**Ascent of Pedagogy**

**A mission**

**For Aided**

**And**

**Un-aided Schools**

Compiled by

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**Introduction, Ascent of Pedagogy—A Mission to Improve Standard of education**

Education is such an important sector that it cannot be left overlooked. Unfortunately, we as a community condoned the same. Trapped in such a faulty and unsound scenario, the condition of Indian Muslims is buckling under pressure. Too many factors have to go right to counter the odds. Therefore a giant act to eradicate the flaws needs to be executed in order to arrest the deterioration.

We need to be a bit more confident, consistent and vigilant with an urge to work in conjugation, along with those who are rendering their services in all walks of life. They may be business or academic institutions, big or small, individuals or societies etc. It is a critical time that calls to perform with a right perspective in order to prevent the collapse with a well planed procedure to prepare leaders in all the fields such as; education, politics, economics, law, medicine, civil services, engineering, police, army, air force, navy, merchant navy etc. etc.

All the minority schools, Urdu medium or English medium, aided or un-aided are grappling with a common problem that is poor and lifeless results. There is lack of Muslim representation almost in all sectors named as above.

An effort is being made to put together a plan, systematized from my experience in acquiring knowledge through formal education, teaching and administration of education, along with information selected from print media, electronic and social media for *enhancing the standard of education* that is prevailing in minority schools either aided or un-aided, recognized or un-recognized.

Improvement of academic quality (**Ascent of Pedagogy**) and efficiency can be the only solution to cope up the globalization and modernization of education. It is the responsibility of head of the institutions along with those who are having the reigns of administration in their hands. They are required to look out for the lacunae in the academic scenario prevailing at the school. There exists no readymade solution for reformation of the quality of education. It is the concerted endeavor by all the stake holders that can bring about the desired changes through certain chosen steps.

Integral academic ingredients of a school are hereby selected and have been tried to define with the help of bullets in chronological sequence for a finer definition that is easy to understand for a successful plain sailing in **Ascent of Pedagogy** in schools.

Dr. Mohammad Shahid

**(November 20, 2020)**

**PREFACE**

Consequent to the psychological, technological, and philosophical researches in the field of education many newer techniques and approaches have been incorporated to the repertoire of teaching learning process. We must prepare our kids for the work of exploration to discover the things that do not yet exist and cannot yet be defined. A fair amount of changes are visible around us, such as means of transportation, forms of entertainment, our eating habits, our thinking habits etc. Society has changed, and the world has changed altogether. Education is no exception too.

Education helps to build the character, grows the strength of mind, expands the intellect and with the help of which one can stand on one’s own feet. But the sorry plight of pedagogy and the prevailing education system in minority schools deserve consideration for improvement. There can never be a higher standard of education in the true sense of the word until we learn to recognize the only case for present discontent and admission of the flaws and lapses that we have ignorantly embraced on our ailing system. We are masters of our forts. The fault is not in our stars but in us.

Dr. Mohammad Shahid, a dedicated person towards the cause of education, has put his sincere efforts to present this work in a book form worth emulating for the benefits of students’ community to harness their talents and release their true potential. He has tried to indicate and explain in some aspects to prune and improve the prevalent system of imparting education in minority and other underprivileged community schools. It is an endeavor to bring forth practical measures to be applied in schools aided/un-aided, to improve their quality of education, run by minority or other underprivileged communities.

As a classmate in AMU, Aligarh and as a close friend, I have known him personally for the last fifty years. He has been holding some important executive posts at Crescent Education Society during last forty years. What motivated him to compile this book is his deep desire to share his experience as a teacher who has a substantial experience in administration of education. I hope that the book will be helpful in Ascent of Pedagogy prevailing in minority and other under-privileged community schools.

Mohammad Inam Khan,

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My thanks are also due to **Mr. Shoyeb Akram,** Director of “Rex Remedies” and the President of Crescent Education Society, who cherished the dream of quality education among minority schools to be materialized.

I am grateful to **Mr. Abdul Hameed Khan** for his help at an opportune time. The script would have gone into oblivion but for his encouragement and assistance, moral and financial. He rendered his services as a “Mathematics teacher at “Jamia Millia Islamia Senior Secondary School”till his retirement. He knew the psychology of his students and the pedagogy that determines how the students can successfully learn the subject.

I would like to thank **Mr. Mohammad Inam Khan,** my class fellow at AMU, Aligarh, who is a “prominent Urdu/English/Persian teacher”, He retired from his government job about a decade ago.

I am indebted to **Mr. Mohammad Javed Khan,** a prominent name in the “field of four-color printing”,whose unflinching motivation and personal efforts transformed the script into this book.

Last but not the least; I shall be grateful to those who bring errors/omissions in my notice for correction in the next edition of the book.

**Mohammad Shahid**

**DEDICATED TO THE LOVING MEMORY OF MY FATHER,**

**A “*SWATANTRA SENANI—MUJAHID E AZADI”***

**AND A RENOWNED URDU JOURNALIST**

**WHO WAS AN ENERGETIC ADVOCATE FOR**

**EDUCATION AMONG MUSLIMS**

**ESPECIALLY THE GIRLS**

**AND OTHER UNDER-PRIVILEDGED**

**COMMUNITIES**

**ASCENT OF PEDAGOGY– A MISSION**

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**SECTION 1**

**A BAD AND A GOOD SCHOOL**

* 1. **WHAT IS A BAD SCHOOL**
  2. **ATTRIBUTES OF A GOOD SCHOOL**
  3. **VISION AND MISSION**

**1.1 WHAT IS A BAD SCHOOL**

There seems to be an un-usual pandemic of poor academic performance in Urdu medium schools in Delhi. The number of ***failing schools***has increased gradually. Much of this may be attributed to the lack of accountability of the principal/HOI and the administrators who use to hegemonies the schools, or lack of interest for improvement on the part of our students’ learning skill or both. There may have been some other factors too.

The scenario attracts our contemplation for reformation to explore and identify the ways and means in order to counter the odds that are being faced by these schools. As we are aware of the fact by our experience that no school fails from one day to the next; the reasons for school failure must have been manifested for some time. The quarry remains staring at us for our failure in taking remedial measures at the initial stage before the complete rot started.

In recent times a school’s failure is defined by the students’ test/examination results, i.e. how many students are below grade level. The management of the school should be serious only when it identifies and admits about the failing of the school at the earliest stage. A rapid turn-around is possible only when the problems are first identified and a remedial action is taken as early as possible. But, once it is allowed to fester, the turn-around is not easy to take place rather it is rarely achieved. Every ***falling school*** exhibitsthe warning signs that require action on the part of educators of the concerned school to immediately start the remedial action.

***Warning signs;***

1. Absence of head of school for a considerable time due to any reason.
2. The school’s principal fail to include the staff members in the process of strategic planning.
3. The principal shows or behave in authoritarian style of leadership. The teachers feel apprehensive to approach and talk to him.
4. The school principal is afraid of confrontation and avoids making decisions on issues that are, or appear to be controversial.
5. In-effective teachers are tolerated and no action is taken against them.
6. It is considered to be the duty of principal to visit classrooms in order to gauge the quality of teaching. If the principal fail to perform his duty, constructive feedback may not be provided to the teachers.
7. Students and the teachers who are good performers require appreciation for their motivation and encouragement. The act may generate positive energy to do more quality work.
8. When students fail to respect their teacher, classroom gets noisy and out of control. Naturally quality of teaching-learning process gets plunged.
9. Teachers have low academic and behavioral expectations of their students.
10. Teachers have a high rate of high rate of absenteeism, both excused and un-excused.
11. Teachers and the staff exhibit a low level of confidence, and rarely arrive more than a few minutes before their students in the morning or stay more than a few minutes after their students have been dismissed for the day.
12. Teachers shout at their students as a means of maintain order and discipline in the classroom.
13. Teachers fail or casual in making contact with their parents.
14. Teachers are required to revive the knowledge.
15. Lesson plans are to be prepared always in advance. Teaching without it may not draw the desired results.
16. If teachers wear inappropriate attire, it attracts disrespect from the students.

**Warning signs directly related to school’s culture**

1. The school building is in bad shape and in a poor state of cleanliness, needs a repair or an urgent repair, both indoors and outdoors.
2. There is poor lightning in the hallways and classrooms.
3. The school is noisy during the school hours due to reasons of traffic or otherwise.
4. Students roaming outside the classroom without purpose or permission.
5. If there is high rate of absenteeism, excused and un-excused both.
6. There is little regard for authority of principal of teachers.

**Warning signs associated with strategic planning**

1. The school’s leadership does not understand the value of **strategic planning** that is a must for success of the school.
2. The school either does not have a strategic plan or no one can remember when the plan was last discussed.
3. The school’s staff and teachers do not know the school’s mission and they do not have a vision for the future.
4. The school’s principal does not pay any attention to the budget and has little or understanding of how it was developed or has to be developed.

**Warning signs related to a school’s communication network.**

1. There is no formal mechanism for teachers to either collaborate on best practices or discuss school’s wide concerns.
2. There are few or no staff meetings.
3. Staff meetings are disorganized and used by the staff as a time to complain about the school.
4. The school does not keep the parents informed through news letters or other forms of communications about what is happening in the school.
5. Parents are not expected to meet with teachers face-to-face at least twice in a month to discuss their children’s overall progress.
6. The school fails to provide parents with ample time left (at least 3 or 4 months) that their children may be at risk of academic failure.

**Warning signs related to the use of student performance data**

1. School leaders and staff do not use data to support their instructional strategies.
2. Teachers do not understand the value or proper use of formative evaluations or summative assessments.
3. There is limited or no use of bench mark testing to identify each student’s academic starting point for the school year and his or her progress throughout the year.
4. Teachers cannot determine if a child has made progress or the extent of that progress.
5. The school is using assessments to measure academic progress but teachers do not know how to interpret the associated diagnostic tool.

**Other important warning signs**

1. The teachers, who are teaching in the school, don’t admit their children because the know the school is not worthy or good.
2. Existence of groupism or sycophancy rule.
3. Basic amenities like sports equipments, labs and its equipments, potable water are in scarcity.
4. The students are taught what to think and not “how to think”.
5. Marks take the precedence and not the talent in any other field.
6. A few students are polished and rest are treated like dust.

**Conclusion**

* a school’s failure should not be seen as surprising or inevitable.
* The warning signs are neither difficult to recognize nor difficult to correct.
* The biggest question facing the community is the willingness of the management to realize the failing signs and act accordingly.
* There are no excuses for school failure.
* Waiting until the end of academic year or consequent years to realize that the school has failed simply means that we have consciously allowed our children to be left behind.

**Remedial steps to check a failing school**

There is magic bullet to turn around the failing schools. A series of remedial steps need to be taken. Each step’s impact depends and builds on the previous step in the sequence, because the later determines the access to good leaders, teachers and students.

**1. Don’t improve the teaching first**

* This is a very common mistake. It is not worthwhile to improve teaching while still struggling badly behaving students or having a poor head of school in charge. We cannot expect teachers to sort out all the problems themselves—we need to create right environment first.

1. **Do improve governance, leadership, and structure first**

* Otherwise we are putting great teachers in a position where they fail—they will waste time doing or managing the wrong things**.**

1. **Don’t reduce class sizes**

* While reducing class size works, it is not the best use of reduces. It is expensive and we can create the same impact by improving students’ motivation and behavior, which fewer resources. Class size of 30 may perform well as the class size of 15. Hence there is no use of reducing the class size.

1. **do improve students’ behavior and motivation level**

* The best way to create the right environment for good teachers is to improve students’ behavior and motivate them. Conversely we will find that the fastest way to do this is to exclude poorly behaved students. Move these poorly behaving students into another pathway, so that they can be managed differently and reintegrated into the main pathway once their behavior is improved.

1. **Avoid the zero tolerance policy**

* Schools which tried to come down hard on poor behavior with a “zero tolerance” policy to bring positive impact may get success but for a short term. Students may revolt and even indulge in riots.

1. Keep the students from the nursery to class X under the cultural umbrella. In this way the, school leaders can create the right culture early on and ensure that poor behavior never develops. It also makes teaching at senior secondary level much easier.
2. **No super head policy**

* Avoid to bring a super head from other successful institutions. It didn’t create the right foundations for sustainable long term improvement. Exam results may dip after they left.

1. **Do improve all your groups**

* Although schools can improve short term performance by cutting and reallocating resources, they will not create sustainable improvement unless they invest in all age groups and subjects.

1. **Don’t expect spending more money to solve your school’s problem any faster**

* More resources can help to overcome specific challenges, such as attracting good leaders and teachers, but what matters the most to the overall speed of improvement is the right changes in the right order.
* But at the same time, don’t expect to improve without spending more, at least in the short term. To improve students’ learning, schools must have the basic resources they need to improve students’ behavior, pay higher salaries to attract good teachers, and employ staff to manage parents so teachers can spend more time at academic matters.
* **Conclusion**

**First:** we need to create the right environment before improving teaching standards. Great teaching is wasted without the right governance, leadership and structure with well behaved students.

**Second:** the most significant improvement occurs when the schools change their students by excluding poor behavior students by creating multiple pathways for students with differing needs and keeping students of Nursery to X separate.

**1.2 ATTRIBUTES OF A GOOD SCHOOL**

Every community across the world is in need of good schools. While the Muslims in India, are falling behind the frame work of education system that is required for establishing good schools or maintaining the standard of existing schools.

**A good school and an effective school**

* A good school is a place where children learn enough worthwhile things to make a strong start in life.
* Where a foundation is laid that support later learning.
* Most importantly where children develop desire to learn more.
* It reflects the realities of life in an ordered adult society.
* It is rational and safe.
* A practice ground for the things people do in the outside world.
* A good school creates a sense of community that permits persona expression within a framework of social responsibilities.
* It focuses on learnings that grow through use—with or without more schooling—such as communication skills, decision making, craftsmanship and group interaction.
* It makes children think of themselves as people who find strength, nourishment and joy in learning.
* A good school has a broad-based and realistic curriculum with subject matter chosen not only for its relevance to higher education and jobs, but also for family and community membership and personal enrichment.
* It uses teaching practices that stimulate the people live in the outside word.
* Children are actively involved in production task that combine and extend their skills, show off their accomplishment, and look for harder, more exciting work to do.
* A good school is like a healthy tree. As it grows, it sinks its roots into its notice soil.
* It adapt to the surrounding climate and vegetation.

**An effective school**

* In contrast an effective school looks at learning in terms of test scores in a limited number of academic areas.
* It does not take into consideration problem solving abilities, social skills.
* It does not differentiate between dynamic and inert knowledge.
* It ignores motivation.
* Children who cover a traditional curriculum in order to master as much of it as possible are not initiators, seekers or builders, they are at best reactors.
* The knowledge they dutifully sock up is not necessarily broad based or useful .
* .it is taught because it is likely appear in test or exam.
* It is quickly and easily forgotten.

**How do these good schools differ from not so good or bad schools?**

The answer is not as easy as it might appear at first glance. For being a bona fide good school, certain quarries need serious consideration.

Do we mean by a **good school** that scores of students are educated with very little hope for their future?

* How can a school call itself ‘good’ when it produces students who don’t know themselves, the world or their place in it?
* What should schools teach and how?
* Whether we should restrict the teaching to the contents of syllabus only or teaching them to think, design their own learning pathways and do extraordinary things that are valuable to them for their future?
* How do we know if we are doing it well?

Beside scrutiny of these quarries, there are so many other relevant observations; those must be answered in regard to social needs, teachers’ true grits and access to technological developments.

**Effective requisites and characteristics of a good school;**

**Leadership**

* A good school is driven by the principal who is passionate about making a difference to the life of children in his care.
* Students perform better when the principal and the management provide strong leadership.
* Successful school principal constructs goals and then effectively communicates them to appropriate individuals (e.g students, teachers and community at large).

**Vision, mission and Strategic Planning**

* A good school has a clear vision that is shared with all for a combined mission.
* A good school plans in advance the process of setting goals, deciding on actions to achieve those goals and mobilizing the resources needed to take those actions.

**Expectations**

* A good school has high expectations from its students as well as teachers.
* It will have a positive impact on students’ performances.
* Similarly, the teachers who are expected to teach at high level of effectiveness can reach the set level of expectations.

**Conducive learning environment**

* A good school needs a clean and well-organized environment in order to boost up students to develop their knowledge and skills. Such an environment catalyzes the teaching and learning process.

**Skilled and dedicated staff**

* A good school has dedicated teaching and non-teaching staff.
* They are required to have a never ending urge to better them and improve their skills, a pre-requisite for one and all.
* Needless to say that the students try to follow teachers, as their role models who have fine and admirable qualities.
* Such teachers can better cultivate their students’ talents and abilities they posses.

**Supportive administrators**

* Administrators of a good school must be professional and supportive to the needs of academic staff.

**State-of-the-art equipment and facilities**

* A good school, besides having conducive academic environment has the educational tools considered to be essential such as computers, smart classes, AV room etc.

**Sports and co-curricular activities**

* A good school gives equal importance to sports and co-curricular activities almost equivalent to the studies.
* Good laboratories
* A good school combines classroom teaching with laboratory experiments to ensure that students grasp each and every concept thoroughly. They get a first hand learning experience by performing various experiments on their own.
* A good school has a great library and a librarian who loves students and he wants the two to make meaningful connections.

**Counseling and career counseling**

* A good school has a counselor cum career counselor.
* Counseling is designed to facilitate student achievement, improve student behavior and attendance, and help student develop socially and personally.
* Career counseling isan effort for students’ career guidance right from their school about the available options as per their interest and stream of academics.

**Motivation of students**

* Teachers of a good school are very well aware of the importance of motivation.
* It is the process of stimulating students to actions in order to accomplish the goals.
* Motivation of students is the responsibility of teachers.
* Activities such as giving them awards, speeches by various personalities including the alumnae, and participation in quiz competitions other such activities.

**Future booster**

* A good school cares for the future of its students.
* Activities such as talent search and personality development are carried out for those students who have the potential to succeed in higher education.

**Moral education**

* For maximum learning, students need to feel secure and respected by those who come in their contact.
* A good school promotes moral education to inculcate discipline among students, and a sense of respect for their fellow students and all elders.

**Discipline**

* A good school inculcates a sense of discipline in its students and deals the incidences of indiscipline effectively. Students are bound to understand the class and school rules and expectations and must adhere to them.

**Monitoring**

* A good school has an effective system of regular monitoring and screening of students’ performance and development as per their needs.
* Effective use of assessment data allows schools to identify the problematic areas of learning and the teachers can generate solutions to address the problems.

**Job satisfaction**

* Job satisfaction is most crucial in determining the faithfulness.
* It is the main indicator of an individual’s level of commitment and productivity in his/her profession as a teacher.
* Factors those influence job satisfactions are;
* Behavior of Principal, colleagues, students and the society,
* Administrative relationship and rapport.
* Work-load,
* Salary,
* Growth opportunities,
* Recognition of service and reward, and,
* Professional development
* If teachers have a high level of job satisfaction, a more enjoyable, energetic and effective school environment can be developed which indirectly will give positive effects on the students’ academic achievement.
* A teacher who is happy and satisfied with his/her profession will emanate positive energy that will give positive influence on students.
* As such the teachers who possess high level of satisfaction in them will be a source of motivation to the students to succeed in their studies.
* School administration too is required to make some innovative plans in order to improve and enhance the moral and motivation of the teaching staff.
* An effective motivational program and an interesting reward system relevant to the needs of the teachers would bring forth effective, dedicated and committed teachers.

**Parental involvement**

* A good school stresses parental involvement.
* It is the school’s job to pull parent in and help them understand what they can do for their wards and other children of the school.
* The more a school involves the parents, the better the students will behave and learn.

**Positive environment**

* A good school needs a clean and well organized environment that encourages students to develop their skills and increase their knowledge.
* A clean and comfortable school setting helps enhance the teaching and learning experience.

**Community development and social changes**

* A good school adapts quickly to social change/s.
* A good school visibly and substantively improves the community it is embedded within.

**Use of resources**

* A good school uses every resource, advantage, gift and opportunity it has to grow students and tends to see more resources, advantages, gifts and opportunities than lower performance schools.

**Students’ mutual support**

* A good school has students who get along with and support one another towards a common goal-and they know what the goal is.

**Confess limitations**

* A good school admits its failures and limitations while working together with a local or global community for its growth and take corrective measures without fail.

**Measures for success**

* A good school has diverse and compelling measures of success—such as,
* Academic achievement,
* Physical and mental health of students,
* Socio-emotional development of students,
* Creativity and innovation,
* Citizenship and democracy,
* Favorable school climate which can be a condition that improves students’ chances for success.

**Cultural pluralism**

* A good school promotes its unique cultural identities while maintaining the cultural pluralism, a term used “when smaller groups within a large society maintain their unique cultural identities and their values and the practices are accepted by the wider dominant culture.

**Satisfaction for all**

* A good school makes certain that every single student and family feels welcome and understood on equal terms.
* High level of intelligence
* A good school is full of students who not only ask great questions but do so with great frequency and ferocity.

**Quality of ideas**

* A good school understands the difference between a bad idea and the bad implementation of a good idea.

**Teachers’ professional development**

* A good school provides a conducive environment for professional educators who are always learning and growing their craft.
* They are being motivated to follow the education path where new ideas, teaching strategies, skills or new information are available for their professional development.

**Transparent projection**

* A good school doesn’t make empty promises, create misleading mission statements, or mislead parents and community members with educational-jargon (technical language).
* It is authentic and transparent.

**Worth of stake holders**

* A good school values its teachers and administrators and parents as agents for students’ success.

**Flexible policy**

* A good school is willing to change its mind in the face of relevant trends, data, challenges and opportunities.

**Disruptive of bad practices**

* A good school is disruptive of bad culture practices, such as intolerance based on race, income, faith, illiteracy, apathy towards the environment and such other preferences.

**Realization of ambitions**

* A good school produces students who have personal and specific hope for the future that they can articulate and believe in and share with others.

**Habitual discoverer**

* A good school produces students who can emphasize, critique (a detailed analyses), love, inspire, make design, restore and understand almost anything—and then do so as a matter of habit.

**Affinity with school**

* Teachers, parents, staff, administration and students have a sense of belonging to their school.

**Co-operation with other schools**

* A good school will connect with other schools—and connect students too.

**Ideologist**

* A good school will produce students who can think critically about issues of human interest.

**No un-necessary meetings.**

* A good school does not have un-necessary meetings.

**Financial regulation**

* A good school does not spend money just because it is there.

**Project base learning**

* A good school may love the project base learning, and the students doing the projects even more.

**Avoid pessimism**

* A good school does not prepare students with little or no hope for the future.

**Equal opportunity for students**

* A good school moves ‘*struggling students’* as far as they move ‘*gifted students’.*

**Skill augmentation**

* A good school seeks to grow great teachers who seek to grow all students to shape and change their world.

**Persistent performance**

* A good school’s teachers and administrators do not exhaust.

**Conducive academic atmosphere**

* A good school feels good to learn in and teach in.

**Better students**

* A good school wants all its students on ‘a better grade level’ and persistently endeavors to achieve the same.

**Optimistic school atmosphere**

* A good school is full of joy, curiosity, hope, knowledge and constant change

**Health and environment**

* Generally speaking, there is lack of medical facility in our schools.
* This is a highly neglected area which usually fails to attract the attention of management, teachers, parents and other stake holders.
* There should be a health-care facility within the school intended to provide basic healthcare for students.

**Value and trust promoter**

* A good school values and promotes trust between and within home, school and community.

**Positive climate**

* A good school has a positive and nurturing school climate and culture.
* A good school encourages a positive environment for respectful dissent.
* Trust and compassion are essential qualities.
* In order to transform every single skill and knowledge into a seamless whole, the dedication, devotion and time is required for practice and perfection of every individual skill and knowledge set.

***A good school changes students; students change great schools***

**1.3 VISION AND MISSION**

**Vision**

* Vision defines our goals and expectations to be accomplished in future. It is a clear statement of what the school is trying to achieve with stake-holders—teachers, students, their families and community members— all working in cohesion. It is about looking forward and seeking to motivate and unify everyone to achieve very best for the students during a specified period.

**Mission**

* A blueprint which strives to prepare all students to become lifelong learners and responsible citizens ready to meet challenges of the future. Creates learning opportunities for students both inside and outside the classroom. An endeavor to develop the knowledge, critical thinking skills and the character traits necessary to succeed in the technologically advanced world.
* *Developing the school’s vision and mission are two of the important steps towards creating a successful program. In combination they provide clarity and direction for what we visualize for our school over a specific period of time (say three or five years).*

**(A) Vision Statement**

* The vision statement is formulated first as it will guide the mission statement and the rest of the strategic plan.
* Schools have their own individual vision or set of visions, that is needed to transform the school into an entity appreciated by one and all. Management, Principal, teachers, students, parents and the community have their individual duty to perform besides a concerted effort of all the stake holders of the school to lift the standard up at the level expressed in the school’s vision statement.
* *Schools may have vision of their own in order to achieve best academic scenario for excellent results****,*** *such as;*
* To develop well rounded, confident and responsible individuals who aspire to achieve their full potential. It will be done by providing a welcoming, happy, safe and supportive learning environment in which everyone is equal and all achievements are celebrated.
* Shaping the available talents into future leaders in every field/stream/profession by engaging each and every child in a thinking curriculum that builds their stamina for deep, creative and critical thinking within all subject areas.
* Students will work together with their teachers, and experts to develop fundamental skills and complex understandings of the world around them as they strive for higher academic achievement.
* Parents, teachers and school leaders will show their commitment for the school through their individual and collaborative involvement in continuously improving the school with an endeavor to make it a source of pride.

***Successful accomplishment of the vision deserves co-operation and consent of all stake holders;***

**Consent of staff members**

* They will inspire and motivate children.
* Provide high quality, stimulating learning opportunities, which will motivate the children.
* Challenge the children to achieve their full potential.
* Promote a life-long love for learning.
* Listen to, respect and value each child as an individual.
* Provide a safe, secure and welcoming environment for all.
* Develop a home-school partnership.
* Be an encouraging and consistent role model for learners.
* Develop confidence and independence in a safe and positive learning environment.

**Consent of students**

* They will come to school every day.
* Be motivated, enthusiastic and positive learners.
* Be willing to work hard and co-operate with others.
* Take responsibility for their learning and aspire to do their best.
* Respect others and their environment.
* Take pride in all their achievements.
* Try new opportunities and experiences.

**Promise of parents/guardians**

* Parents will encourage and support their children and the school by taking an active role in their education and development.
* Encourage children to aspire to do their best and celebrate success.
* Encourage punctuality and good attendance.
* Provide their children with the appropriate equipment.
* Share the school’s expectations and promote the importance of learning.
* Communicate with school to develop a strong home-school partnership.

**Consent of management**

* Members of the management will remain fully committed to their roles and responsibilities.
* Support the school in achieving its aims and aspirations.
* Be supportive and encouraging for the children, staff and the parents.
* Monitor the progress of school to ensure standards and targets are achieved.
* Support and represent the school in the wider community.
* Ensure that the school provides a safe and secure environment.
* Promote the values of the school in the wider community.

**(B) Mission statement**

* It concentrates on the present.
* A mission statement talks about how we will get to, where we want to be.
* It defines the purpose and primary objectives related to our pupils’ needs.
* It answers the questions,
* “What do we do?
* ”What makes us different”?
* A mission statement talks about the present, leading to its future
* It lists the broad goals of the institution;

**Defines the key measures of its success**

* Purpose and values of our existence.
* We try to provide excellent programs in a safe, caring and healthy environment.
* Educate and develop the whole personality of the child to ensure they become enthusiastic, persistent and competent learners that are not only ready for the future, but also care about and demonstrate respect for themselves and others.
* Parents and community will work in conjugation to ensure each student experience the joy of learning.

***When developing a mission statement, effective features are to be considered, such as purpose and values of the institution, our responsibilities towards our students and community, and the main objectives to be achieved.***

**SECTION 2**

**FUTURE PLANNING**

* 1. **STRATEGIC PLANNIN**

**2.1 STRATEGIC PLANNING**

**History**

* Sometime after **1950** the adoption of ‘strategic planning’ in the business world began**.**
* Since **1970,** the education sector amassed a rich history of “community engagements”.
* Since **1980**, Schools in US began adopting the practice of strategic planning.
* Around **1984,** the term appeared in educational publications for the first time.
* By **1987** most of the US schools started adopting the strategic planning.

The education sector has shifted the process of strategic planning from a boardroom activity in business to a community-involved process in education.

**Why do we need strategic planning?**

* ***“Strategos”*** literally means “General of the Army” in Greek. As a General leads the army, similarly strategic planning leads the progress.
* Most of the minority schools, seems to have been grappling with the under par academic performance of their students.
* Regardless of how hard they work, they use to go in circle “LIKE A KOLOO KA BAIL”.
* Failure in drawing a clear roadmap for a higher notch performance might has been the reason.
* Strategic planning is an approach that helps the school to achieve goals to improve students’ performance as well as become a more efficient and effective institution.
* In simplest terms a school undertakes strategic planning to reaffirm or modify its mission.
* The purpose is not to decide what should be done in the future but to decide what should be done now to make desired things happen in an uncertain future.

**What is strategic planning?**

* Strategic planning is the process of setting goals,
* Deciding on actions to achieve those goals,
* Mobilizing the resources needed to take those actions, schools use strategic planning to achieve the broad goals of improving students’ outcome,
* Without community support and the insight that comes with community engagement strategic plans are likely to fail.

**Reason to formulate strategic planning**

*More and more educational institutions are leaned on to plan strategically, due to the following reasons;*

* A school may wish to plan and carry out all the activities deemed needed in a synchronized manner.
* More resources do not necessarily stand for the best results. The way, these resources are being used can lead to different level of benefits.
* It has become more and more difficult to plan everything one would wish to do. One ought to make choices, often tough ones, through a balanced decision making, consensus building processes.

**What is a strategic plan?**

* It is a detailed (approx 3-4 pages) document used to communicate with the institution, its goals, the actions needed to achieve those goals and all of other evaluative elements developed during the planning exercise.
* It can be defined as a set of decisions about what to do, why and how to do?
* As a reference on action, the plan is the result of consensus building process, to be agreed upon by all those working in the field.
* It is designed in such a way as to allow for adjustments in light of new development during implementation.
* It includes not only policy and expenditure framework, but also the ladder of objectives, key actions and institutional arrangements for implementation, monitoring and evaluation.
* It shows the school’s vision, mission, goals, values and objectives. This gives stakeholders discuss and agree on the same priorities and focus on the same path of improvement.

**Key elements of a strategic plan**

1. **Vision**
2. **Core value**
3. **Clearly defined outcome**
4. **Accountability**

**1) Vision**

* It helps create goals which are cohesive and focused
* Vision is very critical for the progress and development of an Institution.
* Inspire all stake holders; the employees of the school alike whether principal, teachers, students, parents and the supporting staff.
* Unify their efforts towards a common goal; all concerned and stakeholders will unify their efforts towards a common goal, with increased efficiency.
* Creating a vision statement is the obvious starting point for defining the overall vision.

**2) Core Value;**

* A core value is a central belief clearly understood and shared by every member of the school community.
* Pursuing excellence
* Learning through innovation
* Growing by learning
* Strive to develop potential

**3) Clearly defined outcome;**

* A strategic plan is nothing without a set of clearly defined outcomes.
* These are the changes we expect to result from our program.
* These can be the changes in individuals, systems, policies that we seek to achieve.
* Vision, mission, and focus areas are great starting points. But-no-one may take the plan seriously unless it is clearly articulated with the steps desired to be taken for the success. When outcomes are clearly defined it works.

**4) Accountability;**

* This is one of the key elements of a strategic plan
* Lack of accountability will absolutely destroy the intended execution of the strategic plan.
* The real value of strategic planning in a school is more than simply the outcome of having a blue print that guides future leadership decisions.
* It is a powerful and effective way to build consensus and motivate resource support, and is particularly useful in defining priorities for the Board, the head of school and administrative team who are charged with the implementation of the plan.

**Creating a school strategic plan**

* An essential process for the improvement of the whole academic scenario at the school.
* It helps in achieving goals, improve students’ outcome as well as become more effective and efficient Institution in the field of education.

**STEP 1**

**Community involvement**

* A “reference document” that can get everyone on the same page, in unison and undivided,
* The first step in “creating a successful strategic plan” is getting everyone involved to agree on ‘one model of strategic planning’**.**
* Without community support strategic plans are likely to be unsuccessful. Engage early and engage often is the *mantra of successful collaborative management.* Strategic planning is best accomplished with the inclusion of parents, and the technology has enabled this.
* Without the connected and accessible ‘environment’ like the internet, genuine and affordable community engagement, strategic planning would not have been feasible.
* Our connected environment, everywhere availability of e-mail and user friendly technology has changed, and will continue to change the strategic planning process.

**STEP 2**

**Carefully select the members of the planning team.**

***Use two criteria for selection.***

* Make it sure about those who intend to be included can and will contribute positively to the content of the resultant plan.
* Those who are in a position to drive the successful implementation of the strategies are to be included as the members.

**STEP 3**

**Educate the administrators to the strategic-planning process.**

* Make it sure that they all understand the definitions and importance of terms like “missions” and “goals”.
* Also make sure they all understand the critical role they play in both strategy development and implementation.

**STEP 4**

**Involve employees beyond those who are in the planning team.**

* Ask them for help.
* Have their participation in preplanning surveys to “rise- up” issues for discussion at the upcoming strategy sessions.
* Be sure to offer them feedback on the outcome of those sessions. If you forget that feedback, they will feel cheated.

**STEP 5**

**Gather applicable information prior to the strategic session.**

* Have your planning team think through the issues you will likely discuss at your up-coming strategy session/s and decide on the information they will need to deal with those issues and arrive at strategic decisions?
* Then prior to the strategy sessions, gather and share that information among the members of the planning team.

**STEP 6**

**Avoid the interruptions and distractions during the session**

**STEP 7**

**Allow enough time to the strategy sessions.**

* Strategic thinking involves thoughtful discussions. This simply takes time.
* Those who rush, end up with inferior plans.

**STEP 8**

**Encourage open communication.**

* If you are the leader, you will play most difficult role in the process.
* For you will walk the fine line between being an active participant and coming across as “too strong” as the boss, you are in a position of leadership.
* Others will simply hear your voice as a bit more loud than any of the others.
* Tone it down and encourage others to participate.

**STEP 9**

**Communicate your strategy.**

* Once you have developed your strategic plan, let your employees and stake holders know your plan.
* Do not tell them once; tell them over and over again.
* Put it into your communication documents, hold annual progress meetings, involve them in the action plans and annual implementation reviews.

**STEP 10**

**Keep your plan alive.**

* Have your employees develop specific action steps (tactics) to implement your strategy.
* Monitor progress of those action steps at quarterly review meetings.
* Remember it is one thing to develop a strategy, and quite another to implement it.
* This is a real work! You will need to manage it as such.

**STEP 11**

**Link your strategic plan to your budgeting process.**

* As part of your action plan development, estimate the resources required to accomplish all of the action steps; thus to implement the strategy.
* Those resources should include: people, money, facilities and equipment.
* These estimates feed nicely into the budgeting process.
* So, your budgeting cycle should follow your strategy development and your action plan development.
* *Responsibility of execution of the Strategic plan lies with the Head and the Manager of the Institution*

**The school’s academic improvement and moral goals;**

* Increasing students’ Math and English proficiency
* Giving teachers advance training and grooming and support on helping students get mentally and physically ready to learn.
* Increasing focus on daily school attendance.
* Increasing instruction through demonstrations and interactive learning between teachers and students.
* Increasing the number of students scoring higher grades can be achieved by formation of different categories of students and gradual improvement in their individual performance.
* Provide children with an education in a caring and understanding manner within a happy learning environment.
* Treat each child individually in terms of his/her emotional and academic environment.
* Help each child to develop academic and physical skills, knowledge, understanding and appreciation, to the point where he/she can sensitively challenge new experiences.
* Work to maintain high standards with high expectations for both staff and children.
* Encourage each child for the development of mutual respect, sensitivity and caring for others among the pupils, staff and community.
* Seek to develop within each child the wish to learn, the ability to learn for themselves, and the willingness and enthusiasm to try something new.
* Work to foster good relationships and good reputation between the larger community and the school community.
* Staff and the management, both are required to remain committed and active throughout the year for development of academics at school.
* The identified areas for improvement are the curricular areas that are below expectations.
* Ensure teaching is given enough time to different subjects for pupils to make adequate progress in each subject.
* Take steps to improve pupils speaking and listening skills.
* Eliminate the amount of unsatisfactory teaching.
* Improve the quality of provision for religious development, including and ensuring that acts of collective worship are more meaningful and purposeful for the community as well as the Nation.

**Execution of strategic planning**

* There are a variety of approaches to carry out strategic planning. One cannot say that there is a “single perfect way” to conduct it.
* Each institution has its own particular interpretation of the approaches and activities in strategic planning and management.
* However, what is generic to strategic planning and management are certain typical stages involving similar activities carried out in a similar sequence.

**To make strategic planning effort successful, certain pitfalls have to be avoided.**

* The main pitfall of planning is falling into the delusion that planning determines the required outcome. In fact planning cannot guarantee the outcome we want. It can only help us to achieve something integral to any future success.
* Unpreparedness to face the unforeseen challenges.
* Not including key people in the planning effort.
* Planning before undertaking a “situation assessment”.
* Developing a mission statement first.
* Confusing goals and objectives.
* Measuring activity instead of results.
* Jumping straight to strategies after developing objectives.
* Not developing detailed action plan for strategies.
* Not monitoring or revising the plan.

***Education strategy incorporates a vision for teaching and learning as well as the students’ experience at a time of rapid change and complexity.***

**SECTION 3**

**PRINCIPAL**

**3.1 ATTRIBUTES OF A GOOD PRINCIPAL**

**3.1 ATTRIBUTES OF A GOOD PRINCIPAL**

**Leadership of a principal demands the following trait**

A senior and the most talented teacher perching at the pinnacle of an academic institution, holding its helm to steer the teaching community and others for an all-round excellence of students in academics, sports and co-curricular activities through his/her vision, leadership, authority, guidance, direction, supervision, control and management.

* **Desired Qualifications**
* Masters in Education (M.ED/M.A. Education) with 5 years teaching experience, preferably **PG in STEM education (Science, Technology, Engineering, and Math)**
* Any Masters degree with at least 10 years of teaching experience (preferably a science graduate)

**Characteristics of a good school principal:**

* **Outstanding leader**: A Principal is in charge of all faculties, staff and students in the school, so, if she/he wants to be effective in this role, she/he must have strong leadership skills. She/he cannot afford to be a back-seat driver.
* **Fair and reasonable:** Problem solver and exceptional listener are her/his other character traits.
* **A good coordinator:** Behind every great staff of teachers in a school, there is equally a great school principal coordinating and managing the activities of both students and staff members.
* **A good teacher and a good administrator:** The work of a school principal combines elements of teaching with administrative tasks.
* **A good supervisor of all activities in the school**:
* Maintaining the disciplinary practices of the school.
* He/she is generally responsible for supervising all academic, sports and co-curricular activities, and non-academic activities.
* One of his/her main duties includes, overseeing the subjects taught by his/her teachers ensuing adherence to the regulatory curriculum, as well as to the particular ideas, rules and principles of the school.

**Primary responsibilities of the Principal**

**Coordinating and organizing all academic activities in the school,**

Such as:

* Coordinating with teachers in order to maintain curricular, disciplinary and academic performance-standards of students;
* Establishing academic programs and co-curricular activities along with other zonal, district schools programs in order to promote achievements;
* Documenting and submitting reports on students’ academic performance to the Managing committee/Executive Board.
* Establishing and upholding school policies;

**Managing school budget, pay roll and maintenance costs:**

* Monitoring and recording all schools’ incomes and expenses;
* Using the school budget to plan and carry out special school activities;
* Proposing renovation and construction of school facilities;
* Planning and approving all out-of-school activities, trips, and competitions with other schools;

**Coordinator of school staff:**

* Training all teaching, administrative and maintenance staff, instructing them in the common practices and procedures of the school, and coordinating their activities.

**Assisting school teachers and counselor (if any) with disciplinary and students’ counseling tasks;**

* Overseeing the disciplinary practices ensuring they comply with school practices;
* Advising teachers on how to apply academic programs and how to deal with students;
* Providing counseling and guidance through teachers to students’ with learning difficulties or behavioral issues; and
* Conferring parents of students regarding school behavior and academic performance.

**Ensuring the students’ personal and social development:**

* Offering teachers and staff members suggestions and discussing strategies to improve students’ leadership, stress management, self confidence, and decision-making skills, as well as communication and interpersonal skills;
* Assisting teachers in facilitating conflict resolution between students when necessary;
* Reporting any abusive situation to appropriate authorities, whether the student is experiencing physical, sexual, and/or verbal abuse.
* Ensuring the school meets with all health and safety standards.

**Job Skills for a principal**

**People skills**

* Principals have to interact with lots of people, including students, teachers, non-teaching staff, parents, school officials and officials of Education and other government departments.
* Principal needs to be able to work with people in all of these groups to accomplish the school’s goals.
* He/she has to be the boss to the teachers, establishing clear goals to give them directions. But, He/she has to be appreciable, so that all may feel comfortable talking to him/her, while remaining professional and authoritative as the head of the school.

**Problem-Solving Skills**

* Students, teachers and other individuals depend on the school’s Principal to solve problems.
* To be a Principal, it is required to have excellent analytical skills to develop solutions to all kinds of problems, including disciplinary issues and budget concerns.
* When leading a school he/she is not in a position to take unilateral decisions. Views and concerns have to be incorporated with many individuals when developing solutions. Work with people involved so that they feel comfortable over the solution.
* To arrive at these solutions he/she must be creative problem solver.

**Communication Skills**

* Principals must have excellent communication skills.
* Communication with school staff, external individuals and organizations has to be undertaken on behalf of the school.
* When dealing with students a principal is needed to be skillful and communicative.
* A Principal is expected to communicate the vision to teachers, students and parents.

**Leadership Skills**

* The Principal is more than a boss or disciplinarian and a leader of the school.
* He/she is expected to establish policies and procedures that govern the operations of school. But this leadership will go beyond this formal role.
* To motivate the teachers and students is the responsibility of Principal, so that they can do their best and to strive for improvement.

**Role of the principal**

* The role of the Principal is to provide strategic direction in the school system.
* Principals develop standardized direction, curricula, assess and evaluate teaching methods, monitor students’ achievements, encourage parents’ involvement, raise policies and procedures, hire and evaluate staff and other facilities.
* Principals monitor daily activities as well as emerging issues.
* Effective school Principals care deeply about students’ success and recognize that test scores are not the only measures of a quality education.
* If he/she is a visionary leader with effective communication skills and a desire to provide diverse students with an exceptional education, he/she may have what it takes to confidently serve in the role of Principal

1. **Personality of the Principal**
2. **Honesty and integrity**

* Needs to know the value as a leader.
* Needs to make a personal commitment to be honest with him/her and his/her team all the time.
* There should be no partiality in behavior toward teachers.
* Be transparent.
* If a mistake is committed, should admit it, take responsibility for it. Resolve it and learn from it.

1. **Ability to trust and empower**

* Listen to the teachers and students.
* Learn their talents, interests and passions and then delegate accordingly.
* Empower them to take responsibility for tasks and projects.
* Be there to coach them and make sure they are appreciated for what they achieve.

1. **Communicative, Collaborative and Connected**

* Openly seek and share information and knowledge.
* Seek to be understood, and understand others.
* Collaborate with others virtually and face to face.
* To ensure best decisions are made.

1. **Positive energy**

* Always present a positive, pro-active and caring approach.
* Make the time to speak with teachers, students and their parents.
* Get to know and value them by developing authentic relationship.
* It is to be made sure that his health is maintained, along with well-being and energy level.

1. **Confidence**

* Should be confident and approachable.
* Be visible, ask questions liable to be asked, but in a polite and authentic tone.
* Give praise for effective teaching-learning practices.
* As a leader, principal may face difficult situations. He/she is required to stay calm and confident in such compelling situations.
* Morale and confidence of the school community is to be maintained.

1. **Commitment and Persistence**

* Displaying genuine commitment and dedication that is a big motivator to the teachers and students.
* Make sure that the short term and long term plans are created.
* Should be 100% committed to the achievement of the school improvement goals.
* Adapt when unforeseen situations occur and then persist till the important goals are achieved.
* Never give up

1. **Willing to learn, unlearn and relearn**

* Never stop learning.
* The opportunities and possibilities are exciting and empowering for the Principal and school community.
* Be open to it and adopt a growth mindset.
* It is said that “if you are not doing the things, the things that scare you, you are not really learning”.
* Attending workshops and conferences give an opportunity to learn from others.

1. **Entrepreneurial, creative and innovative**

* The ability to think outside the box is powerful.
* Creation and innovation are great-ways to manage the disruptions and complexities.
* Empower teachers and students to be resourceful, flexible and creative to think like entrepreneurs.
* Develop the school as an entrepreneurial organization.

1. **Initiative**

* Instinct is to be believed. Recent research shows that we can successfully solve problems instinctively.
* Listen to the internal voice. It comes from a wise and good place.

1. **Ability to Inspire**

* Be inspiring. Address teachers, students and parents with speeches about modern educational possibilities, *highlighting the school’s vision and mission.*
* Create an enthusiasm and optimism to work together in creating future directions for the school.
* Continue this focus all through the tenure
* The ultimate authority for running of the school always remains with the Principal.
* He is praise-worthy for appreciable results, but equally criticized otherwise.
* The gigantic task of running a senior secondary school requires a genuine support from the teaching and non-teaching staff, especially from those who have been assigned the task of assistance to the principal, *the assistant principals or the vice-principals/head teachers.*
* Vice principals are assigned organizational tasks, while the Principal handles the visionary leadership task for himself/herself.
* In Senior Secondary Schools, principals have more collaborative style and share most duties and responsibilities with their vice principals.
* A Principal is often assisted by at least one or two vice-principals. They are heavily involved with administrative and academic tasks and are responsible for carrying out the principal’s decisions.

1. **Duties and responsibilities of Principal**

* Carry out all administrative duties required of a principal;
* Handle official correspondence relating to the school and furnish the necessary information required by Department of Education or any other important agency;
* Ensure that the fee is collected within specified time from all the students;
* Make sure that all purchases and all other expenditures, required for school are in accordance with the establish rules and regulations and also ensure that such expenditures are properly maintained in stock registers or elsewhere in the place allotted for it.
* Conduct physical verification of school’s property at least once a year and ensure the maintenance of stock register.
* Make satisfactory arrangements for the continuous supply of good quality of drinking water and other facilities for the students;
* Ensure that the school building, its fixtures and furniture and office and laboratories equipments and all computers and all other properties are properly and safely maintained;
* Supervise, guide and control the work of the teaching and non-teaching staff of the school;
* Supervise preparation of school timetable and make sure that allocation of duties and equal number (almost) of periods are allocated to all the teachers without prejudice or favor to any of the teaching staff.
* He/she should also make it sure that every teacher is assigned the teaching duty as per her/his specialization;
* Plans the year’s academic work in advance in consultation with her/his colleagues;
* Hold staff meetings at least once a month, review the work done during the period and assess the progress graph of the students;
* Conduct school examinations in accordance with the instructions issued by the directorate of education from time to time, and he/she shall perform these duties in consultation with vice principal or colleagues;
* Helps and guides the teachers and promotes their professional growth;
* Towards the end of the academic year encourage the teachers for participation in courses designed for **in-service education;**
* Promote the initiative of the teachers for self improvement.
* Supervise class-room teaching and secure co-operation and co-ordination amongst teachers of the same subjects area as well as ensure inter-subject co-ordination;
* Arrange for informal and non-classroom teaching and counseling;
* Plan and specify a regular timetable for scrutiny of students’ written work and home assignment and ensure that the assessment and corrections are carried out timely and effectively;
* Make necessary arrangements for organizing special instruction/counseling for the students according to their needs;
* Organize and co-ordinate various co-curricular activities through the house system or in such other effective way as he/she thinks fit;
* Develop and organize the library recourses and reading facilities in the school and ensure that the students and the teachers have access to and use books and journals of established value and usefulness;
* Send regularly the progress report of students to their parents/guardians;
* Secure physical well being of students, secure high standards of cleanliness and health habits, and held periodic medical examination and explanation of the students and send reports to their parents;
* Be responsible for the proper maintenance of accounts of the school, school records, service books of teachers, and such other registers, returns and statistics as may be specified by the directorate of Education and other government agencies from time to time.
* Handle official correspondence relating to the school and furnish, within the specified dates, the returns and information required by directors,
* Promote the physical well being of the pupils, secure high standards of cleanliness and health habits, and arrange periodical medical examinations of the students and send medical reports to parents/guardians.
* Devote at least 12 periods in a week to teaching of the pupils,

***The key objective of Principal’s endeavor is to keep everyone moving and busy in thinking, planning and execution of vision and strategies required to lift the standard of education of his school, bit by bit.***

**SECTION 4**

**V.PRINCIPAL**

**4.1 NEED TO APPOINT VICE- PRINCIPAL**

**4.1 NEED TO APPOINT VICE- PRINCIPAL**

RTE 2009 envisages one full time vice principal/head teacher for proper supervision, monitoring and accountability. However, in Kendriya Vidyalyas two V.P. are used to be appointed. Because of its utility, it deserves the implementation in schools where recommended.

* If appointment of Vice principal is not feasible, it is suggested that one/two teachers be promoted as head-teachers.
* He/they may be given responsibility for proper monitoring, supervision and accountability.
* One V.P/head-teacher for Academic affairs, and
* One V.P./head-teacher for Non-academic affairs.
* V.P is the Administrator who helps the Principal in the overall running of the school
* V.P. works beside Principal to manage the administrative and educational aspect of the school.
* V.P. is the assistant of principal and unlike the principal, V.P. does not have the decision making authority that the principal carries.
* They interact with teachers, students and members of PTA.
* V.P. is responsible for the discipline, classroom observation, teacher evaluation and supervision, facilitating parents meetings, and handling logistical matters.
* V.P. plays a vital role in ensuring the academic success of students by helping to develop new curricula, evaluating teachers and dealing with school and parents’ relations—responsibilities presently assumed solely by the principal in most of our schools.
* V.P. directly works under the principal and helps, co-ordinate and plan the academic activities of the school.
* V.P. manages the teachers, counselor/s (if any), staff and students on a daily basis.
* Along with the principal he reviews and approve/recommend modifications to new and existing programs and submits his proposals to the school management.
* Prepares and oversees the maintenance of attendance records, personal reports, planning and other activities and students’ learning and behavioral problems.
* He provides counseling and guidance to students regarding academic, behavioral or vocational issues along with enforcing attendance and disciplinary rules.
* V.P. handles complaints, resolve conflicts or grievances and settle disputes.
* V.P. requires extensive knowledge, skill and experience to deal with the responsibilities of students and staff on a daily basis.
* Deals with disciplinary issues and motivate students to turn away from negative behaviors and encourage positive actions in students.
* Vice principal is heavily involved with administrative tasks and is responsible for carrying out the principal’s decisions.
* Vice-principal/s tends to work, physically/mentally throughout the summer by planning and preparing for the school academic year. He assists the principal by providing support wherever needed.
* Vice-principal is usually responsible for setting the school timetable each year to help determine the class size and arrange teachers’ schedule, deciding which class will be assigned to them. He is also responsible for looking out the general administrative discipline and carry out other duties assigned.

**Requisites of V.P:**

* Effective communication skills.
* Problem solving skills.
* Strong interpersonal skills.
* Critical thinking skills.
* Good judgment.
* Administrative and organizational skills.
* An ability to uphold rules and regulations while tolerating ambiguity.

**Comfort level: V.P is required to be comfortable in**

* Classroom.
* Offices.
* Outside and field trips.
* Parent-teacher faculty meetings.
* Official functions.

**Job duties**

* Enforcing attendance rules.
* Meeting with parents to discuss student behavioral or learning problems.
* Responding to disciplinary issues.
* Coordinating use of school facilities for a day-to-day activities and special events.
* Working with teachers to develop curriculum standards.
* Observing teachers and evaluating learning materials to determine areas where improvement is needed.
* Ordering the purchase of materials.
* Maintaining systems for attendance, performance, planning and other reports.
* Supervising grounds and facility maintenance.
* Checking in on teachers and classrooms.
* Responding to e-mails from teachers, parents and others quarters.
* Spending time with children and making a difference in their lives.

**Collective responsibilities of vice principals Scheduling**

* Usually responsible for setting the school timetable each year to help determine the Class size.
* Set exam schedule.
* They arrange teachers’ schedule, deciding which class will be assigned to them, but of course in consultation with principal.
* Assign invigilation duty.

**Meetings and committees**

* He helps set the agenda for staff monthly meeting in consultation with principal.
* Forms committees for teachers.
* Regular meeting with counselor.
* Helps in personality development program/other programs.
* Helps teachers in proper performance of their duties and helps them in their problem areas.
* Resolves conflicts that may arise between teachers, teacher-parents.
* Regularly observes, evaluates and endorses teachers’ performance.
* Identification of outstanding teacher/s for a possible promotion or reward.
* Arrangement of substitution periods in case of teacher/s absence.

**Interaction with students and parents**

* A significant time of V.P., each day is devoted to students’ discipline.
* He speaks to the students who are sent to the office for inappropriate behavior and determine the consequences.
* Patrolling is required, inside the school compound in order to maintain discipline there and in the class-rooms as well.
* Organizes trips for the teachers and the students.

**Record keeping**

* V.P keeps-up with documents on students’ discipline and progress.
* Assists students for applying scholarships and award available with the department of education/minority commission and other private or govt. agencies.
* Arranges the forms for different competitions and helps the students apply in time.
* Signing the report-card on behalf of the principal.

**Academic work activities of a V.P.**

* Assisting yearly evaluation, guide staff and students, thus encouraging a positive climate in the school.
* Evaluation of required no. of teaching staff
* Timetable in consultation with principal, before the start of new academic session.
* Helps in making of new academic calendar.
* Assists in the process of “grooming of teachers”.
* Teaching classes, developing rapport with the students and filling in for the principal when required.
* Monitoring of teaching-learning process and arrangement of monthly meeting with the teachers and assessment of academic progress and the complying of a report for the same to be presented in the next managing committee meeting. To chalk out a plan for the next meeting.
* Students’ counseling; a closer look in tandem with parents, teacher/s, counselor, principal and manager.
* Arrangement for Inspection of school.
* Assessment of teaching activity of contract teachers for consideration in their reappointment.
* Comparative study of the compiled results (of 3 years) before and after exams.
* Arrangements for moral education.
* Promotion of motivational activities.
* Search for talented students in academics, sports and co-curricular activities.
* Working closely with the principal on a daily basis to ensure the smooth (overall) operation of the school.
* To promote the initiative of teachers for self improvement and encourage them to undertake new experiments.
* Inspection of written work and home assignment to ensure that assessment and corrections are carried out timely and effectively.
* Preparation of quarterly report to be discussed in Academic Excellence Committee and then presented in managing committee in order to find the areas which need the special attention for improvement.
* Any other matter that requires consideration.

**Non-academic work/activities of a V.P**

* Monitoring of sports and co-curricular activity through PET/principal.
* Supporting the committee of staff and parents (PTA) that functions to improve the learning and social environment of the school for the students.
* Maintenance of building and all other properties.
* Furniture maintenance and requirements.
* Maintenance of health, hygiene and discipline.
* Supervising, maintaining and refurbishing of science labs.
* Updating and refurbishing the library.
* Initiation and monitoring for the activities needed to stay in lime-light.
* Needs to play an active role in maintaining the harmonious relations amongst all the stake holders of the school, especially parents and teachers.
* Resolving conflicts between teachers, students and parents or conflicts between various individuals.
* In tandem with principal, V.P. is required to make it sure that all purchases and all other expenditures, required for school are in accordance with the established rules and regulations and also ensure that such expenditures are properly maintained in stock registers/ERP.
* Directing assemblies and other special gatherings of students for events throughout the year.

***Vice principals, play and fulfill a vital role in schools. They assist the principal by providing support whenever needed. Their responsibility is to do organizational and sometimes more managerial tasks to perform, while principal handles the visionary leadership tasks.***

**SECTION 5**

**TEACHERS**

**5.1 REQUISITES OF A GOOD TEACHER**

* 1. **GROOMING OF TEACHERS**
  2. **GENERAL INSTRUCTIONS FOR TEACHERS**

**5.4 AWARD SCHEME FOR TEACHERS**

**5.5 POLICY REGARDING GUEST TEACHERS**

**5.6 PREPARATION FOR NEW SESSION**

**5.7 TIMETABLE**

**5.1 REQUISITES OF A GOOD TEACHER**

**A good teacher**

* Those who know, do. Those who understand, teach. (*Aristotle*)
* A good teacher affects eternity; he can never tell where his influence stops. (*Henry Adams*)
* Every teacher wants to be good, but what exactly are the qualities, skills, talents and characteristics of a good teacher.
* Can these be taught or learned?
* Teaching can be satisfying for people who do it well, but opposite may be the experience of others.

**Requisites of a good teacher**

* Every good teacher has his own special, unique style. There are certain requisites for being a good teacher.
* A genetic study suggests that good teachers make a difference and poor teachers may do damage, even to gifted students.
* Effective teachers help kids notch up, while poor teachers brought down all the children in a classroom to the same mediocre level or an expected poor level.
* Students are most affected by the quality of their teachers.
* Before they begin offering instruction in the classroom, successful teachers spend time preparing goals and lesson plans. Lesson plans outline what chapters or topics will be taught on particular days and what homework will be assigned.
* An organized schedule helps the teacher keeps on task each day and on pace to meet the required education standards for his/her grade level or class.
* A good teacher keeps the required teaching aids or the supplementary subject material available at internet ready, which are helpful in making the lesson more interesting and more comprehensive.
* A good teacher interacts with students every day in the classroom, the quality of that interaction matters for the students’ future’
* The difference between a good and a bad teacher can be a full level of student achievement in a single school year. But, students rarely have an opportunity to express their perception about a good teacher.
* The top qualities can be summarized as under.
* A good teacher is one whose knowledge, understanding and conception about his subject matter is quite clear.
* Has a sharp skill of transferring the knowledge effectively to the ultimate satisfaction and needs of his students.
* Such a teacher also has effective discipline skills and can promote positive attitude among his students, for an effective study and work habits, and an overall sense of respect in and outside the classroom.

**Ability to develop relationships with their students**

* A good teacher develops relationships with students.
* A good teacher has the ability to keep a good and constant communication with his students during the delivering of the lecture.
* The nature of the job demands that a good teacher has good presentation skills to provide instructions to a class, and good interpersonal communication skills to work one-on-one with students.
* A good teacher is required to create a safe, positive and productive learning environment.
* A good teacher is always willing to listen the students when there is a problem.
* A good teacher regularly shares students’ progress with parents as needed.

**Patient, caring and kind personality**

* A good teacher is a compassionate person having sensitivity to student differences.
* Teacher’s temperament is strongly related to students’ learning and development.
* A good teacher provides an environment that allows children to reach their potential.

**Knowledge of learners**

* It includes an understanding of how students learn at a given developmental level.
* A good teacher knows that the learners have individual needs and abilities.
* A good teacher knows that instruction should be tailored to meet each learner’s needs.
* A good teacher understands the pace and capacity of the students.

**Dedication to teaching**

* A good teacher has a love of teaching or passion for the work, which includes commitment to students’ success.
* A good teacher should be willing to help and give time to solve the problem of individual students.

**Engaging students in learning**

* A teacher should be able to engage and motivate students to learn.
* Three types of engagements are required for students to learn i.e. cognitive, emotional and behavioral.
* A good teacher has the ability to make the contents of the lesson interesting and thereby motivating the students to learn.
* A good teacher can motivate his/her students for a success in and out of school.
* A good teacher develops strong bonds with students, and uses them to help students learn.

**Leadership skills**

* Good teacher needs leadership skills and patience to train students to function in a disciplined environment.
* It is at the start of the session, when students are told to behave properly and follow the basic classroom policies required to maintain discipline and helpful atmosphere necessary for good teaching-learning process.
* A good teacher needs patience, to avoid speaking out in anger or frustration when students are loud or speak out of turn.

**Creativity**

* A good teacher needs to bring a creative ability and personal style to his role to help students achieve academic success.
* A good teacher needs to come up with creative and interesting examples to get the students excited, who sometimes fail to focus at repetitive contents or dry lesson.
* The useof latest classroom technology devices such as tablet, computer, and interactive whiteboard can help the students get excited while enhancing their learning experience.
* A good teacher is always excited to learn about all new technological devices which are in use all over the world for the best teaching-learning environment in the classroom.

**Optimistic Attitude**

* A good teacher needs a genuinely optimistic attitude.
* Students usually come in the school with one or the other familial problem with them, unaware of the solutions.
* An optimistic and good teacher can help kids to focus on the positive aspect of the problem and thus nullifying the possible negative impact of the problem/s that may affect his academic progress.

**Top signs of a good teacher**

* He sees the class as that of individuals, not as a drawer full of case files,
* He keeps his sense of humor against all odds,
* He deals with the upset kids, clueless administrators, and aggressive parents with grace and dignity.
* He is not afraid to be flexible and creative,
* He knows when to make a stand and when to choose his battles,
* He sees the parents as allies, not enemies,
* He never gives anybody any doubt as to why he went into teaching.
* He loves his job, and he shows it.
* His students love him too.
* He is expert in communication skills.
* He has the superior listening skills.
* He has deep knowledge and passion for his subject matter.
* He is easily approachable and friendly to all concerned.
* He has the excellent organizing and performing skills for what he is given the responsibility of.
* He has the strong work ethics.
* He has the community building skills in abundance.
* He has high expectations from all and satisfies those who have high expectations from him.

**Personality** **development of students**

* Personality means the characteristics and appearance of a person—his thoughts, feeling, behavior, communication ability and physical features.
* With the help of simple methods anybody can develop a winning personality and change his/her future.
* With the help of good training a child can learn communication skills, different subjects, driving or computer operating.
* Similarly, training in personality development enhances the general as well as unique traits (characteristics which differentiate from one another) of a person.
* A teacher helps in personality development of students, in order to get positive thought pattern, gain confidence, improve behavior, learn better communication and develop a healthy physique.
* Good personality doesn’t mean wearing of good dress or a well build body, but, the inner personality that has a longer lasting impact. Therefore, inner and outer personality of a child needs to be develop that requires;

**Setting an aim in life;**

* Life is not an aimless destination that is driver by sheer luck. But, is a target that is achieved through a plan of action.

**Power of knowledge,**

* Knowledge is a weapon that is required to impress others. To update the knowledge,
* Read news papers
* Watch informative programs at TV.
* Read good and popular books
* Interact, interrelate, and communicate with intelligent persons.

**Confident look,**

* Think positive then looks will be automatically positive.
* Always wear a smile at your face.
* Confident faces impress others; so, feel confident rather than looking frustrated.
* While shaking hands have an eye to eye contact with others.

**Style of speaking,**

* Speak clearly and forcefully with sweetness and command.
* No mistakes of grammar and pronunciation.
* Speaking power is an essential trait of a good personality

**Smart dress,**

* Successful persons in every field usually wear smart dress to feel more confident and relaxed.

**A healthy body**

* A healthy and smart look is absolutely essential to attract others.
* Exercise regularly, play games and go for a morning walk.
* Eat a balanced diet.

**Good habits,**

* Cleanliness, punctuality, completing your work in time, fulfilling your promises, being sincere and dedicated to your work.
* Listening other people with empathy.
* No smoking and no drinking are the essentials for sparkling the overall personality.

**We get the result of what we think. So, think big and live big.**

**Ascent of pedagogy depends on certain factors such as;**

* Talent search and personality development.
* Use of technology in teaching
* Discipline
* Use of audio-visual aids
* Teaching of subject and its proper lesson planning
* Moral education
* Monitoring of academic performance of individual students for giving award
* Report of good behavior and misbehavior to the concerned authority
* Maintenance of records
* Frequent counseling
* Health awareness
* Frequent motivational activities
* Encourage sports and co-curricular activities
* motivation

***Teachers are the fulcrum of teaching learning process. They are the catalyst to empower the future generation. Right kind of teaching is provided now a-days only through computers, Audio-visual aids, use of CDs, smart boards, e-mail learning etc. Educational institutions cannot afford to ignore detach. Most of the faculties are not very well aware of its use. Grooming of faculty for technology based teaching methods thus becomes imperative***

**5.2 GROOMING OF TEACHERS**

**What is the grooming of teacher?**

The process of refining and developing personal and social traits, such as care, concern, sensitivity, acceptance, empathy, co-operation, etc, of teachers as per the requirements to implement the strides in modern technology and the specific need of the school, if any.

**Importance of grooming**

* Today information ‘technology is in fast forward’ mode and so is the education. The seeds of a dramatic transformation in education are being planted.
* Prompted by massive revolutions in knowledge, information technology, and public demand for better learning, schools worldwide and nationwide too are slowly but surely restructuring themselves.
* This implies that teachers need to understand and learn these developments and skills right now, so as to inculcate them in students for their future needs.
* This also means that the teachers are needed to be groomed.
* If the teachers are not groomed on the needed or right skills, they may not be able to bring the required excellence for the investment schools are making in them.
* Schools spent about 70% of expenditure at the salaries of teachers.

**Grooming considerations**

* There exists a subjective and dynamic environment in the school with a wide range of age difference among the teachers of different subjects with varied teaching experience.
* Assess and understand it first, then identify the grooming needs of individual teachers.
* Teaching skills and performance profile of each teacher is taken into consideration for the grooming needs of the teacher.
* Schools leaders must be practical to ensure concrete contribution from teachers after their grooming.
* To make grooming effective, schools need to focus on understanding teachers,
* Where they are coming from?
* What skill-set they already have?
* What skill-set they may need?
* What would motivate them to be ready for grooming?
* And more importantly what the school needs at this time?
* Understanding this and identifying the right skills to groom a teacher, requires measuring skill-profile of the teacher.
* Individual grooming of teachers requires patience, time, money, expertise and efforts.
* Due to lack of time, this is not happening in the current school system.
* If this is not possible at school level, engage the external experts, to measure a battery of core teaching skills for grooming the teachers.

**If the teaching of a teacher is less than the excellent**

* Then a remediation plan (reformative, alleviative, and remedial) is required to be instituted in order to enhance the performance.
* A sound remediation process identifies issues early, improve skills, and maintain competency.
* Remediation can provide an educator a systematic plan to assist students in developing learning strategies and skills for success.
* If teaching performance still remains less than excellent, departmental action is considered to be followed.

**Grooming tips**

1. A teacher remains a teacher for his/her whole life. It is a 24 hours seven days a week work and hence amongst the toughest career of the world.
2. Teachers are the back-bone of any school/educational organization and without them the infra structure of the organization cannot remain in an ideal position.
3. A teacher must learn dissimilar teaching methodologies and teaching styles.
4. Teaching approach must always be positive.
5. Training, seminars and workshops play a vital role in the enhancement of confidence level of the teachers.
6. Teachers should be well versed and should know the psychology of his/her students for better learning and teaching skills.
7. Group work must be learnt and dealt with Excellency by the teachers as it helps them to collect and learn different teaching techniques.
8. Use the visual aids especially with the help of new technology and internet.
9. Lessons must be prepared by the teachers before they walk into their respective classes to avoid any haphazard situation.
10. Reading books is an excellent grooming tip for teachers of all levels.
11. Other than course books a teacher must read and store interesting books best suited for his taste and stamina.
12. Exploit the information present in the books according to the level of students in order to make it easier for them to understand.
13. Wearing a wrist-watch completes the personality of the teacher wherein it is required to keep mindful of time and punctuality for complete delivery of the lesson.
14. He/she should inspire hope, ignite the imagination and instill a love of learning among students. He/she is the one who shapes the minds of students and set them sail in the right direction.
15. Teach the students in a friendly way so that they could learn better and make it sure that they command respect equally from students and their parents.
16. Teachers should make the students believe in them, help them overcome their setbacks.
17. Show the students the right path under all circumstances and never shy away from the responsibilities and duties.
18. Train and teach them to convert pressure situations into motivation and success.
19. Believe in students than no one else does.
20. Make them accountable of their actions and decisions.
21. Encourage the students wisely when they are wrong. Be a friend, a philosopher and a guide to them at a stretch.
22. Make the students believe that they can change the world and can make a difference.
23. Make them accountable of their actions and decisions.
24. Try to make your personality of an ideal teacher, in the larger benefit of the society. An ideal teacher is a live machine who transforms ordinary kids into positive, productive and reliable persons who can take responsibility of making the world a better place for human beings.

**What a teacher is required to be aware of;**

* Growth:
* Passion Ideas
* Dreams
* Inspiration
* Encouragement
* Dedication drive
* Strength
* Heart
* Honesty
* Believe and love

**1) Growth:**

**(i) Good teachers are always learning and growing their craft.**

* They are on an endless journey where they are always looking for new ideas or teaching strategies, ways to improve their skills or new information that will help their students to succeed.
* It takes a lot of hard work and effort to be an ideal teacher. It takes time to go to seminars, conferences and serve on committees.
* It requires effort to go an extra mile for students who need it.
* And it takes patience to continually grow and truly understand the craft as a teacher.

**(ii) Professional development promotes students’ growth.**

* Use the most-recent educational technology.
* Set high expectations for student achievement.
* Plan instructional strategies.
* Apply high order thinking skills.
* Use co-operative learning (an educational approach which aims to organize classroom activities into academic and social learning experiences).
* Apply class-room management technique.

**(iii) Make use of your time**

* Focusing your students’ attention on the tasks at hand.
* Using materials and technology appropriately.
* Evaluating class-room instruction.
* Planning according to students’ ability (differentiate instruction).
* Optimizing the task at hand.

**(iv) Improve your performance**

* **Read:** Join a professional scholarly journal, go online and read educational blogs, or read some literature on education. Yes the knowledge is power and is acquired by reading.
* **Participate:** go to educational conferences or workshops, or attend online seminars. Participation in these types of events will make you a more effective teacher.
* **Join a group:** There are many online and offline groups, all of these are a great source of information.
* **Observe your peers:** an effective teacher takes the time to observe other teachers. These teachers can be a great source of knowledge for you. You can find a new strategy to teach or behavior management plan to implement.
* **Don’t be afraid to take risks:** “where there is no risk, there is no gain”. Often teachers get so comfortable in their daily lives that they forget to take a risk. A risk may be in trying to implement the new technology that we have heard so much about. Before you try something new in your class-room, make sure that you have done your research about it. This will help you take the risk. Try observing other teachers who may have already implemented that strategy or piece of technology. Keep always learning and always growing.

**2) Passion ideas:**

**(i) Being enthusiastic and a passionate teacher**

* Passionate teachers get better results.
* They are also driven by a deep desire to teach and help others.
* These teachers give their heart and soul to their work, and to the students they teach.
* Teachers who are passionate about making a difference are more likely to make a difference.
* Teaching is an emotional work and greatness comes from passion.
* Passion puts mankind on moon.
* Passion is what, that drives people to excel despite the inevitable hurdles they face along the way.
* People who are passionate about their work love what they do.
* They find purpose in their calling—a purpose that drives them to work hard, to learn along the way, and to achieve more than they have ever accomplished before.
* Their work challenges them and pushes their abilities to their limits.
* The challenge excites them. It forces them to learn, think and grow, and amidst this, it is almost as if their work becomes play.

**(ii) Passion helps you persist**

* Passion of passionate people fuels their efforts, and it helps them push through the obstacles.
* Even the best teachers have bad days.Teaching is a hard work, and for those of us who care about kids, it can be emotionally draining.
* Your passion to make a difference can stop you from throwing your hands in the air and thereby giving up.
* That’s the reason that teachers’ passion is so important.
* Passionate teachers get better results
* Your passion becomes their passion.
* Your passion is contagious.
* It gets your students passionate about learning.
* It ignites their inner curiosity, and it gives them confidence in their own capacity to learn.

**(iii) Passionate teachers generate enthusiasm,**

* This brings out the best in their students and allows their performance to soar.
* Share your joy for teaching, for reading for everything, as it forms the foundation for a love of learning.
* **Passion makes learning fun:**when you have passion you make the hard work, the learning, fun.
* **Teachers’ passion is crucial:**teachers’ passion is vital, it affects how students act, and it affects how well they do.

**3) Dreams**

* Advise the children about the importance of having dreams and setting goals.
* Work hard and be optimistic, for the goal/s they aspire.
* Urge them to dream big: When they grow up, they can translate their dreams into reality, they can become what they want, a dentist, a teacher, a scientist, a doctor, an engineer or an author.
* Show them how to set and stick to goals.
* Sit down with your child and come up with their goals both big and small!
* They can get creative by writing or drawing their dreams on a poster board.
* Have a brainstorm on how you can work to make their dreams come true together.
* Remind them that they can do anything
* Have an honest conversation about all of the hard work their dreams will require while letting them know that they are 100% capable of achieving their wildest dreams.
* Help your child focus on who they are?
* Make sure that they are defined by their heart, character, abilities and those who love them, not by their physical appearance or the opinion of others.

**4) Inspiration**

* It must be recognized that ‘inspiring students’ is not a one-way process.
* The educator who can inspire students to learn will always gain personal and professional inspiration from observing students’ positive engagement with the subject materials.
* Students can inspire their teacher--but only if the teacher initiates the process by inspiring them to learn.
* Inspiring students is primarily a matter of motivation. When inspired, students are motivated to engage with the subject and to learn.
* An individual’s motivation to learn is determined by a range of factors such as,
* The learners’ desire to please the teacher.
* Perceived need for the material presented
* The learners’ attitudes towards the materials being delivered
* The academic and career aspiration of the learner
* Incentives and rewards which are expected to accrue from the learning.

*The relative importance of the different factors as suggested varies over time and with circumstances. In order to maximize learning, it is the educator’s task to maximize the positive attributes of each of the factors mentioned above.*

**5) Encouragement**

**Ways to encourage the students to take responsibility for their**

**learning**

**(i) Don’t make all the decisions**

* Allow choice. Encourage students to make choice about how they learn best.
* Create opportunities for them to pursue their own interests and practice skills in a variety of ways.
* Cater for different learning styles.
* Don’t expect everyone to respond in the same way.
* Integrate technology to encourage creative expression of learning.

**(ii) Don’t play guessing act, what’s in my mind**

* Ask open-ended questions, with plenty of possible answers which lead to further questions.
* Acknowledge all responses equally.
* Use thinking routines to provide a framework for students to encourage with new learning by making connections, thinking critically and exploring possibilities.

**(iii) Model behaviors and attitudes which promote learning**

* Talk about your own learning.
* Be an enquirer. Make your thinking process explicit.
* Be an active participant in the learning community. Model and encourage enthusiasm, open mindedness, curiosity and reflection.
* Show that you value initiative above compliance.

**(iv) Ask for feedback**

* Get your students to write down what they learned, whether they enjoyed a particular learning experience.
* What hindered their learning and what might help them next time. Use a thinking routine like connect, extend, challenge. Take notice what they write and build learning experiences based on it.

**(v) Test less**

* Record students’ thinking and track development.
* Provide opportunities for applying learning in variety of ways.
* Create meaningful assessment tasks that allow transfer of learning to other contexts.

**(vi) Encourage goal setting and reflection.**

* Help students to define goals for their learning.
* Provide opportunities for ongoing self-evaluation and reflection.
* Provide constructive, specific feedback.

**(vii) Don’t over plan**

* If you know exactly where the lesson is leading and what you want the kids to think, then you are controlling the learning.
* Plan a strong provocation that will invite the students in and get them excited to explore the topic further.
* But, don’t plan in too much detail where it will go from there.

**(viii) Focus on learning, not work**

* Make sure you and your students know the reason for every learning experience.
* Don’t give ‘busy work’.
* Avoid worksheets where possible.
* Don’t start by planning activities, start with the ‘why’ and develop learning experiences which will support independent learning. Include appropriate tech tools to support learning.

**6) Dedication drive:**

* To a student it means a teacher should be “always willing to help and give time”.
* Passionate teachers know that it is their role to encourage students for an active learning and concern themselves with promoting students’ intellectual and moral development. Teachers who work with passion, enthusiasm, and dedication, their commitment increases, and they believe in the importance of their job.
* Dedication refers to a love of teaching or passion for the work, which includes commitment to students’ success.
* Response often refers to loving the subject matter or simply being dedicated to the work.

**7) Strength:**

* Communication and social skills.
* Patience, responsibility and tolerance.
* Ability to solve conflicts, emotional intelligence.
* Creativity and enthusiasm for teaching.
* Ability to explain difficult things in a simple way.
* Ability to connect with children or with older students, on a personal level.

**8) Heart:**

* The heart of teaching means to be a great teacher.
* A great teacher shows kindness to students, colleagues, parents and those around him/her.
* Kindness makes the world go around.
* It truly changes the environment in the classroom and school.
* Being a kind teacher, helps students feel welcomed, cared for and loved.
* Teaching is a very humanistic profession, and compassion is the utmost feeling of understanding, and showing others you are concerned about them.

**9) Honesty:**

* Teachers have to build and maintain trust with students, families and colleagues to be effective.
* Trust comes from 5 qualities, each one is important as the next—***kindness, reliability, competence, honesty and openness***—that must come together to foster a sense of belief in your work.
* Honesty is just telling the truth.
* Honesty tempered with compassion makes teachers more trustworthy.
* Honesty is found in plain language.
* Practice what you preach.

**10) Believe and love:**

* When you believe and love your students they do better.
* It is obvious that students achieve at higher levels when teachers believe in them.
* A simple message from teachers can change students’ whole trajectories and achievements.

**11) Personality of a teacher:**

**Ingredients of a successful teacher;**

* It needs constant self direction towards sincerity, personal integrity, sociability, courtesy, morality, wisdom etc, these characteristic should be a part of a teacher’s life. These are the ingredients of a successful teacher.
* Every teacher has to keep motivating her/his pupils to succeed in academics and in life.
* Teachers need to be self motivated.
* It is important for teacher to help in personality development of students. It helps the students to get positive thought pattern, gain confidence, improve behavior, learn better communication and develop a healthy physique.
* Teachers are required to take care of their own, as they are the role model for their students. Students use to follow their teachers’ conduct.
* They respect their teachers. Respect cannot be demanded, it has to be earned.
* Looking smart and professional is the demand of teaching profession. Smartness will boost the teachers’ confidence and self esteem. And in turn they will earn respect from their students.
* Personal grooming and etiquettes go hand in hand as they complement each other perfectly. It’s like using a knife and a fork. You cannot use one without the other.
* The main role of a teacher is to educate, it is not to distract the attention of students. So, keep your attire simple. Simplicity is the key in any educational environment.
* Teachers can dress simply by keeping accessories to a bare minimum.
* For female teachers, this means probably only a pair of simple earrings and/or necklace. Strictly no bling bling earrings or pearl necklaces. These are sure to distract students’ attention.
* For male teachers it is even easier to adopt simplicity. There is no need of a tie except in some occasions or functions.
* It is said that a person is judged by his shoes. So, if you have never really bothered, it’s time to sit up and get a good pair of comfortable shoes, a must-have imperative. Shoes are supposed to be a finishing touch to a lasting positive first impression.
* Now, look out at your hair style. It should be proper and simple. A messy, out of bed look is definitely a no. Appropriate amount of hair products should be used to keep your hair in check. That’s all, so simple.
* Maintain dining etiquettes while dining in the school with your fellow teachers or with your students.
* During grooming session, participants can also share their class-room experience and innovations with their peers thus, resulting in enriched learning.
* Resource persons can move amongst the participants, thus, developing a closer rapport
* Right kind of teaching is provided nowadays only through computers, audio-visual aids, use of CDs, smart boards, e-mail learning etc. Educational institutions cannot afford to ignore it. Most of the faculties are not very well aware of its use. Grooming of faculty for technology base teaching methods thus, becomes imperative.

**5.3 GENERAL INSTRUCTIONS FOR TEACHERS**

**General instructions for teacher**

* Report the duty in time. Record the time of arrival and departure in staff attendance register for every working day.
* Observe the leave rules.
* Remain present in assembly hall at least five minutes before the assembly time and help students in maintaining the discipline and participate in assembly.
* To make it sure that the students are in uniform, make a list of those who fail to wear the complete uniform.
* To maintain the attendance register of students properly.
* Keep the absent record of students.
* Use a few minutes of first period telling about the importance of the moral values and discipline.
* To keep the classroom neat and clean.
* Make the students aware of their responsibility of keeping the furniture, electric fittings and electronic equipments safe in the classroom..
* To tell the students about maintaining the importance of keeping the entire school property safe.
* To intimate properly the detailed weekly timetable to the students and parents and the change, if any.
* To instruct the students bring the necessary books and note-books as per their class timetable that has to be checked before leaving home to the school.
* To make sure the proper and regular use of the students diary. Note each and every default committed by the student is to be noted in the diary.
* Class teachers are required to prepare the class timetable and display it properly in the classroom. Make the monitor of the class responsible for its safety.
* To instruct the students, especially the monitor to maintain the discipline in the classroom as well as in the school.
* To observe the conduct of every student and report to the Principal about the incident/misconduct of the student/s.
* Not to leave the class un-attended in any case.
* To give due importance to oral work, handwriting, reading and pronunciation.
* To keep pace with the advancement in technology.
* To consult the Principal/HOD in case of any problem academic or otherwise.
* To assign the homework regularly, check and evaluate carefully and thoroughly within a specific frame of time.
* To make the weekly lesson plan sincerely and regularly and submit the teachers diary to the Principal for checking in the first period of first working day of every week.
* To enlist the difficulties concerning the syllabi and record the necessary suggestions and recommendations for improvement.
* To report to the Principal, in case a student/s is not feeling well and make sure that his parents are informed immediately about the ailment of their ward.
* Proper prescribed procedure is to be followed for students’ award.
* To be present on the last working day of every month/PTM to discuss the performance, progress and problems of the students with their parents/guardians.
* Not to indulge in un-necessary discussions with the parents without the knowledge of the Principal in daily routine.
* To collect the students’ possessions left by them in the classrooms, in the last period daily and return the same to the student/s concerned on the next day.
* To avoid physical punishment to the student.
* To inspire, motive and guide the students on daily basis.
* To talk in English with the students and colleagues in the school.
* To make a careful reading of the notice/circular/office-orders and to work accordingly.
* To maintain a polite conversation with the students, parents and colleagues.
* To perform the assigned additional duties properly and sincerely.
* To make the regular efforts to achieve the objectives and goals set by the school.
* To work in accordance of school’s strategic planning.
* To make the suggestions and proposals for the betterment of the students and the school.
* Do not allow the parents to reach the classrooms except in the dire consequences.
* Week-end seminars hold an important position. Leave on the date is generally not permitted except in emergency situations.
* To look into difficulties/disputes/problems of the students and efforts are to be made to resolve/solve the same and if needed the matter can be brought to the notice of the Principal’
* Class-in-charge is to maintain proper record of leave applications of the students of their respective class.
* To report the continuous absence of the student (without information) to the Principal.
* To report to the next period in the next class without any delay or wastage of time.
* Utilize the adjustment/arrangement period in a very useful manner.
* To guide, encourage, motivate, inspire, help and facilitate the students in their pursuit of studies and activities.
* To give special and personal attention to slow learners/physically handicapped/mentally retarded/naughty students and suggest remedial methods seeking co-operation of the parents for better performance and conduct.
* To give general commands and instructions in English inside and outside the classrooms in order to improve communicative skill of the students.

**5.4 AWARD SCHEME FOR TEACHERS**

Teachers are the foundation of the education system. What they do to the students is always a matter to be appreciated.

* If the teachers perform well, then the students are benefited.
* The performance of a teacher can be measured by the performance of his/her students.
* The teachers who nurture the students with the values of life, education and talent development, should be honored for their guidance and encouragement for providing the students with a platform to express themselves.

**(i) Innovation for motivation**

* Set up a group of enthusiastic teachers for the purpose, who will guide the rest of their fraternity for finding the ways and means to motivate the students through technology or by using teaching aids, lectures including moral lectures, excursion and visit to historical places, industrial townships, industrial locations, industries and other relevant faculties, projects under-taken.
* It is suggested that the quality of teaching and teachers’ performance should be gauged as per the following guidelines.

(i) Teaching Activity

(ii) Post teaching Activity

(iii) Non-teaching Activity

**(ii)** **Teaching Activity**

* Advance lesson-planning.
* Class-room discipline.
* Students’ involvement during the teaching of lesson.
* Style of teaching and body language.
* Question and answer session.
* Black-board work/use of smart-boards and internet.
* Use of audio-visual aids.
* Extra or relevant information given in regard of lesson.
* Use of internet for innovative teaching during class-room teaching-learning process.
* Home assignment given.
* Proper checking of class-work and home-work. A record of the activity is to be kept properly.
* Quality of introduction and evaluation of the lesson.
* Any special project taken by the teacher.
* Rapport/relation with students.
* Activity of teacher during substitution period.
* Moral boosting measures and future building guidance. Weekly report of such an activity is to be prepared by the teacher.
* Any other special comment by the teacher

**(iii) Pre and post teaching activity.**

* Teaching target of the week.
* Weekly assessment of the quantum of target achieved.
* Problem of students, educational or otherwise, remedial suggestions and attention paid to solve them.
* Any special incidence/s.
* Anything noted specially during the checking of H/W , C/W,
* Rapport with other staff-members.
* Self discipline.
* Time taken to complete the syllabus.
* Number of times the syllabus revised.
* Co-curricular activities.
* motivation of students for participation,
* Innovation,
* Help.
* Identification of talents among students.
* Talent building activity to be reported in detail.

**(iv) Non-teaching activity**

* Strive for the gradual improvement of the students. Poor students’ performance tried to be improved to a possible extent.
* Rapport with parents and class-teacher for those students who require special attention for their educational and behavioral improvement, details of efforts being done in this regard.
* If parents fail to co-operate, matter is to be reported to the principal or the committee specially constituted for the purpose.

**(v) Other suggestions deemed fit for implementation**

**5.5 POLICY FOR GUEST (CONTRACT) TEACHERS**

Delhi Government approved policy for guest teachers to continue till age of superannuation;

* The Delhi cabinet approved a policy to allow guest and contract teachers to continue in the job till they attain the age of superannuation so that schools can avail of their services uninterrupted.
* Deputy Chief Minister and Education Minister of NCR Delhi, in a letter written to the Lieutenant Governor, urged him for the approval of the policy adopted by the NCR Government.
* According to the policy, the appointment of guest teachers in government schools were necessitated to ensure uninterrupted education of children mandated under the Right to Education Act.
* The cabinet decided that all guest and contract teachers who were roped in on merit basis in the past have been appointed until the date of notification of the policy and shall be entitled to its benefits.
* All such teachers will continue to function with the DoE till they attain the age of superannuation as determined by the government for its regular teachers.
* His letter to LG came against the backdrop of protest by the guest teachers in the National Capital.
* Among many of the 25,000 teachers use to face an uncertainty after their contract of service ends.
* The Delhi government had passed a bill to regularize the employment of around 15,000 guest teachers (who were working on contractual basis) in the government run schools in October 2017
* The Delhi High Court had directed that guest teachers would continue in their services till Feb 28, 2019 or till the time regular teachers were appointed.
* It gave the direction during hearing of a plea filed by an NGO against the Delhi Subordinate Services Board over the appointment of permanent teachers.

**5.6 PREPARATION FOR NEW SESSION**

After about a month and a half of school holidays, preparations for a new school session can be overwhelming and intimidating for one and all, be they are the students, parents, teachers or other school staff including the Principal.

**For Principal, school staff and the school authorities**

* Building maintenance and all kind of repair-work including electricity work, fans and ACs, computers, repair of old and purchase of new.
* Maintenance of smart boards and relevant soft and hard-ware are required to be fully functional before the commencement of New Session (April,1st.)
* Proper and complete timetables are needed to be ready before the new session.
* Keeping the plan ready for teaching.
* As per Delhi Education Act 1973, every teacher is required to devote 1000 of his/her teaching hours during the academic year.
* In addition a teacher is also required to devote 200 hours for extra classes/coaching/remedial classes, after the school is over i.e. one hour 20 minutes per day, for remedial classes.
* Proper and effective teaching can only be carried out with required number of teachers for each subject. Appoint the teachers, if required.
* Shortfall in number is certain to affect the quality of education.
* It is therefore obligatory for the Management to accelerate the process of appointment of the required no. of teaching staff for each subject, to get the worthwhile outcome.

**Preparing for new session (students)**

* Review what you learned last year.
* Complete your holiday home work before opening the school.
* Glance through course guide.
* Follow e-learning.
* Students have to set some goals before beginning of the new session, to work over the course of the years.
* Work on your time-management skills. Studying is hard, especially when you don’t know the time-management wisely.
* Arrange your studying environment.
* Combine both intellectual work, that is studying and physical work, take up sports.
* Ask your educators and classmates for help whenever you feel it is required.
* Make new friends of your caliber and taste.
* Managing the stress and bringing your life into balance is a good skill to gain. Whatever you do for your stress management, the aim is to get rid of stress
* Resolve to work hard and set a few short term and long term goals, and strive hard to achieve them

**Preparing for new session (Parents)**

* **Sleep for school:** In order to keep the minds of students alert and fresh, a sound sleep of 7-8 hours for children is required. Make a time schedule to keep your child fresh.
* **Look up to learning:** Share with your child the sweet memories he/she may have experienced during the last academic year. The activity will improve his/her level of interest and liking for attending the school.
* **Walk through it:** For little kids your company will be a mood booster. Familiarize your child with key places like library, wash room, canteen etc of the school.
* **Suit them up:** Shopping for school supplies is a fun and excitement activity for children. Allow them to have the school bag, lunch box, water bottle, new clothes, color box, pencil box etc. along with school uniform, of his/her own choice.
* **Talk it out:** Asking your child about the school carries. It shows that you are interested in his/her education and give value to his/her school.
* **Bring it home:** Helping your child with his/her H.W. is worth appreciable and give tremendous encouragement in his/her further studies. Remember the students who use to study regularly at home climb a notch better in their studies.
* **Go farther:** Involvement in school functions is morale booster for your child. Participating in school’s other activities is a valuable way of connecting to the school community. You can learn a lot about the school just by talking to fellow parents. **Keep your eyes (and ears too) open:** If your child’s eating or sleeping habits have changed drastically, it may be a sign that he is having difficulty in adjusting to the new grade or an indicator of some other difficulty.
* **Read, read, and read:** Reading with your child is an invaluable way to spend quality time together on a daily basis. Reading together has a personality development effect at your child.
* **Connect.** Communicating with your child’s teacher on a regular basis is an important activity.

**Fist day at school**

**What should teachers do on first day of school?**

There are about 11 things that all the teachers are required to do on first day after summer vacations.

* Greet your students.
* Have work for them all day.
* Introductions.
* Build community. Building community is important because then, throughout the year, you can work together like a team or a family.
* Teach procedure.
* Enforce rules.
* Question and answer time.
* Read. On the first day demonstrate the importance of literacy by creating a time reading.
* Observe and assess.
* Ease the nerves of the students.
* Reinforce positive behavior and moral values.

**5.7 TIMETABLE**

Quality of teaching-learning process depends at the required number of teachers and their dedication towards their noble profession.

* A school where there is a dearth in required number of teaching-staff is not supposed to deliver the batch of students, the desired quality of teaching-learning activity.
* Where there is excess in no. of teaching staff there is needless loss of precious amount of money.
* It is an important and unbiased regulatory document. Before its documentation certain guidelines are needed to be observed in order to extract the maximum benefits.
* Head of an academic institution is duty bound to keep the time table ready for implementation well in advance, before the commencement of every academic year.
* The ratio for one section to teachers is 1:1.5 (as per Delhi Education Act 1973), and the number of periods assigned to the principal in a week is 12 or more.

**RTE Act 2009 Envisages,**

* School hours for students ………………….……………. 6 hours and 10 minutes
* School hours for teachers………………………………… 7 hours and 30 minutes
* 45 hours work per week i.e. 7 hours and 30 minutes per day 6 days a week.
* If there are lesser number of working days more numbers of Working hours per day.
* Teachers may be retained after school hours for additional 1 hour and 20 minutes for planning/ preparations/checking and other follow up work and for ensuring safe exit of students after school hours.
* Full time Head-teacher/V.P for classes VI – Vi…… at least one
* Two or more V.P in the schools having classes up to XII, irrespective of strength.

**Number of hours to be devoted to the teaching of students:**

* A teacher shall devote in a year not less than 1200 hours to the teaching of students out of which not more than 200 hours may be devoted for the coaching, in the school premises, of weak or gifted students, before or after school hours.

**Timetable Considerations**

* A school timetable is a reference document created by professionals that clearly shows how school resources, such as teachers and class rooms, fit together with students’ schedule and school schedules, as well as with days of the week. Timetables may be created manually or through specific software.
* It is a frame work to run the school properly.
* It is a mirror that reflects the entire educational program that is followed in the school.
* It is a complete guideline for the teachers.
* It ensures orderly work
* It saves time and energy.
* It ensures right allocation of time for different subjects.
* It ensures proper distribution of work among teachers.
* It develops regularity and alertness in students and teachers.
* It helps to maintain discipline and order.

**Contents of a timetable;**

* Time of beginning and ending of the school day.
* Time of beginning and ending of each period.
* Subjects and activities offered during a specific period.
* Name of the teacher engaging in each subject.
* Name of teacher in charge of each division.
* It gives students, teachers, parents and administrators a clear picture of what’s happening in the class-room at any given time.
* It assists in maximizing school resources such as class-rooms availability.
* It adds structure to the school system for planning and documentation purposes.
* It helps to ensure accountability.

**Attributes of a timetable**

* In order to avoid the resentment among any of the teachers, allocate more or less equal number of periods to everyone.
* First half of the day should preferably be reserved for important subjects such as Mathematics and Science for class IX-X, and XI-XII.
* Avoid Math and Science periods just after the races or PT period.
* Avoid teaching of Mathematics in VII and VIII periods, at least for IX, X, XI and XII classes.
* Student’s comprehensive powers are better during the first half of the school, but certainly it is not possible to assign all periods to Math and Science in first half. Maximum possible early periods should be assigned in descending order of the classes.
* Assign equal number of periods to Mathematics, Science and English.
* Combine the classes of common subjects of Arts and Commerce class XI and XII.
* CCE warrants more time to the teachers during class-room activities. Therefore two block-periods per subject per week to be planned in the time table of secondary classes, also for Math and English for XI and XII.
* Keep a check on teaching of Math in all classes.
* Reserve one period in each class for learning skills.

**Principles of timetable construction;**

* The best period for fatigue creating subjects is the second and third period in the morning and second period in the afternoon.
* Mother tongue and manual work do not cause much fatigue. The first and the fourth period in the forenoon and the first and the third periods in the morning can be set apart for these.
* It is better not to have the same subject for the two consecutive periods. There should be alteration for mental and physical task.
* Work among the members of staff should equally be distributed.
* No teacher should be asked to teach the subject for which he/she is not qualified.
* Rest and recreation are essential for children so provision should be made for rest and recreation.
* The timetable should be flexible not rigid. It should be designed to make necessary changes according to the circumstances.

**There are seven types of a timetable;**

1. Master timetable
2. Class-wise timetable
3. Teacher-wise timetable
4. Vacant period timetable
5. Games timetable
6. Co-curricular activities timetable
7. Home-work time-table.

**1. Master time table**

* This timetable gives a complete, correct and comprehensive picture of the entire school program.
* It is a consolidated timetable.
* This timetable is meant to be used for principal, manager and the higher authorities.
* It helps in supervising the teachers’ work.
* It indicates the detailed work of individual teachers.
* It is a combined timetable of all the classes in a school.
* A copy of it should be kept in principal’s office and one in the manager’s room as well as in the staff room.

**2. Class-wise timetable.**

* This timetable shows the daily program of a class.
* It defines the distribution of each subject for each class.
* It specifies a particular teacher, in a particular class, about a particular the subject.
* It fixes the responsibility of teacher for a complete subject.
* It indicates the breaks and the periods for games and other co-curricular activities.

**3. Teacher-wise timetable**

* The timetable focuses on the teacher.
* The whole course is distributed teacher-wise.
* This is useful for teachers as it indicates where he/she will teach a subject.
* It should indicate a schedule of teacher’ non-academic duties.

**4. Vacant period timetable**

* This timetable shows the vacant periods of all the teachers.
* This is helpful in allotting work when a teacher/s is on leave.
* Availability of a teacher is indicated in a particular period.
* This is the best use of free time available with a teacher.
* A copy of this timetable is required to be made available with the V.P. for allotting a class to the free period of a teacher.

**5. Games timetable**

* This indicates the game in which a class will be involved in a particular period.
* It shows which particular group is engaged in a particular period and about the game.

**6. Co-curricular activities timetable**

* It shows the different types of activities in the school and the name of teacher in charge of those activities.
* The place where to be held and the time when to be held.
* It avoids the duplication of efforts and wastage of time and energy.
* It helps students to select appropriate activities of their choice.

**7. Home-work timetable**

* This is very important type of timetable that manages the burden of home-work assigned to the students.
* It ensures the equal attention to home-work in all the subjects.
* It helps the parents to know what home work has been assigned
* This indicates the amount of time, students will allocate to each subject every week.

***School timetable is an important document which maintains the even distribution of teaching work-load among the individual teachers and allows the students to know exactly when a specific subject is scheduled. A well constructed time table establishes a natural rhythm and routine, which can be comforting (bring comfort) to teachers and students***

**SECTION 6**

**STUDENTS’ REQUIREMENTS**

* 1. **TECHNOLOGY BASED EDUCATION**
  2. **LEARNING THROUGH COMPUTERS**
  3. **SMART CLASSES**
  4. **AUDIO-VISUAL ROOM**
  5. **IMPORTANCE OF CCTV**

**(SURVEILLANCE IN SCHOOL)**

* 1. **CLASSROOM AUDIO TECHNOLOGY**
  2. **SCHOOL BROADCAST SYSTEM**

**6.1 TECHNOLOGY BASED EDUCATION**

Technology based education is the integration of instructional technology into the teaching-learning environment of the classroom.

* In the past, teachers may have had little choice but to lecture because of the large size of their class.
* But now they have the option to explore online—learning experience where students can learn independently.
* Students are now able to do web-search at home, watch a video, or discuss with their peer on line.
* There are countless reasons why technology is a key aspect of learning in the schools.
* Technology is everywhere; and in order for our students to survive in post secondary education and the business world they must know technology.

**Use of technology in education**

* As demand for technology in education and skill increases, there is a growing emphasis for students to become digital citizens.
* Technology enables the teachers to deliver personalized feedback to students more easily; as a result this is giving rise to two-way stream of communication, and allows teachers to adapt their teaching style in order to maximize the learning outcomes for students.
* It also helps teaching staff to consider how they can most effectively provide audio and visual feedback in order to inform learners how to further improve their work.
* In US and other advanced countries the use of Virtual Reality (VR) headsets is becoming more common place in the classroom.
* This is because edtech companies want to utilize the potential benefits of this technology for education.
* It is based on its use in the commercial gaming world.
* Blended learning tools are in the process of developing to accelerate understanding and enable the application of learner’s knowledge to be developed during classroom activities.
* Another way the edtech is supporting pedagogy is that it also allows teachers to share their learning designs with other staff members.
* Over the last 10 years, the edtech sector has changed dramatically, with teachers, students and parents realizing the growing impact that technology will have on the way we learn, develop skills and teach.
* Mobile connectivity in particular has provided the sector with a number of new opportunities for operators globally to change the future of education through developing the skills of 21st century digital workforce.

**Reasons to adopt technology in education**

* **We use technology** to make education work effectively for the needs of 21st century work-force and support students in their journey to becoming digital citizens?
* **Students demand it:** students engaging in technology outside the classroom constantly demand it. Kids like to be interactive, and learning through technology has now become a part of their lifestyle.
* **New teachers are demanding it:** in schools who have adopted the technology and the teachers who have learned to teach through it, and for new teachers technology is considered a necessity for the learning environment
* **Kids are the digital native:** kids know better than most adults. It has become the easiest way they learn, because it is such an integral part of their life. Engaging with technology in classroom has not only helped them learn better, but they also acquire multi tasking skills.
* Kids can learn at their own pace:
* **With technology there are no limitations:** having access to other information outside of the book gives students many different ways to learn a concept. Teachers can come up with creative ways to teach their students that keep them engaged.
* Technology has the ability to enhance relationships between teachers and students.
* Technology is necessary to succeed outside of school education.
* **More educational opportunities:** The effective use of technology in education has changed the face of education and it has created more educational opportunities.
* Both teachers and students have benefited from various educational technologies.
* Teachers have learned how to integrate technology into their classrooms and students are getting more interested in learning with technology.
* The use of technology has removed educational boundaries; both students and teachers can collaborate in real time using advanced educational technologies.
* Technology has helped in the growth of mobile learning and long distance learning.
* The use of internet technology has enabled teachers to reach students across borders and also students from developing countries have used internet technology to subscribe for advanced educational courses.
* Many universities and colleges have embraced on line education by creating virtual classrooms.
* On line education is flexible and affordable.
* Students can attend classrooms in their free time, and they can have a chance to interact with other students virtually.
* This new educational technology is supporting both teaching and learning processes.
* Recent advancement in educational technologies has yielded positive results in our educational sector.
* Technology has digitized classrooms through digital learning tools like computers, iPads, smart phones, smart digital white-boards; it has expanded course offerings.
* It has increased student’s engagement and motivation towards learning.
* Technology should not and cannot replace teachers. Its main use is to enable students learn better through increasing their engagement in educational activities.
* Technology has to improve the learning process and aim at improving students’ grades.
* Technology is not having cool iPads or expensive gadgets.
* Technology has to facilitate and stimulate individual learning. Students should use technology to learn on their own with limited help from teachers.

**Importance of use of technology in classroom**

* Students while at the off campus interact with each other through technology. So, integrating this technology into classroom will simply make it very easy for them to learn.
* Teachers have to learn how to use the latest new educational technology so that they also simplify the way they do their job.
* Technology provides educators effective ways to teach and reach different types of students.
* Technology can also bond the relationship between teachers and their students, because teachers will have to interact and guide students on how to use this technology.
* This will bring teachers closer to students, since these students can use technology platforms like Piazza.com to ask questions and get instant answers from their teachers.
* It is also important to incorporate modern technology in classrooms a way of preparing students for tech demanding jobs and tasks. Now every job will require some skills of technology, so it is very important to bring this technology in the classroom and also incorporate it into the curriculum.
* Beside that technology is much cheaper than what we think.
* Technology has played a big role in changing the education environment in so many schools which have implemented it, but with the active co-operation of teachers.
* However, every school is not so fortunate of using this technology in their classrooms or education system because of its high cost. By the grace of ALLAH we are in a position to afford and introduce it for easy access to academic information and ability to learn.
* Encourage students to use various multimedia technological tools to demonstrate themselves in classrooms. In this way students get more involved in this process and learn better.
* It is very easy to learn new subjects using a computer and internet. Many computer applications have been created to make learning of new subjects easier

**Need for Training the teachers**

* Integrate new educational technology in classrooms.
* Teachers will have to be trained on how it works.
* To some extent this is a difficult task, because we are used to teaching the students, not them getting taught.
* Most of them have less time to learn new technologies.
* As for the students, they will find it difficult to learn these technologies without the guidance of their teachers.
* If we intend to enjoy the benefits of technology, (that seems to be a bit difficult tool), we will have to find a way to integrate it in our curriculum, so that in every subject taught, students and teachers find its great use.
* Refusing to learn technological tools and how to use them in classroom, may leave us backward and this can also effect on the grade of students.
* As the world develops, more technological jobs will pop up.
* Our students need to be prepared for this new era of tech demanding jobs.
* Most of the jobs we have today will not be worth in 5—10 years.
* Technology will prepare the present day students to capture the opportunities which will be more rewarding than the present jobs.
* If we are reluctant to use the modern technology, it means that *“we are denying our students the chance to compete tomorrow.”*

**Barrier to the effective use of technology**

* To a great extent, the lack of professional development and support has acted as a barrier to the effective use of technology in education.
* Teachers feel unprepared to learn and integrate technology in their classrooms.
* Yet for the students, they have the knowledge of this technology for educational purposes.
* There is a lack of training programs to teach these teachers the ways they can use technology to simplify their job and also make it easier for their students to learn better.
* So, if teachers have no teaching skills for using technology for educational purposes, then students will also miss out on these skills.
* We are thus required to emphasize the use of technology in the class and the teachers should be well trained and well equipped with technological tools for education.
* ‘Resistance to change’ seems to be another barrier.
* Some teachers have refused to change from the old teaching style, even though they might have a sense of technology in education.
* Students require the help of teachers in understanding their lessons through education, especially during the introductory phase of technological classroom teaching learning process.
* To integrate new educational technology in classrooms, teachers will have to be trained on how it works.

**Start technology based learning for all classes in order to make learning easy, motivated and complete**

* CBSC has advised its all affiliated schools to set up at least one (may be more) classroom in their schools equipped with technology to enable usage of digital instruction material. It will be good beginning as on line learning is the first step toward digital information.
* To establish smart class-rooms.
* To ensure the maximum utility of inter-net.
* To make on-line learning through videos available for free.
* To keep watch on academic web site launched by CBSC.
* To install digital boards in place of existing black-boards in the year to come.
* Procurement of projector and handy cam, tools required for smart classes.
* What is stopping teachers from using classrooms and education is the lack of technological training and support and inadequate professional development.

**6.2 LEARNING THROUGH COMPUTERS**

A computer is a machine that can be instructed to carry out sequences of arithmetic or logical operations automatically via computer programming.

* Early computers were only conceived as calculating devices.
* Modern computers have the ability to follow generalized sets of operations, called programs.
* These programs enable computers to perform an extremely wide range of tasks.
* Conventionally, a modern computer consists of at least one processing element, typically a central processing unit (CPU), microprocessor, along with some type of computer memory.
* Peripheral devices include input devices (keyboard, mouse, joystick etc.), output devices (monitor screens, printers etc.), and input/output devices that perform both functions.
* Peripheral devices allow information to be retrieved from an external source and they enable the result of operations to be saved and retrieved.
* A complete computer including the hardware, the operating system (main software), and peripheral equipment required and used for “full” operation can be referred to as a computer system.
* This term may as well be used for a group of computers that are connected and work together, in particular a computer network or computer cluster.
* Computers are used as control systems for a wide variety of industrial and consumer devices.
* This includes simple special purpose devices like microwave ovens and remote controls, factory devices such as industrial robots and computer-aided designs, and also general purpose devices like personal computers and mobile devices such as smart phones.
* The internet is run on computers and it connects hundreds of millions of other computers and their users.

**Purpose of computers in Education**

* Computers are one of the most valuable resources in a classroom because they serve so many useful functions.
* One of the most common applications of computers in educations today, involves ongoing use of educational software and programs that facilitate personalized instructions for students.
* Programs like iReady use computers to assess students in reading and mathematics lessons that are designed to target the specific academic needs identified during diagnostic testing.
* **Computer** supported collaborative **learning (CSCL)** is a pedagogical approach wherein **learning** takes place **via** social interaction **using a computer or through** the internet.
* **CSCL** can be implemented in online and classroom **learning** environments and can takes place synchronously or asynchronously.
* This kind of learning is characterized by sharing and construction of knowledge among participants using technology as their primary means of communication or as a common resource.
* The study of computer supportive collaborative learning draws on a number of academic disciplines, including instructional technology, educational psychology, sociology, cognitive psychology and social psychology.
* Use of Internet and mobile phones serves as a motivated learning.
* Internet has made knowledge seamless and accessible and in this age of communication revolution, no one can afford to ignore it.
* Young students love the technology based learning, because it plays a big role in increasing our information based on various subjects.
* The transition from rote learning to tech-based education is clearly evident; we are bound to adopt it.
* Technology has brought about a huge transformation in education system and rote learning is likely to diminish in coming years.
* Today technology has arrived with a bang, and everyone who prefers a thorough learning is compelled to appreciate it.
* Right kind of education is provided nowadays only through computers, audio-visual aids, use of CDs/DVDs, e-mail learning etc.
* Thus, it is imperative to provide students the right kind of education through prevailing education system.
* E-learning ensures the data quality besides facilitating the development of content.
* The introduction of IT will not only aid the students but also the faculty, and as a result overall efficiency of the system is bound to improve.
* The young lot will certainly take more interest in the curriculum and will unleash their creativity.
* Everything is available at internet to make the best use of it.
* Beside the formal note-books and text-books, laptops will also be required for presentation up to a possible extent in near future.
* In such a situation teachers will also have to widen their knowledge base, as the students can now put up questions on any and every topic.
* Subject teacher is required to make a CD (fortnightly) of the delivered lectures. The CD should be placed in the audio-visual room in order to revise the completed lessons.
* CD will be a recorded asset for future use and will provide guide lines, if we opt for an award to good teachers.
* Technological advances have ensured that today no information is unavailable. Parents can also find out what is being taught is correct or not.
* Technological tools are bound to improve with the passage of time.
* We should remember that these are the tools which provide only the assistance to the teacher. These are not a substitution to a teacher.
* The fact is that our education system has not been able to cope up with the rapid evolution; our lack-luster attitude deserves amendment.
* With the introduction of technology based education, students competing with each other will increase their knowledge and confidence.
* It will increase their presence of mind and spontaneity that acts as a judge in quiz competitions and elsewhere.
* It also improves their analytical skills and gives them practical exposure.
* CBSC has advised heads of all affiliated institutions to set-up at least one class-room for each class in their school, equipped with technology to enable usage of digital instruction material.
* It will be a good beginning as online literacy is the first step towards digital information.
* It is imperative to search and identify the authenticity of the subject matter. A teacher trained in IT is thus required.
* Students should be given more practical exposure like visits to industrial establishments, research centres and museums, which will help them in increasing their knowledge and broaden their horizons.
* Students should be given proficiency awards including prizes in academics, sports and cultural programs.
* Installation of Smart-board in every class-room is required for improving the quality of teaching and overall academic scenario.
* Teaching through smart-board requires pre-planning of lessons before its delivery in the class-room.

***Only those teachers may oppose the proposed installation, who are not willing to work a bit extra, as they will have to prepare the lesson-plan at home. Yet decision is to be taken after consultation with teachers.***

**6.3 SMART CLASSES**

**What is a smart class?**

* Smart class is nothing, but a unique and latest way to teach children.
* Smart class is an advanced technology for implementation in schools.
* It gives tools and other contents for students’ learning, using latest media presentations.
* A smart classroom contains an instructor equipped with computer along with internet facility, in addition of having CDs/DVDs and audio-visual equipments.
* A white board screen is used instead of a black-board.
* A projector is fixed on the roof so that its rays are reflected upon the screen.
* In addition, white-board acts as a replacement of black-board. A teacher can write over the screen of it with the help of a specially designed pen called stylus.
* In this new era of technology smart-class is a step toward the development of education.
* It is a solution designed to help teachers in meeting with new challenges and developing students’ abilities and performance.
* It helps the teachers to access multimedia contents and information that can be used for teaching students more effectively.

**Need to adopt creative pedagogy**

* Adopting technology in education will enable both students and teachers to create an enhanced learning experience.
* Teachers will communicate and transfer knowledge more effectively and students will have a better experience and promised knowledge retention.
* Use of digital tools ensures better digital literacy allowing more collaboration and innovation among students.
* Digital tools enable teachers and educators to foster a creative learning environment to turn passive learners into active participants, ignite innovation and make education more compelling, personalized and accessible.
* E-learning plays a crucial role in making education interactive and interesting.
* It is for the teachers, to learn and adapt their teaching methodology to control digital tools.
* The focus needs to be on enabling teachers to integrate the tools into their curricula.
* They are required to develop a desire to facilitate a creative pedagogy with the use of right tools and technology.
* The word *“creativity”* should invoke in them certain imagery, joyfulness, productiveness.
* If the teachers are ill equipped in using the technology, they may not be able to stimulate creativity.

*They are therefore required to make their lessons planned and have practice in advance for making their lectures interesting, stimulating, full of relevant information gathered from all resources, including internet, in order to deliver it without waste of time in the class-room.*

**Essential smart class tools**

* Digital classrooms are modern-day pedagogy method that brings the concepts to virtual reality.
* This method of teaching helps students to break out of their shells and become good communicators.
* Listed below are a few classroom tools/websites those are essential for a transformational learning experience.

**1. Desk top or a laptop**

* In a digital classroom a desktop or a laptop acts as the central system that stores information and also essential for managing lessons.

**2. Visualizer**

* A visualizer or document camera is a simple to use and flexible digital learning tool that allows teachers to project on large screens.
* This tool helps to display a wide variety of information ranging from a page in a book, a scientific diagram, a flower in all its glorious colors, or any other specimen and gives a cleverer view to help students understand complex features.

**3. Interactive whiteboard**

* Whiteboards have replaced the traditional blackboards and a digital classroom without an interactive whiteboard is incomplete.
* A teacher can project any subject on the touch-sensitive whiteboard surface with the help of a projector and a computer.
* They can conduct lessons using their finger or with a pen or stylus.
* Made to match with the growing exposure of children to smart phone and other technology, the whiteboard comes with an exciting range of features that add a sense of excitement to each classroom session.

**4. Interactive Projector**

* It is portable solution that helps convert any surface (existing projector screens, whiteboards or wall surface) into an interactive surface.
* An interactive pen is required to draw point or click just by touching the screen directly.

**5. Simple Projector**

* We can turn any plain flat surface into an interactive one with a simple projector.
* A projector connected to a computer or laptop can display the content on a computer’s screen, on to a whiteboard or a screen.

**6. Digital camera**

* It can be used to enhance education inside or outside of a classroom.
* It makes learning a fun.
* Students can take pictures during the visit of a place (which their lesson requires to visit), field trips, events, historical places or geographical areas of importance and more, thus improving their learning experience.

**7. Speakers**

* Speakers ensure that the teacher is audible to the whole class and no one misses out on important point.

**8. Graphic Tables**

* Tables and e-readers are very popular with students. These devices not only encourage reading, but also give students the option to refresh their lessons any time.

**9. Big interactive LED/LCD Panels**

* Children love interactive screens.
* It does not matter if it is TV, video console or computer screen.
* Digital learning involves 2D and 3D animations, graphics, audio and video presentations for every subject.
* A smart classroom that is digitally equipped with big interactive LED or LCD panels can better project these graphic representations.

**10. Multimedia Pen/stylus**

* A multimedia pen or stylus is a great tool to support a child’s creative genius.
* These handy tools can be used to create art work or to add more precise text or drawings to an image or diagram.
* These innovative tools keep children engaged for hours and enable learning at the same time.

**11. Wireless microphones for convenience**

* A wireless microphone eliminates the shackles of dealing with long coils of electric wires which often lead to children tripping and falling. Wireless microphones give us more freedom for movement with free hands.

**12. Student Response System**

* Save time and cut down on paper cost with a student response system.
* Great for a classroom with large number of students.
* These systems help evaluate students’ aptitude accurately within few seconds.

**13. Feedback Assessment Tools**

* AnswerGarden, Ask3, and Animoto are popular feedback assessment tools which are ideal for online brain storming or polling.
* Teachers can use these Apps to analyze a student’s thoughts or review answers to specific question.

**14. Educational Software**

* There are so many educational soft wares which support major academic curriculum.
* These soft wares also enable educators to streamline the students’ admission process, automate attendance, set exam schedules and many such activities.

**15. Digital Podium**

* A digital podium is a modern day lecture stand that comes equipped with various media components/devices that enable an uninterrupted learning session.
* Some of the components are, a public address system fitted with amplifier, speaker and microphone.
* The podium also comes with integrated UPS for uninterrupted power supply, a lecture recording system, and ample storage space for visualize, keyboard drawer and more.

**16. Printer**

* A printer is an important part of creating colorful assignments, reports or crafts and students are more enthusiastic about seeing their work in all its colorful glory.

**17. OMR (Optical Mark Reader) Scanner**

* These OMR scanners can also save scanned images on computer which are then processed by OMR software.
* OMR Scanners are used for scanning OMR sheets or forms, especially useful while conducting examinations for a large group of students.

**18. Cloud Based Communication System**

* The use of cloud based communication system in a digital classroom through video conferencing and unified communication platforms that can transform students to **virtual field trips** they wouldn’t be able to take otherwise.

**19. Skype**

* Skype has revolutionized the world of video conferencing and it’s **“in the classroom”** program enable teachers to expand their curricula beyond classroom.
* Skype also acts as a platform that allows students to interact with international speakers and educators.
* The fun **’Mystery Skype’**, educational game involves two classrooms that must guess the location of their Skype partner by asking each other questions.

**20. iThoughts**

* iThoughts is Apple’s mind-mapping App that allows educators to visualize, see and understand how students think while discussing ideas or coming up with solutions.

**21, Kahoot**

* Teachers can combine fun and learning by designing questionnaires, surveys, quizzes and other interactive games with **Kahoot.**
* Students can appreciate or answer questions using a range of devices.
* It is also popular among teachers across the globe as it helps in spreading up the learning process especially that of a foreign language.

**22. Google Knowledge Graph**

* Google Knowledge Graph live online tutorials, lesson plans, interactive class materials and many resources
* New developments in Google Knowledge Graph, such as voice search and Carousel have made this product even more user-friendly.
* The ‘Google A Day’ daily trivia challenge is a great way for educators to incorporate research-skill practice into a fun daily activity.

**23. Empressr**

* It is a free online application that allows students/teachers to create visually rich presentations.

**24. Socreative**

* Socreative supports educators with a range of useful tools like student performance tracker, speedy and automatic tools, real time information reports, personal learning community and more. Link of the App is
* <http://www.socrative.com/apps.phb>

**25. Present.me Edu**

* Present.me offers a fun way to encourage students to get involved in their own learning by creating visually rich presentations.

**26. Wikispaces**

* It is social writing platform that makes it easy for students and teachers to work side by side
* Can be used to measure student contribution and engagement in real time.

**27. Yammer**

* Works in groups, share files, co-edit content and more with yammer.com’s free basic plan.

**28. haikuLearning**

* haikuLearning is a free cloud-based education site for teachers that provides content sharing assignments, feedback, grading and other rich tools for the classroom.

**29. Cacoo (cacoo.com)**

* It is very useful in a wide variety of academic disciplines.
* We can collaboratively create and edit flowcharts and diagrams online real time with this very useful tool

**Concerns about smart classes**

**1. Costly affair**

* There is a concern among various schools about the pace of changing technology. After every few months new programming language, new software are being developed. A substantial amount is required for getting the technology upgraded, so the technology is hard to maintain in financial terms.

**2. Unmanageable**

* Upgraded technology requires upgraded equipments. This task is highly pocket punching. It is not possible every time to upgrade according to the need of the hour.
* Man power is also needed to maintain the whole infra-structure.
* The more there are students, the more a school needs internet band width. All these facts act as stumbling blocks.

**3. Handling issues by parents**

* Many a times parents face problems in handling the school work because of technology, familiarity becomes an issue.
* The last generation is comparatively slow in catching new technology in comparison to Generation X.

**4. Interactions and social issues**

* The social dynamics gets altered in a smart class. There is no face to face that is real time interactions among the peers in tech-driven classroom.
* Social interaction forms an integral part of human society, without it, human morals and ethos become hard to develop.
* There is a need to inculcate these values among the students.

**5. Dependency on technology**

* Technology makes a person highly dependent
* When it comes to the students, it acts as a crutch.
* Everything comes in handy.
* A child needs not to bother much about completing any task, hence problem solving capacity declines.

**6. Actual learning process**

* Smart class lowers the test standardization scores.
* It is found that many pupils lack the basic knowledge of Math and English while competing for creativeness in a tech-driven class.
* A smart class also does not ensure that whether a child is improving in his/her smartness or creativity. It becomes quite mechanical while working on and with a gadget in a particular direction.

**7. Lessening human values**

* A child using technology lowers the importance of a teacher.
* The child becomes used to the theory that *“it is the computer or the gadget that is teaching”*, the teacher is merely a medium.

**8. Efficient infra structure**

* To setup a smart class, it is highly crucial that the instruction has enough facility to carry on with the project.
* Technology requires long term investment, both monetary and mental.

**9. Understanding**

* There is no doubt that an understanding between two human beings is much more than a machine and its user. After all manmade the machines, machines did not made man.

**10. The ultimate analysis**

* All these opinions and arguments point to a pertinent question that “whether a smart class is actually beneficial for a child or not”?
* Is it really making an educational growth in the life of students, or making it easy for a child to go hand in hand in this fast moving world?
* There are many questions that prick our conscience. We need to get out of the dilemma and work towards making education more accessible and feasible to all in whatever way we can.

**11. View points**

* It is justified, if we say, “smart-classes are not the only way of learning”?
* Similarly making comments like “smart classes are fruitless and a total waste of time’ is also not acceptable”.
* It is suggested that a blend should be kept between the two.
* Ethical and moral enrich values should be merged with modern techniques and the result should be delivered to the students.
* This experiment will result in a subjective solution to many problems.
* It is also suggested that first of all mark the subject with difficulties, then arrange smart classes for it, and feel the different experience.

***A classroom has students with varied power of understanding and learning, and studying from notes and other materials becomes difficult for some students. Get the use of smart classes and modern technology eases the learning process for all students.***

**6.4 AUDIO-VISUAL ROOM**

**AV room**: interactive learning sessions are held in the audio-visual room which is well equipped with an LCD projector and a large screen, a wide screen TV, DVD players, a scanner and CDs and DVDs on different subjects for different classes. A particular attention is paid to the audio and visual presentation of the material with the goal of improving comprehension and retention.

* Children do best by observing and copying the behavior of adults. It is therefore evident that learning is more effective when sensory experiences are stimulated. It is the training with educational materials directed at both the senses of hearing and senses of sight, films, recordings, graphics etc. are used in class-room, library collections or like.
* In current digital world, AV aids have grown exponentially with several multimedia such as educational DVD’s, Power Point, TV educational series, You Tube, and other on line materials.
* The goal of AV aids is to enhance teacher’s ability to present the lesson in simple, effective and easy to understand form for the students.
* AV material makes learning more permanent since students use more than one sense.
* The visual instruction makes abstract or conceptual idea more concrete to the learners.
* Studies have shown that there is important difference between the use and non-use of AV material in teaching and learning.
* It increases the skills of teacher.
* It increases the interest across different levels of students.
* It is used to develop lesson plans that are simple and easy to follow.
* It makes the class more inter active and interesting.
* It focuses on student-centered approach.
* The most common tool we use in classrooms these days is power Point slides, which makes the class more interesting, dynamic and effective.
* Integrating technology into the class-room help students to experience things virtually or indirectly. It is clear that AV aids are important tools for teaching- learning process.

***The audio-visual room is a place where the students of all classes experience learning in an effective way.***

**6.5 IMPORTANCE OF CCTV (Surveillance in School)**

Increasing incidents of negligence and crimes violating the innocence of children have raised numerous doubts and questions in the minds of every parent and every responsible citizen. The need of the hour is the safety of students all the time during school hours.

* Being humans, there exists a chance of negligence by those who are assigned the responsibility of vigilance. Thus, CCTV remains the only option for flawless monitoring all the time during the stay of our kids in the school.

**CCTV Surveillance is of great importance in schools, namely,**

* It acts as a deterrent to anybody with mal intent.
* It supplements the security guards since this is an electronic gadget and always targets the set focus.
* It is of extreme help for monitoring and recording all the activities taking place in the school premises.
* No intruder or an undesirable activity as such can escape its focus.
* The movement, entry and exits are supposed to be secure.
* Valuable electronic items inside the classrooms and elsewhere in the school are safe.
* During an emergency, an effective monitoring is possible.
* It is useful in solving the cases of theft or vandalism.
* Helpful in keeping the movement of students and their presence in the school.
* The cases of bulling and indiscipline remain under control.
* Parents use to appreciate the CCTV surveillance in the school as they feel a sense of satisfaction about the security of their wards.
* Of course, it is helpful in controlling the activities of students and the teacher during teaching-learning process inside the classroom.
* It improves the discipline and behavior of students with teachers and fellow students inside the class-room
* Shall help the reporting time of the teacher in the class-room
* Control of possible undesired activities taking place in the school. In order to achieve the objective cameras are to be installed at strategic points especially at school gate/s, corridors, play-ground/s, all the classrooms, and all labs, etc.

**6.6 CLASSROOM AUDIO TECHNOLOGY**

**Classroom audio technology**

It is now recognized as one of the most powerful and cost effective tool for students’ improvement.

**Classroom audio**

* Whether it’s leading an activity, teaching a subject or playing a music recording, require student to pay attention and develop listening skills.
* The ability to hear an instructor is critical to students’ success.
* Studies have shown that the students who sit in the back row of their classrooms miss 30% of what their teacher say because they cannot properly hear the lesson that is being taught at the front of the room.
* Therefore, advisable is the arrangement of an audio-assistance for the students.
* Students who struggle to hear due to classroom noise, hearing loss or other issues often suffer from delayed language skills, lower grades, social isolation and poor self esteem. These things all contribute to success or lack of it, later in life.

**Benefits of classroom audio technology**

* Classroom audio is recognized as most powerful and cost-effective tool for students’ improvement.
* Research has shown that audio enhancement indicates significant and consistent benefits for education, particularly with academic achievement and test scores.
* When teachers wear a microphone, they allow the audio technology to distribute their natural voice throughout the room, so that every student can hear them more easily and more clearly.
* Reduction in ambient noise level
* Various noises that make up the ambient noise in a classroom are composed of external sounds like street traffic, facility noises like air-conditioning and classroom noises like students’ noise.
* Classroom audio systems overcome ambient noise and distribute the teacher’s voice throughout the room.
* Every child hears the teacher at the same amplified level no matter where they are seated or standing.

**Improved academic performance**

* Various tests show that amplifying a teacher’s voice results in exceptional improvement in reading and language test scores for students at all levels.
* Some studies have shown up to a 10% improvement in academic test scores.

**Reduced classroom stress and behavior problems**

* Audio technology assists with classroom management, helping to reduce discipline issues and stress for teachers and students overall.

**Reduced voice fatigue and throat illness in teachers**

* With the use of audio-technology, teachers can speak in a conversational voice, so that all students can hear them more easily.
* Vocal strain is greatly diminished.
* Schools using classroom audio system report significantly lower teacher absenteeism due to voice and throat problem.

**Hearing is essential to students’ achievements.**

* The primary channel for learning is hearing.
* Students spend 75% of their school time involved in listening activities.
* The better can children hear, the more they can learn.
* The goal of classroom audio technology is to enable every child in a classroom to clearly hear all the speech components of the teacher’s voice, no matter where a child is seated relative to the teacher’s position in the room.

**6.7 SCHOOL BROADCAST SYSTEM**

* School Broadcast system is used for operational and emergency communications within the school.
* This includes all the classrooms, ground/s and interior area such as corridors and outside the parking area etc.
* It allows live broadcasts, scheduling of events such as class change etc.
* Live broadcasts can be executed from a single or a number of broadcast points.
* Additionally apps allow for communication from a smart phone, the mobile device needs to be on the same network as the speakers.
* This allows an administrator with the ability to make an announcement to an individual classroom, or selected classrooms or all the class rooms at a time, from the office or anywhere at the entire school,
* These speaker systems are also available with a Wi-Fi option.
* But, this system with Wi-Fi option require a strong Wi-Fi network
* Wi-Fi speakers are available in standard power size and a high power size for classrooms and large for the large gathering area.
* With the installation of this system live broadcast can be executed from multiple locations including the Principal’s office.
* Communication between principal and various classrooms.
* Principal can speak to each class individually or address all classrooms simultaneously.
* Principal can receive communication from each classroom.
* Relay of pre-recorded cassettes over loudspeaker in classrooms.
* School Broadcast system is a powerful tool in the hands of Principal/head of the institute to speak to each and every student, thus establishing personal rapport and complete discipline inside or outside of classroom.
* It helps in recording a teacher’s lecture to overcome the deficiencies in his/his teaching method.

**SECTION 7**

**STUDENTS’ PROBLEMS**

* 1. **LATE COMING PROBLEM**
  2. **CHRONIC ABSENTEEISM**
  3. **DROP-OUT PROBLEM (REASONS AND PREVENTION)**
  4. **VOCATIONAL EDUCATION**

**7.1 LATE COMING PROBLEM**

**What is late coming?**

* Late coming to school is an act of arriving at school after the official hour of commencement of the day’s learning activities.
* Late-coming means partial absence for a few hours or period or a part of it, in a day.
* Before actual commencement of teaching activity there are other activities which students are expected to be present in school in order to take part in them.
* A situation where students do not attend these pre-lesson activities and are not present at the commencement are considered as late coming to school.

**Late coming problem**

* There is hardly any school that is spared from the problem of late coming.
* The impact of this problem cannot be overlooked, as it has contributed immensely in a negative way to the academic achievements of learners and the functioning of the school.

**Theoretically lateness is classified into three categories;**

**Chronic:**

* It is a response to a bad environment and student’s dislike with fellow students.
* Chronic lateness among students in high school could be the low level of commitment to school and lack of satisfaction.

**Avoidable:**

* It occurs when students think that they have more important activities to do than arrive on time for a particular lesson or class in the school.
* In most cases this happens in math classes.

**Unavoidable:**

* It is due to factors beyond the students’ control, such as transport problem, bad weather, illness and accident.

**Repercussions of lateness**

* Effective teaching and learning cannot take place without coming together of the teachers and the learners.
* A learner, who is not punctual in school, faces learning problems resulting from late coming to the school.
* Punctuality is important because learners who arrive late at school often disrupt lessons and the general management of the school.
* Late coming violates the principle of punctuality and if not checked at the onset, it may become a habit with the individual involved and may have negative consequences.
* Lateness can be seen as a “less severe form” of withdrawal that eventually escalates into the “more severe form” of absenteeism.
* In most cases, when condoned, it breeds a bad habit and an attitude detrimental to success in numerous enterprises in life.
* Lateness could result into poor academic achievement, disruption in class, difficulty in keeping accurate records, reduced ability to meet instructional target.
* In fact, chronic lateness can impact a student’s academic success throughout elementary school.
* Increase in number of late comers often damage school’s reputation.
* Furthermore, studies have shown that chronic lateness (tardiness) can reduce acceptance of personal responsibility.

**Reasons of late coming to the school**

* Issues that frequently cause lateness in early or late childhood group are; medical, transportation, and family based issues.
* Medical issues include circumstances in which the parent or the child has a chronic illness that makes early morning difficult.
* If a family is without a way to transport a child to school each day, this could cause chronic lateness.
* A single family with many children in different schools could have a trouble ensuring all get to school at the right time, thus creating a chronic lateness problem for one or more.

**The impact of lateness**

* Late-coming to the school is a big problem.
* Habitual late-comers feel disconnected with the school, leading to behavioral problem and eventually drop-out of the school.
* Students with habitual late-coming use to impact negatively at their teachers and other students.
* Schools stress the need to be punctual in coming to the school in time, as the habit leads to the irregularity of attendance.
* School attendance is a major factor when it comes to school success and student behavior.
* The most crucial learning hours of a school day are the morning hours because students are most attentive at these hours of time.
* Latecomers not only miss the beginning of their morning class but also cause distraction when they arrive late to the class.
* Late comers usually fail to score higher grades.
* Chronic lateness in elementary and middle classes is also linked to the failure in secondary classes.
* Late-coming causes students to feel disconnected with school, leading to behavioral problem and drop-out.
* Students who have been habitual late-comers in school are more apt who may be fired from a job for showing up late at their duty.

**Addressing the late coming problem**

Strategies adopted to tackle the late-coming problem of students may vary from school to school. Practical solutions ranging from administrative improvement to students’ behavioral change are recommended.

* Set the clear rules at the beginning of the session which is required to be communicated to all the students of the school and their parents.
* Make them understand the school’s late-coming policy from the very first day.
* Frame somewhat strict rules to deal with such an issue.
* Students should simply know that being late is their loss.
* Some students’ late-coming can be due to legitimate reasons. We need to understand situation before taking actions and suitably find the innovative ways to handle the problem.
* Beyond those legitimate reasons, the complex issue of late-coming requires a careful handling.
* One strategy “fit for all” may not work.
* Strict may be the strategies to deal with such elements.
* Lack of respect for “class-start time” should be dealt firmly in order to make them understand that lateness shall not be tolerated and it is not an option.
* Late-comers need to understand that their lateness affects the whole class, and they should know the importance of punctuality.
* Leave one or two desks/chairs at the back of classroom for late-comers.
* They should, if allowed will enter in the classroom through the back door only just to avoid any disturbance in the ongoing teaching activity or they may be asked to spend the remainder of the period standing outside the class.
* These late-comers may see the teacher after the class is over in order to explain the cause of their late arrival in the class.
* In order to address the problem of late-coming, school may embark on dynamic and creative campaign, driven by learners outside the school premises, to assist school by encouraging late-comers to be present at the school time.
* They may display placards, posters about punctuality and hand out information about the damage done by late-coming.
* Collecting fines at school gate from those who use to report late/habitual late-comers is not a reasonable policy. It looks as if it is an extortion activity without desired result.
* Rather than collecting the fine, it is better to Keep record of habitual late-comers and call the parents and discuss the matter and find out a proper solution.

**7.2 CHRONIC ABSENTEEISM**

**Importance of regular attendance**

**Consistent school attendance is critical for many reasons.**

* When students miss school they miss instructions.
* Catching up of missed class lesson is very difficult especially in higher classes.
* Daily attendance is similar to building a wall. Students who attend school every day, each of the lessons is like adding a block to the wall.
* But, when a student is chronically absent, he misses block of learning causing gaps or holes in the wall.
* It can have a negative impact on his academic achievement in his future studies.

**The problem**

Missing 10% or more of school days in a year, due to any reason--excused or un-excused, i.e. absence of approximately 18 or more days in a year is defined as chronic absenteeism. Following are the usual repercussions;

* Third graders may fail to master reading practice.
* Sixth graders may fail to clear subject/s.
* Ninth graders may drop-out of school.
* Children living in poverty are two to three times more likely to be chronically absent. Parents’ lack of resources may not arrange coaching/tuition facility in order to make up the lost learning in the school.
* Often absence is due to health issues, lack of transport facility, or a safe route to the school that make it difficult to attend the school every day.
* In many cases chronic absence goes unnoticed because **schools use to count the attendance of students rather than their absence.**
* While chronic absence creates no academic challenges during lower level of their classes, but at higher level, where they usually fail to understand the subject matter.
* It ultimately affects the comprehension level of the student who then fails to score higher grades.

**Causes of chronic absenteeism**

**Bad grades**

* Student sometimes may fail to understand the classroom lessons that lead to a conception of skipping the classes, an easy solution.
* To counter this imaginary idea, parents can help their kid by arranging tutoring,
* There are a large number of ways to inspire confidence in students, and help them feel comfortable in going to the school regularly and attending the classes without any fear or fright.

**Bullying and harassment**

* Acts of bullying lead to a compelling situation where student feels unsafe physically and emotionally.
* It is important for parents as well as the teachers to recognize the signs of bullying, as the student may not divulge the sufferings he may have suffered in the school.
* There are plenty of resources even some apps that offer tips on how to have these kinds of conversations.

**Illness**

* Good health is essential for a child’s wellbeing, so encourage good diet and exercise. Whenever student makes a complaint of un-well condition, parents are liable to gauge its reliability, as calling in sick is probably the first excuse that comes in the minds of children.

**Caring for another family member**

* Sometimes younger siblings, grand-parents or any other ailing family member need special healthcare and attention. Elder kids are usually required to stay at home for taking care of them.
* It’s a tough choice to make. The longer stay at home may lead to a difficult situation in classroom studies.
* Loss of interest in studies, may lead to chronic absenteeism.
* An alternate arrangement is thus needed to avoid such a situation.

**Mental or emotional health issues**

* Students who are suffering from mental or emotional issues have every right to study in school.
* Although, missing school due to mental and emotional reasons is considered to be valid.
* Parents should work with schools so that students can move forward.
* Extended absence from the school can aggravate both academic and emotional problems.
* Families should understand the range of a child’s emotions and behaviors that might not involve or necessitate missing the school.
* They should understand how to identify and help children through more serious mental health issues and situations when they do arise.

**Difficulties with housing or food**

* When a family is worried about food for their kids or have residential problem, school can be a secondary consideration.
* Educators and other concerned people of the community should make a concerted effort to guide such families in the right direction to alleviate these burdens, so that the measures can help the student in attending the school.

**Addressing the chronic absence**

* Parents, schools and communities must work together to ensure that the students understand the importance of making every school day count.
* The earlier those absences are identified and addressed, the more successful students will become.
* Schools, in attempt to tackle the problem and enhance the over-all standard of education may draw a well defined policy that “every student gets success”, and no student follows the casual attitude towards the regular presence in the school.
* When students improve their attendance rate, they improve their academic prospects, and chances for further studies.
* Collect right data in order to address chronic absenteeism. It provides the pattern of absenteeism of the student.
* Early education is vital to a child’s success.
* Pre-school is the ideal time to introduce children and families to the importance of consistent on-time attendance habits.
* Communicate attendance expectations to students and their parents through student’s diary, school website, and in face to face meetings.
* Parents must be well aware of the importance of regular and on time presence of their kids in the school.
* Schools may develop a regular monitoring system preferably through an attendance team, using the available internet facility. A mobile app or a web platform is needed to register all the data of attendance and participation of students in proposed activities.
* The attendance team should monitor daily attendance, and communicate with parents and students about the issues.
* Parents should be notified of an absence as early in the day as possible. This can be done either by a team member or by an automatic operated system.
* However, with a personal phone call, the team member has the added benefit of making notes in detail about the identity of the contacted person along with the reason of student’s absence.
* Early intervention may prevent small problem turning into big. The student who is absent for two days or more without information, his name should be referred to the attendance team for an appropriate and immediate action.
* Prevailing atmosphere of the school deserves a culture that motivates students to attend the school regularly rather than preferring to remain absent.
* Sports, co-curricular activities and cultural events determine the motivation level of students. Academic calendar and the weekly timetable should be designed in a way that will attract students’ participation.
* Create goal based incentives that motivate attendance and help positive student behavior.
* Communicate the school’s progress towards attendance goals to students, parents and school staff. Celebrate the success to keep the momentum going.
* By being proactive, schools can identify student needs and address them early to prevent chronic absenteeism.
* When children improve their attendance, they have more time for learning and they improve their chances for graduation and success in college and careers.

***Encouraging students to attend the school every day sends a message to them, that school is important and should be taken seriously.***

**7.3 Drop-out Problem (Reasons and Prevention)**

Dropout is one who has left school or college before completion of studies, or it may be defined as a student who fails to complete a school or college course

* Drop-out problem is fairly a common occurrence in almost all schools throughout the world.
* UNESCO (United Nations Educational, Scientific, and Cultural Organization) mentions that there are 47 millions youths in India that drop-out by 10th class.
* The repercussions of dropping out affect teen-agers for their entire life.
* Drop-out rate also influences the community as well as the society.
* This eventually affects the enrolment at graduation level and for higher education too.

**Drop-out Problem and its repercussions**

* Students who drop-out of school face a difficult future.
* They are most likely to be unemployed, confined and/or impoverished thereby losing their strength and vitality.
* With the students suffering from disabilities, the risk of dropping out intensifies.
* Their drop-out rate is about 40% more than normal students.
* Face unemployment;
* Live in poverty;
* Earn half as much income as a graduate;
* Get married early and have children at an early stage;
* Use illicit drugs, tobacco, or both;
* Likely to get overweight, not good for health.

**Risk factor for dropping out**

* Identifying students who are most likely to drop-out is not a precise process.
* Some students with no apparent risk factors leave school, and some with many risk factors complete school education.
* Although risk factors are not precise predictors, parents should be aware of them.
* Families can play an important role in making it sure that their kids attain graduation level. Therefore staying involved in teens’ life during middle and secondary school is critical.
* More importantly, they should become involved or seek assistance if they repeatedly see risky behaviors such as skipping school, failing classes, having significant discipline problems, or being involved in illegal activities.

**Why do young students drop-out?**

* When a young student drops-out of school, it is not always an intentional decision.
* Many say, they simply stopped going to school one day and no one objected.
* Some youth may drop-out because they have comprehension problem or problem with teachers, dislike school, or receive low grades.
* Other youths, however leave school because of problems not directly related to academics, such as financial needs, family caretaking responsibilities, employment etc.

**Prevention of drop-outs**

* Drop-out prevention starts during the early stages of a child’s education.
* In some cases though, parents and educators do not notice that the student is at the risk until he/she reaches high school.
* The challenges that contribute to dropping out are often systemic and may require a coalition and co-operation of teachers, school heads, community members and parents, to tackle the gravity of problem.
* There are many more small steps that we can take as remedial action.
* Exemplification of income statistics, dignity in future life and life expectancy, of an educated person through guest speakers such as former students who may share their experiences so that students see the real-life stories behind the success.

**Consequences**

* Most students who drop-out have not fully considered the consequences and typically are not prepared for what will happen to them afterwards.
* Being immature physically and emotionally, these adolescents often face the challenging transition to independent living and adulthood.
* As a result, they are more likely to face poor job prospects, experience lifelong dependence on social service system, use illicit drugs, become involved in juvenile justice system and become teen parents.

**Reasons of dropping out**

**1. Academic difficulty**

**Problem**

* They may have no personal connection with their teachers.
* One of the biggest reasons of dropping out of school is the academic failure that is because of the inability to cope with the academic pressure.
* A majority of students did not feel their teachers motivate them enough to work hard.
* Those students who fail to study competently at the earlier stage/or lower level of their education are more likely to quit the education at the later level.

**Prevention**

* More student-teacher interaction can act as an important remedy for the drop-out problem.
* Educators can use technology as a tool to bolster learning and keep their attention.
* “student-centered learning” allow teachers to take a more facilitative role in the learning process.
* When students enjoy their school’s environment, they’ll want to participate and stay in school.
* Technology allows teachers to invite students to personalized learning like never before.

**2. Boredom**

**Problem**

* Students often drop-out of school due to apathy or boredom.
* They often feel the academic contents uninteresting.
* According to a study, majority of students become disinterested at secondary school level while they are in 9th or 10th grade.
* They prefer to go late to the school, skip classes and take long lunch break.
* The lack of interest often leads to dropping out of school

**Prevention**

* Boredom is a problem that must be addressed by school faculty, students and most importantly by parents.
* A positive school culture, meaningful relationships with their peers and adults, and engaging interaction are all ways to motivate students and to keep them to be in school without feeling boredom.
* Introduction of Robotics is also a way to motivate students that can be used as a tool to minimize the drop-out cases.
* Learning how to build a website not only gives teens a career, but keeps them engaged in school studies.
* Parents can help by encouraging their kids to get involved in activities other than academics to develop talents and an interest for studies.
* Sumer camps that incorporate learning as well as fun can enhance students’ skills, keeping them fresh for the start of another school year.

**3. Bad company**

**Problem**

* Influence of bad company is an important factor of dropping out of the school

**Prevention**

* Parents should keep an eye at all the activities of their kinds.
* As soon as they notice any abnormal activity in their behavior, a thorough enquiry is required to be undertaken for their changed behavior to neutralize the bad effect, if any.
* Teachers are also required to pay attention at their students and guide them frequently.

**4. Bad influence**

**Problem**

* Un-limited exposure to internet and to TV can distract children from pursuing academics.
* This may start them off into anti-social activities.

**Prevention**

* Parents can guide their kids about the positive use of internet.
* Restricted use of internet, only for academic purpose should be allowed.
* Become involved in extra-curricular activities and games that keep kids more engaged.

**5. Economic needs**

**Problem**

* Students belonging to low income groups are more likely to drop-out of the school due to compulsions to support their family.
* Financial difficulty/lack of financial support by parents is a major reason that contributes in dropping out of students. Lack of sound financial back up some times instigates the drop-out act.

**Prevention**

* Communication with school administrators on the impact of financial difficulties can provide a range of options that will assist the family and keep the student in school.
* Establish an NGO for financial assistance for poor students. The NGO may start ***School Drop-out Prevention Program*** for students who are in need of financial/ other assistance.

**6. Familial problem**

**Problem**

* Some children may need to stay back at home to take care of their siblings while the parents go out to work.
* Family disputes, especially between their parents may lead to indifference towards education.
* Divorce or separation of parents also affects the education of children adversely.

**Prevention**

* Faculty is required to identify the student who may be having one or the other familial problem.
* In association with the school counselor try to minimize the detrimental e/effects the student may be suffering from.
* This may ultimately prevent the drop-out tendency.
* Class-teacher in all probability can skillfully handle such cases, in case there is no counselor in the school.

**7. Importance of education**

**Problem**

* They might have no knowledge of the importance of education that is required to spend a dignified life ahead.

**Prevention**

* Students should be made aware of the fact that those who drop-out of the school face difficulty in future and a higher unemployment rate.
* Motivate the students and prepare them to get ready for participation in competitive examinations in and out of the school.
* Students and most of the time parents have no perspective about the future education and its impact at their future.
* However, in public schools the situation is not so bad.
* Most of the time, principal and even the management of public schools fail to guide students (or their parents) about good prospects of their career.
* Majority of students are weak in two important subjects viz; Mathematics and English.
* A research shows that higher educated people have higher expectancy of life.

**8. Parents’ role and family involvement**

**Problem**

* Parents often fail to encourage their children to stay in school.
* When parents don’t prioritize their child’s high school education, the child may choose to drop-out of the school

**Prevention**

* Parents play an important role in education of their primary and high school kids.
* To help successful completion of secondary and senior secondary school education, parents are required to follow the tips which are based on drop-out prevention research.
* Family involvement is one of the most important contributions to the student for completion of his school education and success.
* The most accurate predictor of a student’s school achievement is the extent to which his/her family encourages learning.
* Success is more likely if, the family communicates high yet reasonable expectations from him/her. Take care for his/her future and sincerely involve in his/her education.
* Maintain contact with the child’s teacher throughout the school education.
* In case the child is skipping the school, it may be a warning sign that the kid is having some kind of trouble.

**9. Health of children**

**Problem**

* The health of a child greatly affects his learning ability and performance at school.
* Prolonged illness that occurs during childhood may curb a child’s ability to complete the school’s education.
* Students with depression are twice more likely to drop out of high school than the normal students. This is because their illness can affect their ability to learn and engage in studies.

**Prevention**

* School has an obligation to look after the health condition of students.
* Regular check-ups may identify a chronic disease that requires immediate medical attention. Successful treatment at a proper time may prevent drop-out of the concerned student/s.
* Much like any other disease, knowing the warning signs of depression/mental disease can be crucial to helping the teens before they drop-out.
* Finding services that can help to treat their conditions, along with counseling services can make all the difference.
* Our working memory helps us hold and use information. It is the intellectual process we use to hold some information in our minds.
* Working memory and dyslexia work hand-in-hand, and there is a lot we can do to help students with dyslexia to remember more.
* Students suffering from dyslexia need more attention than those students with normal working memory.
* If they are not paid more attention that is required to teach and train them, they may in all probability loose heart in studies and dropout of the school.

**10. Lack of performance and failure in a class**

**Problem**

* Failure/retention in a class has a negative impact on the self-esteem of a child.
* Repeated failures may develop a feeling of being older than their class-mates and tend to drop-out of the school.

**Prevention**

* Parents and educators are required to give young students more opportunities to learn course materials and get better grades.
* This may involve after school tutoring.
* Identifying learning disabilities that make academic success a difficult task.

**11. Reading habits**

**Problem**

* Children who are not reading proficiently by fourth grade are four times more likely to quit secondary school than their peers, since reading is required for everything in higher grades.
* The lower the reading level the harder time a student will have in school.

**Prevention**

* Early reading interventions are crucial in keeping kids engaged, successful, and remain in school.
* Parents and the teachers should be on the lookout for students who are struggling with the core subjects, especially in the lower classes.
* Point out different strategies that parents and teachers can use to try to improve reading levels, like shared reading, keeping books accessible, encouraging reading, one-on-one reading interventions.

**12. Chronic absenteeism**

**Problem**

* Chronic absenteeism leads to a seven fold increase in dropping out.
* It is also blamed for students falling behind and ultimately dropping out.

**Prevention**

* Schools must carefully monitor attendance and notify parents immediately if students are missing the school on regular basis.
* Aggressive persistence, teacher support and engaging parents could be the key to making sure students show up for school and stay there rather than drop-out.

**7.4 VOCATIONAL EDUCATION**

Technical/professional knowledge that is being given to the students during their regular studies in schools or in the institutes meant to impart the exclusive technical knowledge, to those who are interested in some technical jobs after their regular studies. It prepares them to work in a specific field, a trade, a craft, as a technician or in professional options such as engineering, accountancy, nursing, medicine, architecture, data scientist etc. It is sometimes referred to as career education or technical education.

**Aims**

* Vocational education is concerned with the training on vocation.
* It is related to productivity.
* Vocational education prepares individuals for jobs.
* It has adequate employment potentialities.
* It leads to dignity of labor.
* It is helpful in maximum utilization of the material resources of the country.
* When vocational education is mixed with general education, it is called **vocationalisation of education.**
* **Vocationalisation of education** is designed to introduce manual skills in general education.
* It means training in some vocations at the secondary/senior secondary level with general education.

**Objectives**

* To develop a healthy attitude among the students towards work and life.
* To enhance employability of individuals.
* To meet the demand of skilled man-power.
* To avoid further aimless higher education.
* To help those who intend to become their own masters.
* To increase the productive potential of the country.
* To raise the economic standard of people.
* It creates the self employment.
* Self employment reduces the un-employment.
* To make the available man power to skilled technicians.
* It’s important task is to generate in pupils a love and appreciation for work culture.
* There is a large section of people among Muslims who remain un-employed even with adequate skills and qualifications. It will increase their employability and the self employment. .
* A high rate of drop-outs, un-employment and lack of vocational training are acting as barriers to better employment levels. The only way to equip them to earn a descent livelihood is to empower them with soft skills training.
* With vocational skill development, the youth can be made ready to create a suitable livelihood.

All of these programs take a specific set of skills that is not offered in a normal school classroom. These students typically can come straight out of a training course and earn more than most college graduates in many areas.

*The Central Board of Secondary Education (CBSE) has a provision of vocational subjects in order to help students hone their skills and proficiency. There are about 40* ***vocational courses*** *which are being offered by* ***CBSE.***

* These vocational courses are offered in order to help students obtain practical knowledge regarding practical work situations.
* CBSE has given the institutions an option to introduce vocational courses to help students obtain practical knowledge regarding practical work situations.
* 40 vocational courses offered by CBSE are quite varied and diverse and can be broadly classified into the following categories;

**Commerce**

1. Office secretary ship.
2. Stenography and computer application.
3. Accountancy and auditing.
4. Marketing and salesmanship.
5. Banking.
6. Retail.
7. Financial market management.
8. Business administration.

**Engineering based vocational courses.**

1. Electrical technology.
2. Automobile technology.
3. Civil engineering.
4. Air-conditioning and refrigeration technology.
5. Electronics technology.
6. Geo spatial technology.
7. Foundry.
8. IT Application.

**Health and paramedical.**

1. Ophthalmic technique.
2. Medical laboratory techniques
3. Auxiliary nursing & midwifery.
4. X-ray technician.
5. Healthcare science.
6. Health and beauty studies.
7. Medical diagnostics.

**Home science based vocational courses.**

1. Fashion design and clothing construction.
2. Textile design.
3. Design fundamentals.
4. Music technical production.
5. Beauty services.

**Agriculture**

1. Poultry farming.
2. Horticulture.
3. Dairying science and technology.

**Hospitality and tourism**

1. Food production.
2. Food and beverages.
3. Mass media studies and media production.
4. Bakery and confectionary.
5. Front office.
6. Travel and tourism.

**Other vocational courses**

1. Transportation system & logic management.
2. Life insurance
3. Library and information services.

**Top 10 Vocational courses after 12th**

Here is the list of 10 best vocational courses to choose from.

1. Animation course.
2. Electronics/House electrician/Electrical expert.
3. Gym/Physical education.
4. Finance and banking.
5. Disaster management.
6. Public relation.
7. Marketing/advertisements.
8. Catering management.
9. Beauty course.
10. Information technology.

**SECTION 8**

**MONITORING OF TEACHING ACTIVITY**

**8.1 MONITORING AND EVALUATION**

**OF SCHOOL ACADEMICS**

**8.2 INSPECTION OF SCHOOL**

**8.1 MONITORING AND EVALUATION OF**

**SCHOOL ACADEMICS**

The main purpose of any education system is to provide students with the necessary knowledge, skills and values for effective participation in society.

It requires maintaining a standard and regularity in the academic process. A series of systematic actions has to be followed that demands the regular monitoring of the academic exercise prevailing in the school for a purposeful evaluation.

**Monitoring & Evaluation**

**Monitoring**

* Monitoring is defined as continuous assessment which gives early indications of progress in fulfilling the objectives,
* It is a checking process to see whether activities are going in accordance with plan and that the learners are ‘on task’,
* Monitoring assists decision making, ensures accountability and provides foundation for evaluation.

**Evaluation**

* Is a systematic measurement of performance of an on-going program at certain intervals or at completion of academic year.
* It aims to determine the relevance and fulfillment of objectives efficiency, effectiveness, impact and sustainability.

**Difference between monitoring and evaluation**

* **Monitoring** is the on-going assessment during the teaching-learning process, activity and implementation in the field of education, whereas,

**Evaluation** is the performance assessment of a completed or half completed program.

* **Monitoring** is done by individual teacher or internal management whereas,
* **Evaluation** is done by agencies, internal such as school management or external such as inspector of school/department of education.
* **Monitoring** occurs continuously whereas,
* **Evaluation** occurs in the end or at mid-term of the year.
* **Monitors** check progress, take remedial actions and update plans and strategies whereas
* **Evaluation** provides suggestion for improvement of the teaching-learning process.
* Usually **Monitoring** does not provide any suggestions whereas **Evaluation** provides suggestions.

**Objectives of monitoring and evaluation (M&E)**

A framework is needed to be developed which formulates the comprehensive monitoring and evaluation (M&E) plan for analyzing the overall school performance,

* M&E is an endeavor to ensure the fair and good quality of education that is being imparted to students at different levels, i.e primary and middle, secondary and senior secondary.
* M&E together provide the necessary data to guide strategic planning,
* M&E is needed to design and implement programs and projects,
* M&E is needed to allocate and reallocate resources in better ways.
* M&E is needed for a better and effective use of human resource or teachers management information system for replacement or recruitment and deployment of teachers,
* M&E is needed for inspection and appraisal systems,
* M&E is needed for financial management systems,
* M&E includes teachers’ and students’ evaluation procedures
* M&E is needed to understand and appreciate the nature of teacher’s own teaching standards,

**Importance of Monitoring and Evaluation in Education**

* Monitoring and Evaluation play an important role in all projects, programs and policies.
* As every education system includes policies, objectives, planning and implementation, monitoring and evaluation is important to check the progress towards meeting the objectives.
* Monitoring indicates the success or failure whereas evaluation checks relevance, effectiveness efficiency, impact and sustainability of education policy, plans and strategies, educational projects and programs.
* Monitoring and evaluation should be an integral component of any particular school since it helps in planning.
* A school should use technological tools available to help in gathering information.

**Monitoring & Evaluation of individual student, teachers, and classroom monitoring and inspection of school**

* Students self assessment
* Monitoring and Evaluation of individual teacher
* Teacher’s self monitoring
* Teacher’s self-assessment
* Informal classroom monitoring
* Inspection of school

**1. Students’ self assessment**

* Students’ self-assessment involves the evaluation of their own work and learning progress. It is a valuable learning tool as well as part of an assessment process. Through self-assessment, students can:
* Identify their own skill gaps, where their knowledge is weak.
* See where to focus their attention in learning.
* Set realistic goals.
* Revise their work.
* Track their own progress
* This process helps students stay involved and motivated and encourages self-reflection and responsibility for their learning.

**2. Monitoring and Evaluation of individual teacher**

* It is defined as a systematic procedure for reviewing the performance of a teacher in a classroom and analyzing the review to provide constructive feedback for the teacher’s professional growth.
* Principal or any administrative staff member is traditionally involved in evaluating a teacher.
* Aspects such as students’ performance in terms of class work record maintained by the teacher, daily or weekly lesson plans etc are considered while evaluating the performance of a teacher.
* It is one of the most vital elements for a thorough career development of a teacher and maintains the quality of education.

**Purpose of evaluation of individual teacher**

* Improve the performance of teachers by evaluating them at regular intervals.
* Assignment of precise ranks to all the teachers according to their respective abilities and contribution.
* Unproductive teachers can be asked to improve their teaching talent within a specific frame of time. Such teachers deserve to change their frame of mind and adopt conducive teaching strategies, if they fail to do so, they should then be asked to quit or an appropriate action needs to be taken to improve their teaching methods.
* Collection of feedback to make well-informed decisions about appraisals and promotions.
* *School’s management is responsible for the all-round growth of their teachers and thus, the main purpose of conducting teaches’ evaluation is to empower all the teachers who contribute towards imparting education to their students in the best possible manner.*
* The Principal and management are in charge of empowering the teachers to perform better in the same manner as the teachers are responsible to empower the students.
* A teacher performs better in case the management communicates and appreciates his/her work which contributes to continuous improvement in their performance.

**3. Teacher’s self monitoring**

**The rationale of self-monitoring can be summed up as under.**

* A teacher who has an awareness of teaching and its different components is better prepared to make appropriate judgments and decisions in teaching.
* It involves asking questions about how and why things are the way they are, the value system they represent, alternative available.
* Much can be learned about teaching through self enquiry.
* Very often class visited by outsiders are not feed-back oriented but are judgment oriented.
* Moreover, rather than depending on external sources for information, the approach that seems to have *a lot of potential for self development is one where teachers monitor and collect information about their teaching either individually or through collaborating with a colleague and making decisions about what alternative to adopt.*
* *It is not enough that teachers’ work should be studied. They need to study it themselves.*
* Self monitoring is illuminative’ because it involves raising the consciousness of teachers as to what is actually happening in the classroom as opposed to what is supposed to happen.
* Teachers should use their classroom as laboratories to study the learning process as it applies to their particular disciplines,
* Teachers should become skillful, systematic observers of how the students in their classrooms learn.

**4. Teacher’s self-assessment**

* It is the process of making judgment about the effectiveness of one’s own knowledge, performance, belief or effects, so that they can be improved or refined.
* Self-assessment is a formative evaluation process.
* All teachers carry out to form their personal, professional knowledge and to assess their instructional effectiveness on a day-to-day basis.
* Self evaluation is a continuous process. This enables a teacher to refine, modify and change as per the requirements of students which tend to change almost regularly.
* Principal’s observations, feedback from students and parent interaction deserve a serious thinking for evaluation of one’s performance as a teacher.
* In the long term, it plays a major role in enhancing the teacher’s professional skills

**5. Informal classroom monitoring**

* Following a set procedure does not guarantee success

* An informal level of monitoring always remains going on while the teacher is conducting a lesson. This is an interesting and encouraging phenomenon.
* It is not that all teachers monitor carefully and successfully all the time. But, the teacher remains aware of how the class is getting on.
* The pace of teaching activity that is not too fast or too slow keeps the teaching-learning process favorable; yet, slow learners may need individual attention of the teacher.
* It remains a fact that the teaching-learning process is not a simple and straight forward matter of predetermined and neatly organized inputs leading to clearly predictable outcomes, as we know from everyday experience, even much simpler operations can go wrong.

**6. Inspection of school**

* The word monitoring does have an association with inspection and evaluation of teaching-learning scenario by an “external authority” or some authorized internal authority/management members of the school.

***School’s management is responsible for the all-round growth of their teachers and thus, the main purpose of conducting teaches’ evaluation is to empower all the teachers who contribute towards imparting education to their students in the best possible manner.***

***It is not enough that teachers’ work should be studied. They need to study it themselves.***

**8.2 INSPECTION OF SCHOOL**

The purpose of inspection is to ensure that high standards are maintained and that there is continuing development of the educational system.

* Evaluation of standard of education, quality of teaching and the effectiveness of individual teachers.
* To promote excellence in the management of teaching and teaching methods including the use of technology based teaching and its fine tuning.
* Inspection will be held with an objective of bringing about the improvement in the standard of teaching in the school.
* Having a view of **standard and quality of education** is critical for everyone concerned with education. A comprehensive report of assessment, defects and deficiencies in teaching-learning process and the education system will be submitted (by the convener of Inspection team) to the Managing Committee for necessary remedial action within 15 days.
* Every recognized school shall be inspected at least at least once in each financial year.

**DELHI EDUCATION ACT 1973,**

**Supervision/Inspection of the academic work**

**(Actual teaching and its different aspects)**

The supervisor/Inspector whether alone or in a team shall thoroughly supervise the teaching of all individual teachers and the work done by students. Inspection shall be as objective and critical as possible. It shall be effective and aimed at bringing about improvements in the standard of teaching-learning situation.

**Points to be observed and notes made on the following:**

* How the teacher has planned his/her lesson?
* The type of lesson/notes written by the teacher and how far they are useful?
* Whether the teacher has converted the specified course and syllabus for the term and has adhered to it in the programme of teaching?
* Was the lesson taught on the day of inspection already scheduled and planned for the day?
* Were the questions put to the students thought-provoking and well-distributed?
* How far the teacher encouraged the students to put questions to him/her or the subject?
* What type of audio-visual aids were used by the teacher in the class and how far were they effectively used?
* Did the teacher write a proper black-board summery?
* How far was it a true synopsis of the lesson taught?
* Are the assignments given by the teacher, and if so, are they judicious and scientifically given?
* Does the teacher gives the class-work to students regularly? If so, is it regularly corrected and corrections followed up?
* How much home work is given by the teacher? Is it regularly corrected and followed up?
* How far is the assignment for class work and home work assessed and evaluated?
* Has any record of such assessment been kept by the teacher and if so, how?
* What methods were used by the teacher in teaching the lesson and how far was the method effective?
* How far was the lesson taught by the teacher effective?
* How far did the students grasp the subject?
* How far the teacher did achieved the objectives of the lesson?
* Were periodical tests held?
* What types of papers are given to the students?
* How are they evaluated?
* How are the tests and examinations in the school organized?
* How far the modern techniques in setting and evaluation of papers used?
* How is the record of tests and examinations kept in the school?
* Is it properly maintained?
* Are progress-reports of students regularly sent to the parents?
* Are they signed by the class-teacher and the head of the institution?
* Are they kept in proper and safe custody?
* What remedial steps have been taken by the teacher to remove the weakness of students in different areas?
* Does he/she keep any record of such students and the progress achieved by them?
* What efforts has the teacher made in helping the gifted children?
* Is there any record of their progress and achievement kept?
* What projects, if any, has the teacher taken up in the school?
* How far are the students and teacher involved in the project?
* How far the objects of the project have been achieved?
* Have any innovations and new experiments been made by the teacher? If so, with what was their results?
* How does the teacher encourage love for the subject and love for reading amongst the students?
* What efforts has the teacher made in improving the hand-writing of his students?
* How far he/she succeeded in it?
* Does the teacher write his/her diary properly and regularly?
* How far does it help him/her and the authorities in assessment in hi/her work?
* Did the teacher keep a class library?
* If so, how is it organized and with what results?
* How does the teacher control his/her class?
* How are his relations with his/her students?
* Has the teacher participated in any seminars, refresher courses, summer-institutes or in-service training programs? If so, give details.
* Has the teacher contributed any article or published any text-book, etc? If so, give particulars.
* Has the teacher received any recognition, award or prize from the school, community or the Government? If so, give details.
* A critical and objective impression as a whole of the teaching-learning situation observed by the Inspector may be recorded.

**SECTION 9**

**COACHING**

**9.1 EMPHASIS AT 9TH AND 10TH CLASS COACHING**

**9.2 COACHING FOR MERITORIOUS STUDENTS**

**OF CLASS 11TH AND 12TH**

**9.3 CENTRE FOR COACHING AND COUNSELING (CCC)**

**9.1 EMPHASIS AT 9th AND 10th CLASS COACHING**

* Most of the students ignore the importance of 9th class. They hardly know that 9th and 10th standards are interconnected and to do well in 10th board exams is important to start getting ready from 9th standard itself. We know that many of the books have two parts. One part is for class 9th and the second part is for class 10th. So, it should be kept in mind, if the basics are not clear in 9th class, one may face problems in 10th standard as well.
* The second thing is that, nowadays competition level has touched new pinnacles and if one wants to keep up, he has to be extraordinary in his studies. It is better, if the students start preparing for **IIT-JEE, combined medical test** from the early stage, and 9th standard is supposed to be the best time to start preparation from.
* The third and the most important is that, does the student feel about it? If he thinks that he can manage his syllabus without the help of tuition or coaching classes, then there is no need to join one. But most of the students ignore the importance of preparation at 9th class, coaching remains a must option to join.
* There are many students who use to live under the impression that tuition is must for standing in front row. That is nothing but a myth. Many students achieve good grades without attending tuition classes, but again, it is nothing but a personal call. If someone thinks he is lacking in some subject then he should join the tuition/coaching. It will be a step beneficial, indeed.
* Career planning during school days is very important, which stream is to be selected after 10th class? Humanities, Commerce or Science. Concern for choosing the stream is genuine as it plays a very important role in choosing the future path. However, many a times, students are not completely sure of which stream to select after class 10th.

**Stream selection after 10th is influenced by various factors**

* Every student needs to understand that choosing a stream after class 10th is completely their decision and they should be serious about it. Parents too, should also understand that their child needs their support for making a decision. So, they should avoid any social or peer pressure affecting their child’s decision.
* At class 10th students not only require coaching in the subjects they feel poor, but they may also be in want of counseling. Four factors play crucial role in choosing the stream for their future.

**1. Self Awareness**

* This is the most important thing to be considered before deciding a stream to choose after 10th.
* This involves identifying his interest, understanding the aptitude and skills.
* Adequate attention must be given to interest and aptitude. For example, if one is weak in any science subject like Physics, Chemistry, Biology or Mathematics, then he has tough time in understanding the subject in class 11th and 12th and during higher studies.
* This is why detailed strength-weakness analysis is necessary and important while choosing a stream after class 10th.

**2. Know the Streams**

* A student should find out every minute detail about the stream, like subjects’ difficulty level, higher education courses and career projects etc.
* Without having known all these aspects, a student won’t be able to find out which stream will suit his/her the best.
* Some streams give access to diverse job opportunities. But, the key is to find out what the future in that field will be like?
* Is the stream offering a promising career in future? The details will have to be listed down about professional courses that one may pursue after completing schooling in case of each stream.
* This will help in getting an idea about career prospects associated with a particular stream.

**3. To take help of a counselor**

* Approaching a counselor is essential when it is not sure about choosing a stable path after 10th class.
* It is then advisable to students to attend career guidance, seminars and educational fairs, where experts can assist in discovering the student’s potential and aptitude and accordingly suggest the right stream.
* For more clarification a student can personally visit a career counselor who will conduct to explore out student’s aptitude, intelligence, interest and personality to consequently find out the stream that will best suit him.

**4. Discussions with parents and teachers**

* Seeking guidance from reliable people in the community is another way to go.
* Parents and teachers are among those experienced people who can easily judge the inner strength and interests of the student.
* Both serve as a major influence in a child’s decision-making actions.
* So, guidance from experts and experienced people always matters. However, their decision should not be solely imposed on children while choosing stream, as after it is seen that, students are made to ignore their own passion and follow parent’s decision which ultimately take students’ future nowhere.
* So, a healthy discussion with parents and teachers and conveying about own real happiness should not be missed out during this phase of academic career

**Conclusion**

* Different parameters must be thought over while selecting the right stream for senior secondary education.
* The foremost criterion is to select a stream which is the strength of the student.
* Choosing the right stream makes a significant improvement in one’s career path.

***There is no good or bad stream and a lot of opportunities are there in every field. One just needs to put all his/her efforts to make a successful career.***

**9.2 COACHING FOR MERITORIOUS STUDENTS OF CLASS 11th AND 12th**

When schools fail to provide a good quality of education, a need for its excellence is then required and necessitates the need for extra coaching.

* *Excellence* demands an extra guidance and need based hard work through coaching arranged by the school.
* Existing coaching centres in the private-sector claim their role as an important factor for success of students in their endeavor for a favorable outcome in entrance test for admission in the institutions of repute.
* Being well aware of the needs and caliber of our students, school coaching may prove to be an extra benefit for students in terms of quality of teaching-learning process, but in financial terms too.
* Only 20 best students from class 11th and 12th should be selected for coaching.
* If more students deserve the coaching, the classrooms are required to be fitted with audio-facility.
* The school premise is an ideal place to cater the need of students.
* It is easier for them to join the coaching classes without exertion or wastage of time.
* They can attend classes half an hour or so, after the school is over, and after having a brunch in the meanwhile provided by the management of the school.
* Students need an extra-coaching to get admission in institutions to become doctors, engineers and civil servants after their +2 or graduation.
* The coaching centre in the school should have suitable infra structure in the form of books, study material, adequate and comfortable seating arrangement and some recreational facilities for the students.
* Adequate lightning is also a prerequisite to begin with.
* Providing the students a quality of education is must. We need to appoint the teachers who use to upgrade their knowledge on regular basis.
* They are required to be the best subject teachers from the school.
* To add to the faculty from out of the school, look out for the dedicated and experienced teachers. It is vital to instill faith in students for their motivation.
* The study material must be prepared after quality research and should ideally cover all aspects of the subject.
* Teaching tools work to the advantage of the teacher and the same is true for the coaching classes.
* Apart from the usual white boards and markers, some other innovative tools designed by subject experts, may be helpful in ascent of pedagogy. Innovative teaching tools may be the charts, working models and online help from the experts in the required subjects and field.
* Beside this smart classes will be innovative in true sense.
* In case of the success achieved by student/s in a competitive examination a kind reward will be a morale booster and will act as motivator for other students.

**9.3 CENTER FOR COACHING AND COUNSELING**

**(CCC)**

All the minority schools, Urdu medium, aided or private are grappling with a common problem that is poor and lifeless results. There is lack of Muslim representation almost in all sectors, be it education, in services (govt. or private sector), economic leadership or the political leadership.

Sachar committee presented its report in 2006. It showed that the Muslims are at the lowest level of education and persistently dwindling. Even after 16 years situation remained the same or dwindled further. There is a little hope in future too. It is a matter of great concern which calls for an immediate attention for a reconditioning and overhauling.

**Need to thrust the Muslim Community**

Survey conducted by an Educational Trust reiterated the Sachar committee report about the depleted academic affairs of students of Urdu medium and other schools in “Old Delhi”

* Students were found to be a bundle of useless stuff unfit for any competitive examination. Devoid of any specific goal regarding their career in education.
* Mathematics and English are like a spitting fire dragon for them. Even the knowledge of Urdu failed to justify their option of studying in Urdu-medium schools.
* Most of the schools either Urdu medium or public schools are grappling with the same problem of low quality results.

It is thus imperative to establish coaching cum information centre as per the needs of Muslim students in order to design a blueprint for their future. Success of such centres rests at the “quality of people” managing such centers. Triumph demands their persistent dedication.

**Importance of Coaching Classes**

* To attain a desired objective, coaching classes have become an important part of every student’s life.
* While the debate about the importance of these classes continues, one cannot deny the fact that coaching classes do come with a set of advantages especially when it comes for preparing for the competitive exams.
* The purpose of competitive exams is to filter with right aptitude for a said profession.
* Therefore simply mugging up the study material may not prove to be useful.
* Its importance is to have a strategy in place.
* Thus a well chartered plan is the need of the day, and this brings us to one of the important advantages of a coaching-class guidelines.

**Impact of coaching and monitoring**

* To coach is to instruct or train and is an effort of enhancing the knowledge.
* The practice of coaching in the class-room is one of the most effective ways to bring out the best in students, to develop their talents and strengths.
* To built skills and confidence and to nurture learning, students sometimes need an extra push of encouragement to help them thrive.
* A powerful technique of listening and questioning can provide a myriad of benefits.
* An important component of academic coaching is helping students understand how their ‘use of time’ and level of organization or disorganization (paper, space, and technological data) impact their studies.
* Proper guidance is vital for preparing the students for their higher studies.
* Increases reflectivity and clarity of thinking.
* Improves psychological wellbeing and confidence.
* Better problem solving skills.
* Gains in practitioner knowledge and skills.
* Improves practice of sharing.
* Better communication and relationship.
* More positive attitude towards professional and career development.
* Self management and self learning skills.
* The most powerful way that school leaders can make a difference to the learning of their students is by promoting and participating in the professional learning and development of their teachers.
* Only qualified, experienced and good teachers successfully identify and bring about need of the day.
* Students’ efforts play an important role in fetching the desired results.
* The coaching class does not determine the success, the students’ hard work does, an important message to be inculcated among the students to motivate them for their triumph.

**Vision**

* To establish coaching centers at different places in Delhi and then try to establish gradually, in other cities too, big or small, all over India with an agenda to transform the existing available talents among Muslims and other disadvantaged groups, into the future leaders in all streams and fields through “promotional” education.

**Objectives**

* Development of moral values and religious culture.
* To assist in acquiring such a quality of education that is needed to seek admission in various professional courses like medicine, engineering, journalism, law, beside so many others streams.
* To inculcate the scientific temper, rational attitude and logical approach in order to enable the students to become leaders in diverse professions.
* We believe that average IQ of Muslim children is not at the ebb, if compared to the other community children, yet they usually fail to achieve their potential at the higher level of their education. Objective is to remove the barriers through persistent counseling.
* To enhance the skill of employability to an extent that is required to seek employment in govt. and public /corporate sector.
* To guide those who wish to choose self employment, either by choice or compulsion, utilizing the opportunities and facilities available or being provided by the govt. directly or through minority commission/private agency.
* To engage in detecting the avenues those are beneficial for employment of the community youth.
* To engage in activities required to facilitate the objectives and conducive to the set forth vision.

**Mission:**

* In keeping with the spirit of vision/objectives, following steps as mission are suggested.
* Endeavor to develop a platform to guide students about the prospects available in different streams in education/vocations.
* To accomplish the proposed design, it is crucially pressing to establish CCC’s in a School premises, so that the students of it and those of the other academic institutions around, may relish the benefits of facility.

**Procedure**

* Set out a Survey of existing schools/coaching institutes, private tutors, trusts and societies engaged in academic activity. Such an activity/information will guide to select the talented and the best teachers/tutors from the surrounding area. It will also contribute to measure the degree of academic scenario prevailing in the locality for a possible need based measures.
* Set-up such a CCC preferably in schools located at a strategic area with an easy approach for those pupils residing in and around it.
* If the selected school is equipped with smart-boards (in at least 2 class-rooms initially), it will be an additional advantage.
* The initial level for intervention would be class 6th. Free coaching in 3 subjects will be undertaken to the students of class 6th, 9th and 10th of the school, selected through the criteria set forth by the centre. Counseling cum career counseling will be used as a tool to develop leadership initiatives among the students.
* For a longer lasting life of the centre, nucleus of it demands a self sustaining character. Attempts to make CCC self-sustainable in economic terms are therefore imperative and shall be under taken.
* Constraint as stated above may push the CCC to fix a small amount as fees from the students of other institutions, in order to hold CCC posture straight, on no profit no loss basis.
* It will undertake the responsibility of coaching about an equal number (or so) of scholars from other institutions too.
* Coaching of school students will start after half an hour of the school is over.
* Coaching of students of other institutions will commence after the coaching of school students is over.
* All the students will be treated as adopted children of the centre in order to develop a sense of strong bond for each other.
* Individual profiles of all students and their parents will be made for a better understanding and academic performance of students.
* Case history of all students will essentially be kept for the development of their literacy and related capabilities.
* Assessment of learning style and caliber and subsequent academic, communication and performance skill improvement.
* CCC will undertake different programs/activities for the development of life skills among students.
* A complete knowledge of talents as recognized by their respective institutions will be collected for its further development/elevation.
* Frequent personality development programs will be held in order to find out the latent talents and perceptions among the students for development
* Undertake Quality Development Program in Schools who ask for the same.
* Conduct Counseling, Career-counseling and Personality Development Program in schools in order to motivate the students for a better future life.
* Regular counseling of students along with their parents will be undertaken.
* Will conduct workshop for parents.
* To guide and prepare the students of class 9th and 10th for selection of stream in class 11th.
* CCC intends to expend every year and make the coaching available till class 12th.
* In following years a strict monitoring during 11th and 12th class for scoring a desired grade required to get admission in the subject/course of their choice.
* Guide the students to get admission in different institutions in and around Delhi as per their score in class 12th.
* Those who fail to get admission in regular classes at college/university will be guided about the distant-learning programs conducted by different universities.
* Training for the govt. jobs such as staff selection commission, banking, police services and so many others.
* Students who intend to pursue Civil Services and Medical/Engineering should start preparing early. Every student in Class 8th must be very clear about his future plan and start preparing accordingly. The CCC will shoulder their wishes through persistent motivational coaching and guidance. Guide students post 12th class for coaching institutes of repute those are imparting coaching for admission test to medical, engineering and Civil Services.
* Career guidance post graduation.
* Student(s) residing anywhere in the city would avail the complimentary facility of finding a good tutor/coach in their own area of residence.
* Collaboration with other institutions who are working for identical motive.
* Transfer of available information regarding different opportunities given by govt. or private agencies, to the students in time and assist them to get its benefits.
* Vocational guidance post class 12th.
* CCC will distribute literature related to careers and education.
* Will help in all round personality development who may desire so.
* Will help/guide/launch Professional courses in computers to make them eligible for immediate employment.
* Will guide in seeking admission in various ITI Vocational Courses.
* Foreign destination, complete guidance.
* Career counseling shall be a complimentary/charge-less service for all..
* Synchronized shall be the working of all centers through internet.
* To establish Schools, wherever possible for quality Education.

“**THE TIME”**

**It is a mistake to think “time is going”.**

**Time is not going.**

**Time is here until the world ends.**

**“It is you who is going”.**

**So, don’t waste time.**

**Time is infinite.**

**You are finite.**

**You waste yourself.**

**It is you that grows old and dies.**

**Time doesn’t.**

**So, make a better use of yourself before you expire.**

**And one of the worst things to do with time is comparing you to others.**

**A cow eats grass and gets fat.**

**But, if a dog eats grass, it will die.**

**Never compare yourself with others.**

**Run your own race.**

**What works for one person may be fatal to others**

**Focus on the gifts and talents God gave you**

**Don’t be envious of the blessings HE gave others.**

**SECTION 10**

**COUNSELING**

**10.1 COUNSELING OF STUDENTS**

**10.2 COUNSELING OF PARENTS**

**10.3 CAREER COUNSELING**

**10.1 COUNSELING OF STUDENTS**

Counseling is designed to facilitate student achievement, improve student behavior inside and outside the classroom and improve attendance and help student develop socially.

* All students in a classroom may not always be of the same background, financial set up, academic skills and social behavior and comprehension level.
* Understanding their emotional concerns and giving them timely moral support and guidance can make a remarkable difference in their overall performance.
* The family problems, financial worries or bullying can take a toll on the student’s behavior and performance.
* This is when counseling as a part of school life becomes a whole lot purposeful.

*Some schools would arrange quarterly or annual counseling to students by arranging some specialist counselors and some may appoint a regular counselor.*

* Of course education is a process of learning and transformation of students.
* The internal and external challenges of our younger generation are to be resolved in order to empower them properly with high quality of education.
* For this a close assessment and warm interaction with the individual student is mandatory.
* The purpose of school counseling is that, students can freely and confidently express their academic, emotional and personal pressures to an expert in this field (counselor) who can affect them effectively.
* The major objective lies in facilitating academic, emotional, social and cognitive development of the students, hence to empower them in their learning and personal development.
* Other than students, parents and teachers get the benefit from the counselor in order to pave a path to the students inside the school and in their homes.

**Counseling for common issues such as**

* Effective handling of academic issues of students.
* Lack of concentration at studies and thus under achievement.
* Coping with examination exertions.
* Loneliness and adjustment difficulties.
* Counseling for individual student for a range of issues including difficulties with
* peers,
* behavioral difficulties in classroom,
* academic issues,
* anxiety,
* Emotional issues arising from family background, etc.
* Confidential environment where students can explore and express aspects of their **“self”** that may be painful or uncomfortable for them.
* Relationship issues: relationship with parents.
* Behavioral problems such as anger, outburst, disobedience, lying etc. Conducting work-shops with parents in dealing with such issues.
* Bullying at school require anti-bullying measures.
* Need based class talks.
* Low confidence and self esteem.
* Depression, anxiety and other mental health problems.
* Suicidal tendencies that sometimes develop during adolescent period.
* Developmental group skills session with adolescents.
* Guidance for family life of adolescents.
* One-to-one counseling session.
* Regular group counseling session and lecture in different classes.
* Motivation session for bright/meritorious students.
* Motivation session for not so good students.
* Counseling of parents.
* Training and motivation workshop for the faculty.
* Psychometric tests and therapy.
* Maintaining case records of students for reference and comparative study.
* Documenting of the referral cases and planning intervention plan of special cases.
* Collaborating and working in conjugation with school administration, particularly in matters that directly pertain to students, e.g. discipline (rather in-discipline) cases of the school.
* Class-wise counseling (and moral lessons) of most indiscipline students (sections combined).
* Good behavior inside and outside the school.
* Planning NGOs visit to school for students’ sensitization.
* Regularly taking life skill classes from class 6th to 12th.
* Data management.
* Career profiling, individual profile of students and their future plans.
* Dissemination of information to teachers, students and parents on various issues.
* Orientation program for students of Nursery 1st 5th, 9th, 10th, and 11th.
* Organizing first-aid classes.
* IQ testing and talent search.
* Specific learning disability.
* Aptitude and vocational guidance.
* Make a list of disciplined and undisciplined students (as per the remarks of different teachers).
* Regular counseling sessions in order to apprise parents about their responsibilities and their duties.
* Monthly class-wise counseling of students to apprise them about their responsibilities towards their parents, community and participation in National development as a whole. A complete record is to be maintained.
* Counseling sessions for students of, 6th, 7th, 8thand 9th--10th. Counseling of other students and moral lectures (classes combined).
* Assessment of learning style and caliber, and subsequent academic improvement of sub groups (viz. intelligent, good, average, below average and poor).
* Documentation of the referral cases and planning intervention plan of the special case.
* Good behavior inside and outside the school.
* Moral building measures, discipline, cleanliness, punctuality, respect of teachers, parents and elders.
* Love for parents, community and country.
* Efforts to minimize late coming, habitual absenteeism and dropouts.
* Development of reading habits and group discussion.
* Time management,
* Guidance for time spent at studies, sports and co-curricular and other activities.
* Time spent at home.
* How can students get help from internet and allied agencies?
* Guidance to develop problem solving skills.

**Counseling tips for problem solving skills**

* Define the problem
* Identify what information is given and what information is missing.
* Ask questions.
* Identify possible solutions.
* Evaluate potential solutions.
* Practice, practice and more practice.

**Counseling tips for future planning and study as per requirement**

* Communication helps us ask questions, customize our learning, and sparks our passions.
* There is no single magic solution that will help students of today become tomorrow’s work force.
* But, giving them well-rounded education of Science, Technology, Engineering and Math (STEM), arts, history and communication courses will help. History informs us of the struggle and success of the past innovators.
* Encourage team-work. One of the biggest things that students today need to succeed at work is the ability to work as a team.
* They need to understand how to communicate compromise and share credit, so that they can be valuable contributing members to projects.
* Be future-focused
* Teach Complex thinking Skills.
* Prepare for college and career.

**Counseling tips for exams preparations**

* Give enough time to study. Make a study schedule that fits the way of studying.
* Nothing should be left for the last minute preparation.
* Use flow charts and diagrams.
* Practice on old papers.
* Organize study groups with friends.
* Explain your answers to others.
* Take regular breaks
* Drink plenty of water.
* How to perform in exams in different subjects.
* Information regarding different new courses or other innovative courses in different universities and institutions.

**Counseling for employment requirements after education?**

* Keep track of different activities taking place in the field of technology and communication, sports, science, engineering and medicine.
* Future guidance either as an employee or a self employee.
* How to tackle the failure in life.

***Counselor plays an important role in psychological and emotional development of a child, an aspect important for his/her future progress. He will shape a detailed program as per the need of student/s. Comprehensive record of counseling is to be maintained for the accomplishment.***

(Software is required for Counseling of students, parents and Career counseling).

**10.2 COUNSELING OF PARENTS**

Parental counseling is a service that aims at providing the required tools, guidance, knowledge and support to parents in a healthy manner without them having to worry about being judged, in an unbiased atmosphere. This way they become more fully equipped to take care of their children.

* Parents are the first teachers of their kids and have to play a key role in shaping up their character.
* A balance of education at home and school moulds a student’s actual learning.
* Parental encouragement and support for learning activities at home combined with parental involvement in schooling is critical to children’s education.
* Their role is not limited to home but involvement in school activities too.
* A child’s learning scale is highly related to the treatment he receives at home.
* Proper parenting is a daunting task.
* Many parents usually fail to follow the dotted lines imperative for upbringing of their kids and the engagements required for their kids thorough education.
* Parents counseling is an evidence-based approach for helping parents to cope with a range of difficulties affecting their children.
* Counseling of one or both the parents is required.
* It concentrates for helping the parent/s to learn ways to encourage positive behavior, manage undesirable behavior and understand the emotional, academic and intellectual needs of their children.
* Parents universally, have a deep rooted desire to nurture their children with excellent character traits that a youth deserves for being a good member of the community, society and simultaneously a good citizen that a nation demands.
* Parents involvement has a positive impact on many indicators of student achievement, including;
* Higher grades and test scores.
* Enrolment in higher level programs and advanced classes.
* Lower drop-out rates.
* Higher graduation rates.
* It has been observed that most of the parents need a guide line or counseling for a better and fruitful education of their kids.
* Although parents’ counseling is recommended to all parents who use to face some issues pertaining to their children.
* School authorities and the teachers concerned may guide parents for issues regarding the difficulties in academics that are being encountered by their kids.

**Need for the counseling of parents**

* As explained above, parental counseling is a type of service that aims to provide the necessary knowledge, tools, guidance and the especially support to the parents without bias or judgment. This way they become more fully equipped to take care of their children.
* Parental counseling offers modalities or therapies that help parents gain a better understanding of their parental style, face and eventually conquer their personal issues, and restore their family, bringing back harmony and peace in the household, with the ultimate motive being the improvement in socio-economical functioning of the child.
* It is a multifold approach and multi-step process that requires frequent meetings with the parents.

**Teacher-parent relationship**

* Trust and mutual understanding between parent and teacher is a real secret of child’s happy learning.
* Support and cooperativeness from parents towards teacher helps a lot to connect, understand and work towards child.
* Parents should have a regular contact with the teachers of their kids on regular basis in order to know the performance of their kids.
* Meeting teachers and discussing with them about their children create a sense of responsibility in children regarding their studies and exam.
* Remarkable positive change is seen in a child if the parents and teacher understand and work hand in hand.
* A good parent teacher relationship leads child to be positive attitude towards attending school.

Following are some of the ways that parents are required to adopt at home for a better academic results of their kids.

**Be a role model**

* Kids usually imitate what they usually use to see at home. So, it is important to act as a role model in their learning phase.
* Parents are the first teacher of their kids and learn first thing together at home.
* Inspire them from the very beginning for the exciting experience he may have at the school life.
* Inspire them to learn novel elements in and out of school with friendly reminders and glance.

**Read together**

* Doing things together with parents give them a sense of support and confidence.
* Reading the lessons together is one of the best ways to be close with the child’s learning at school.
* It improves their vocabulary and invokes interest to learn more.
* Frequent visit to the library will help them to acquire additional knowledge.

**Oversee child’s activity**

* It is important to have an eye at the child’s activity in school and at home.
* Habits adopted at young age are linked to their performance and learn in classroom and school.
* Any abnormal behavior requires correction at the earliest.
* Help them to be more organized with their daily routine and find enough time for the lesson.

**No over scheduling**

* It is not a good idea to over schedule them with learning activities at home.
* Spending half of the day at school is a cumbersome and tiring activity. Don’t try to over burden them for more than required studies at home.
* Help them to be more organized with their daily routine and find enough time for the lesson without extra burden.
* Balancing the time between lessons, play time and rest is important to have a quality student life.

**Provide pleasant atmosphere**

* Parents should make sure that the kids are provided with a peaceful and pleasant atmosphere at home.
* It is good to avoid discussing family matters and problems in kid’s presence and don’t create a mess at home with unnecessary quarrels.

**Give constructive criticism**

* If you notice that your kid is not performing well or giving less importance to studies, make an effort to correct them in the beginning itself.
* Avoid using the ill words, giving only the constructive criticism.
* Make them understand the difference between the right and the wrong.

**Help with home assignment**

* Giving good support to kids in their studies would really lift their spirit for learning more.
* Show it with small gestures such as helping them with home assignments or projects.
* It is strictly not advisable to do every lesson for them and let them to play.
* Do it together and help them with some tips and guidance in doing the assignments better.

**Prepare them for tests**

* When it is their exam time, don’t leave them alone with their lessons.
* Help them to prepare for the tests with good guidance and support.
* You may even conduct mini tests at home before the actual tests to less and reduce their exam worries and tensions.
* You may also give additional help with the lesson areas in which they are weak.

**Reward them for results**

* Giving good motivation is important for a kid to perform better in studies.
* So, don’t hesitate to reward them, if they come up with some good results in the tests.
* This also gives them spirit to perform better every time.
* However, keep a limit and it is not good to over shower them with gifts with an average performance which fades away with their killer instinct.

**Go for educational trips**

* It is good idea to go for educational trips during the holidays.
* Include destinations that have some relevance with what they are studying to help them to have a better understanding of the lessons.
* Occasional trips to museums and zoological parks will also help them to interact with nature and learn new things.

**Maintain parent teacher relationship**

* Don’t skip the parent teacher meetings and interaction sessions.
* It is good to keep a good relation with your kid’s teachers.
* Learn from them about the child’s activities in school and make sure to correct the child if something is wrong.
* Maintaining parent teacher relationships also shows your interest in your kid’s matters which gives them a good feeling.

**Set aside time for kids**

* It is a fact that working parents would be busy with their tight schedules.
* However set aside some time for your kinds and don’t leave them alone at home.
* Make a comfortable space for them at home by maintaining a good parent child relationship.
* Eat together and play with them in the free time and go for occasional trips to free up their minds.

**Monitor their learning**

* Some kids will take up initiatives themselves to spend time for learning at home.
* However, it is not the case for all, and parents should make deliberate interventions for many of the kids.
* Don’t force them to do anything, but do a proper monitoring about their learning at home and give friendly advices. Have a check on their leisure time if they are lacking in performance.

**Prioritize child’s learning**

* Life of a child studying at school is an important phase and parents should give enough importance to it when deciding on other matters.
* Make it a priority and avoid unnecessary trips or functions that can affect their study schedule.
* Discourage them to take unnecessary leave from school for silly matters and make them understand the importance of daily class attendance.

**Share your personal experience**

* It is good to share some of your school life experience with your kid in your free time.
* This can include positive and negative experiences to help them understand the importance of learning.
* Also inspire them with your success stories to teach them about the importance of hard work and how it pays you back.

**Devise fun ways to learn**

* Make learning a fun activity with devising some interesting ways.
* Gamification (gameful thinking) is also a good idea to adopt for home learning too.
* Utilize the travelling time and playing time to help them memorize and revise the difficult subject areas with some tricks.
* Perform fun quizzes and friendly debates at home that cover their lessons or include flash card activities to revise their subjects with fun.

**Talk with your kid**

* Spend enough time everyday to talk to your kid even if you have tight schedules.
* Learn from them about their concerns or doubts about any happenings in and out of the school.
* Make sure that they are not worried about any thoughts or scare things and give them moral support for the problems they are facing.

**Encourage active learning**

* Active learning has a lot of benefits over the sedentary learning.
* It is the role of parents to encourage them for active learning at home which reflects on the way they perform in classrooms.
* You may also take initiative to help them form a good friends circle with the neighbor kids and organize interesting activities.

**Help them relax**

* In addition to the busy study schedule and play time, make sure that they are getting proper rest at the end of the day.
* Help them to relax with a good night’s sleep and proper food.
* Take effort to know your child’s area, areas of interests and include them in the holiday time to give them a good relief from the stress of studies.

**Be a good friend**

* It is important to be a good friend of your kid.
* Give them space to share anything that comes to their mind and express their true feelings.
* Give them assurance that they will get a helping hand in spite what comes in their way.
* This would boost their confidence level and help them to excel and perform better in learning and other activities.
* Besides school learning, parent’s active role during their study life can help them to grow up with better social skills and improved behavior.
* Students with good support from home have achieved better grades at school and grew up with a higher self-esteem.

**Life skills**

1. Teach kids to never stop reading and learning.
2. Teach kids to play well with others
3. Teach kids to improve their soft skills.
4. Teach kids to resolve disagreement amicably.
5. Teach kids to let their voice be heard.
6. Teach kids to apologize when they are wrong and forgive when they are made wronged.
7. Teach kids to show unexpected kindness and help the less fortunate when they can.
8. Teach kids to remain positive and focus more on the bigger side of life.
9. Teach kids to protect the environment and care for animals.
10. Teach kids to brush, dental floss and keep neat.
11. Teach kids to love unconditionally.
12. Teach kids to value for their selves
13. Teach kids to value for others.
14. Teach kids to become self sufficient.
15. Teach kids about the curiosity and critical thinking.
16. Teach kids about self expression and emotional development.
17. Teach kids about self discipline.
18. Teach kids about the moral values.
19. Teach the kids to be positive and hopeful about their future life and work hard to achieve success.
20. Kids need a better psychology development.

**10.3 CAREER COUNSELING**

**What is Career-counseling?**

* It is for making the students aware about the variety and diversity of courses and streams to choose from and enable them to prepare to acquire the eligibility requirements for these courses
* It is an effort for students’ career guidance right from their school about the available career options as per their interest and stream of academics. Through career counseling, an analysis can be done for students which will help them find out their interests and also their strength and weaknesses

**Why Career-counseling is important for high school/secondary school students?**

* Career-counseling should be done in school itself at least from class 9th and 10.th
* Especially because these are the levels where students choose a particular stream as their specialization, and also it will be helpful for them to decide the stream they should opt for.
* This is because many students are not satisfied with the stream they choose and tend to change it.
* This happens in the absence of proper guidance about options available as per their interest and different education streams.
* Nowadays many counselors prefer psychometric tests to analyze interests of students, because generally students are confused between their various interests but these psychometric tests help find out students’ capabilities towards each of their interests.
* Organize career guidance with students of terminal classes.
* Career talks with students along with their parents.

**With Career-counseling students will be aware of.**

* Their aptitude and interests, strength and weakness for a particular stream/subject.
* Necessary for making choice of stream for education after class 10th.
* Career options are available as per the student’s academic choice.
* Students should begin their career planning right from 10th class, because after this level, only a particular stream could be followed and career options will be limited to their choice of stream only.
* The stream choice also depends on career planning and interest of student.
* For a successful career, careful planning and a well carved path are must.
* It is known that selection of stream/course depends upon the students’ aptitude, grade and marks, yet most important factor is one’s keen interest in the subject and the purpose of selecting the course.
* Further guidance for every student as per the performance in class 12th for admission in different Colleges, institutions either in Delhi or elsewhere.
* Guidance about the information available at different websites.
* Professional and vocational guidance to the students who fail to seek required marks for their further education.
* Financial guidance and guidance for other available benefits.
* Guidance for those who failed to get admission in regular colleges.
* Guidance about the information available at different websites.
* Distant education, (online education): Traditionally job-market requires as many as possible number of degrees along with the talent and the capabilities of the job seeker. But the fact is that it is not possible to go on studying for years. On-line education seems to have resolved the problem. Just a computer with a connection of internet, It is what one needs to study a range of subjects. No wastage of time, minimum hassles.
* What the student needs in this method of learning is recorded video lectures and down loadable course material. This replaces the live lectures and the burden of consulting the huge no. of books at most of the time. This enables the learner to stay at home during his learning process, at a pace one can comprehend at the suitable/preferable time. The teachers and the students who are involved in teaching-learning process in online education are required to remember that it is a new concept so the teachers have to be cautious before they start imparting education online.
* It is imperative for an online teacher to give a brief idea about the program and the web domain. It helps the student adjust themselves to this new system.
* Students need to plan and give some fore-thoughts to make their learning a successful process.

**How can the students choose a career?**

Students are required to know certain things while choosing a career. The first and most important is;

**Knowledge of oneself**

* A student is required to know about him as a person.
* What is his strength?
* What is his weakness?
* Everybody is composed of individual character traits.
* Everyone is different from the other, blood relatives or the friends.
* Just remember that everyone is unique as a person.
* So, first and the most important thing is “identification of oneself.”

**What are the likes and potentials?**

* Most of the students think that they are interested in certain things, or certain work fascinates them. It could be their interest, but not their potential.

**Potentials are;**

**Aptitude**, a natural ability to do something

**Intelligence**, the ability to acquire and apply knowledge and skills

**Interest and**

**Personality**,

* The combination of characteristics or qualities that forms an individual’s distinctive character set of behaviors.
* Cognitions and emotional patterns that evolve from biological and environmental factors.
* There is no set definition of personality, most theories focus on motivation and psychological interactions with one’s environment.
* A student is required to remember that he is unique as a person;
* First and the most important thing is to identify himself;

**What is that he likes?**

* Should try to differentiate between his interests and potentials;

**How to know about self**

* Professional career counselor or school career counselor helps those students who cannot make analysis of their strength, weaknesses, opportunities and threats.
* There are two major aspects of counseling and vocational guidance
* Psychometric assessment
* Career counseling

**Psychometric assessment:**

* There are certain psychological tests and certain set norms.
* It doesn’t mean that someone in psychologically depressed or suffering from psychological disorder.
* It means simply the standardized tests.
* For vocational guidance there are certain tests which the students need to give. These are;
* Aptitude tests,
* Intelligence test,
* Interest assessment, and
* Personality test.
* These are the four different aspects and have to be tested, administered and counseled by qualified persons, people who have the psychological background and undergone some ‘counseling course’, not by someone who has done some course or someone who can speak better.
* Psychology people have in-depth knowledge about distress, about people and about courses.

**Required knowledge**

* Students need to know the available courses.
* About the location of colleges
* Whether the college is inside the city, outside the city or out of the country?
* What is their admission process?
* Need to know about the alternate courses too.
* What are the allied courses, that information is also required?
* Applicability of the course in various industries deserves to be known.

**Proper backup plan:**

* We need to be focused in practical and realistic world with a competition we are facing,
* There exists a need to have a proper backup plan, first selecting the course option and then going for the backup plan. Not because “I could not do and do not have any other option, so this is my backup plan”, not this kind of backup plan.
* And also not too many plans, we need to know one backup plan only.
* If plan A fails, then there is plan B. It should be something very handy, “last minutes decisions have to be avoided”.
* It sometimes happens that the selection of a course is regretted at a later stage. To avoid all these situations, a proper backup plan and awareness of the alternate route with similar sectors and similar careers are all big wider, scientific, logical and practical ways of choosing a career.

**Differentiate between interest and aptitude**

* A career is not selected because of interest only. Interest may change with advancing age, and experience.
* Interest/I.Q. level is something which is to be considered for selection of the career. Once we know our self, the next part is the consideration of available options. Obviously the competition is increasing day by day, new entrance exams are coming to fore, selection process is changing, and we have to be extra vigilant.

**Resources**

* Include the duration of ‘course’ and
* Availability of financial resources.
* Consideration about the maximum or minimum time is essential because cost of private education is too much and always increasing. That is why financial consideration is an important factor. Expenditure will naturally increase if we study in another city or another country.

**Scope**

* Scope is not about the salary or designation. It is about potential and how it will be used to the maximum. When we talk about scope, it means about the student’s potential and how it can be used to the maximum. Scope is something which a student is made for and that can enhance on the move. It is nothing to do with the position or payback. Scope is wider thing than one is thinking.

**In short**

* When students are thinking to study any course they need to have four things in mind
* They need to know about their self,
* Need to know the options,
* Very much clear about the availability of resource/s,
* Scope of the subject,

***Once these are in place, it is sure that students can make a very wise career decision and come to a logical conclusion where there can be no confusion at all and it can take them a long way ahead.***

**SECTION 11**

**IMPORTANT SUBJECTS**

**11.1 TEACHING OF MATHEMATICS**

**11.2 TEACHING OF MATHS DESERVES**

**A SYSTEMATIC APPROACH**

**11.3 EFFORTS TO IMPROVE ENGLISH**

**SPEAKING SKILLS**

**11.1 TEACHING OF MATHEMATICS**

Unfortunately, So far Mathematics has been an elusive bird, which we hope will one day take off and fly. The prevalent conventional and formal teaching has enough scope for a change to an objective, organized and strategic planned education. The focus should be on the achievement of teaching and teaching environment as a whole. The teacher should be well equipped with the innovative teaching concepts and visions to achieve desirable, smooth and sustainable transitions.

* It is known to one and all that Mathematics plays an important role in our daily lives. We cannot move an inch without mathematics.
* Not all students like mathematics, but a good math teacher has the power to change that disaffection.
* For the students who have a bad taste for the subject, a good math teacher can breathe new life into the subject.
* A successful math teacher has an extensive knowledge of mathematics.
* This knowledge allows him to confidently explain concepts and processes to his students.
* This confidence boosts his credibility and helps students trust in his ability to teach them what they need to know.
* Math teachers use many methods when teaching.
* Their job when instructing is to develop methods, or ways of teaching, that will benefit the students and make them successful.
* Methods of quality math instruction include using visuals, making connections, using formative assessments, and teaching strategic thinking.

**Teaching strategies**

* Students learn in different ways, and a good math teacher understands that.
* He keeps up with the best practices in the math education and regularly incorporates them into his instructions to help all of his students learn.
* His lesson plans engage students and help them feel confident in their mathematical abilities.

**A personal approach**

* In the class-room a talented math teacher serves as a facilitator of learning, providing students with the knowledge and tools to solve problems and then encouraging the students to solve them on their own.
* When students answer incorrectly, he does not allow them to quit, instead figure out where they went wrong and keep working at the problem until they get the correct answer, providing support and guidance where needed.

**Class-room leadership**

* A skilled math teacher is seen as a leader in his class-room and in the school.
* His students respect him, not only for his knowledge of the subject but for his overall attitude and actions.
* He has control over the class-room, laying out clear rules and expectations for students to follow.
* When students misbehave, discipline is consistent and fair.

**Care and concern**

* A good math teacher cares about his students.
* While he holds his students to high expectations, he recognizes that occasionally life gets in the way of home-work and that studying sometimes take a back-seat to family obligations.
* Therefore he offers student second chance when warranted and takes time out of his own schedule to help student catch up.

**Math teacher is required to have skills in a variety of topics**

* He should be patient as some students take long time to comprehend a concept.
* He should be creative in finding ways to convey concepts to somewhat resistant students.
* He goes beyond teaching the basics of counting, adding, and subtracting to installing a love of Math and its usefulness into students.
* He is usually well versed in both his understanding of the basics of Mathematics and how to share the knowledge in various ways.
* A Math teacher must have the ability to communicate effectively with students, parents, and fellow teachers in order to work towards the common goal of providing education to youth.
* He is required to create lesson plans to keep students engage in the learning process while sharing math concepts that can often be confusing.

**Teaching Math at Primary level**

* Math teachers who teach math at Primary level are usually certified in elementary education and teach all topics.
* Help students develop the skills and strategies for mathematical problem solving.
* Assist students develop the skills and strategies for mathematical problem solving.
* Assist students in understanding math as a natural language that is able to be manipulated by human mind.
* Teach students how to build more advanced skills as they progress.
* Show students how to check work, revise, and evaluate mathematical process.
* Teach students to reread and restate the problem using different languages.
* Teach students how to relate the problem to other similar problems.
* Empower students to consider various problem-solving strategies.
* Teach children to do the necessary calculations.
* Teach children to communicate answers using pictures, manipulative and words.
* Teach children fundamental concepts like “reasonableness” and “approximate”.
* Model math reasoning by thinking aloud.
* Encourage talk at each state of the problem solving process.
* Encourage positive attitude for approaching mathematics.
* Teach children how to measure using a variety of tools.
* Connect mathematical concepts and procedures to everyday situations.
* Communicate mathematical thinking and inquiry through visuals, written work, and speaking.
* Commit to becoming a role model for students in the community.
* Set rigorous, concrete and individualized goals for student to achieve.
* Engage in professional development on a regular basis.
* Use a variety of teaching aids manipulative to reinforce concepts.
* Understand money, time and measurement.
* Acknowledge students in meaningful ways in regard to their academic development and achievements.
* Collaborate with other teachers to support the school’s mission, statement and values.
* Develop positive and meaningful relationships with students and their families.
* Conduct all teaching practices and related work activities with a manner of professionalism.

**At middle and higher classes**

* Math teachers are responsible for refining students’ developing mathematical experiences and greater understanding of math in the world, and directing them towards a study and appreciation of mathematics in both the practical and theoretical spheres.

**With that goal in mind, secondary math teachers**

* Teach students about the focus and goal of math in the real world.
* Assist students become more confident mathematicians
* Assist students select and apply a variety of problem solving strategies.
* Create a variety of retranslations of mathematical concepts.
* Help student determine area, volume and parameter etc.
* Help students reflect on their thinking.
* Help students make connections among math concepts.
* Become familiar with mathematical terminology.
* Use analysis to verify problems and solutions.
* Be passionate about the mission and vision of the school.
* Set academic goals for students to achieve.
* Commit professional development to increase depth and skill of teaching practice.
* Commit to becoming a part of the students’ community as a teacher.
* Be flexible to meet needs of students that vary from day today.
* Support the school’s culture and practices with confidence.
* Make appropriate connections with students to acknowledge their academic development and achievements.
* Work collaboratively with students and their families to achieve best outcomes.
* Conduct all work activities in a professional manner.

**Math Lab for improvement of teaching of Mathematics**

* Mathematics is more than the rules and operations that we were taught in school.
* Mathematics has always been the very important subject to understand the physical phenomena in everything around us.
* So, Mathematics as a tool is indispensable in our daily life. Unfortunately the phobia for this subject is very prominent amongst our learners.

***The present education system has made a 360 degree shift from learning Mathematics by obedience to learning by applied reasoning.***

* This means children learn best when they are interested and even excited about what they are doing.
* We should therefore give children many opportunities to see and hear different things, and to move about and play with things they can touch.
* Let them connect things, and show and demonstrate concepts in their own way.
* National Curriculum Framework (NCF) developed by NCERT, the Central Board of Secondary Education has initiated a number of steps to make teaching and learning of Mathematics at schools activity-based and experimentation oriented.

**The guidelines are:**

* Learning concepts using concrete objects.
* Foster Mathematical awareness, skill building, positive attitudes and learning by doing.
* Verify Math facts and properties using models, measurement and activities.
* Teachers to explain and demonstrate many concepts using charts, models, aids and activities.
* **Math Lab--**will enable school students to learn and explore mathematical concepts and verify mathematical facts and theorems using technology tools.
* **Math Lab--**will offer Multiple Teaching and Learning Aids comprising of Technology Applications, Videos, Manipulative, Measuring Instruments, Tables and Charts based on the three pillars of *'Imagination, Investigation and Interaction'*.
* **Math Lab--**provides an opportunity to students to understand, internalize, discover and verify the basic mathematical and geometrical concepts through concrete objects and situations, thus building interest and confidence in students learning the subject. The laboratory also allows and encourages the students to think, discuss amongst themselves as well as with the teacher, and assimilate concepts.

**Methodology**

* Mathematics is not about isolated skills and procedures.
* It needs to be seen as a tool which helps us in the process of estimation, communication, analyzing data patterns, connections, relationships and spatial sense.
* Children need mathematics education that is alive, vibrant, relevant and meaningful; an education that paves the way to seek and understand the world around them in the stance of numerical.
* At present students may be able to solve various mathematical problems but not able to relate to subjects like science, art, computers and appreciate the interconnectedness.

**Mathematics club**

* Mathematics club for motivation and better understanding of the subject.
* Participation in various inter-school competitions.
* Mathematics made easy through practical Math work.
* Other activities as suggested by Math teacher.
* Mathematics coaching during summer vacations and after regular classes during the year.
* Representation and participation in various inter-school competitions of mathematics and various other activities

**Merits**

* The method is based on the principle of learning by doing.
* This method is psychological as we proceed from known to unknown.
* It is based on student’s self pacing.
* It helps in making clear certain fundamental concepts, ideas etc.
* If develops the self confidence and teaches the students the dignity of labour.
* Children learn the use of different equipments, which are used in laboratory.
* It develops in the child a habit of scientific enquiry and investigation.
* This method presents mathematics as a practical subject.
* It stimulates the interest of students to work with concrete material.
* It provides opportunities for interaction and co-operation among the students.
* It is child centered and therefore it is psychological method.
* It helps the students to actively participate in the learning process and therefore the learning becomes more meaningful and interesting.

**Demerits of math lab**

* This method can be used for a small class only.
* It requires a lot of planning and organization.
* This method is suitable only for certain topics.
* By this method, it is not possible to make progress quickly.
* This method requires laboratory equipped with different apparatus.
* All math teachers cannot use this method effectively.
* It is an expensive method. All schools are not able to adopt this method.
* This method has very little of theoretical part in it.
* While in science, experiments provide evidence for hypothesis or theories, this is not so in mathematics.
* Mathematical truths are accepted only on the basis of proofs, and not through experiments.

**Conclusion**

* We can say that this method is suitable for teaching mathematics to lower classes as at this stage teaching is done with the help of concrete things and examples.

***”Pure Mathematics is the world’s best game. It is more absorbing than chess, more of a gamble than poker, and lasts longer than Monopoly. It’s free. It can be played anywhere. Archimedes did it in a bathtub”. (R.Trudeau)***

**11.2** **TEACHING OF MATH DESERVES**

**A SYSTEMATI APPROACH**

Math helps us in developing better problem solving skills and built analytical and reasoning abilities. Analytical thinking refers to the ability of thinking critically about the world around us. Analytical and reasoning skills are important because they help us solve problems and look for solutions.

* Mathematics helps children make sense of the world around them and find logical meaning in the physical world.
* Through Mathematics children learn to understand their world in terms of numbers, shape and patterns.
* They learn to reason, connect ideas, and think logically with mathematical concepts.
* It is about connecting to and understanding the relationship in every aspect of life.

**Therefore teaching of Mathematics deserves a systematic approach.**

* The goal is to literate the students in Mathematics, so that they can be prepared for a world where the subject is growing fast and applied to a diverse number of fields.
* The teaching of the subject is truly effective when the teaching of it makes a major difference to the students’ outcome in the classroom. Therefore its teaching should be closely monitored.
* Re-orientation of the existing teacher/s in order to make them aware of pedagogy effective for the successful learning for his/her students.
* Persistent motivation through innovative ideas.
* Deterioration is maximum from class VI to VIII. It requires monitoring, guidance and motivation at this level.
* When these students are promoted to higher classes and appear in Board exams, usually fail to perform properly. Therefore, parents’ involvement is imperative if we intend to raise their performance bar.
* Students should be made aware that the practice is the ultimate key for success. It requires a daily routine practice for 2 hours at home. Thus, there arises a need for guidance to parents, an un-deniable fact that we usually fail to strive.
* Mathematics is a scoring subject. An average student with a little extra effort will be able to score more than 60% marks, and those perching at a higher level will have a better leap.
* Inception of Mathematics lab can be a good approach for motivational activities in lower classes for making the subject easy through practical work.
* Use of audio-visual CDs/DVDs (available in the market) at the time of teaching will improve the quality of teaching.
* In a Math lab use of internet by students and teachers will, for sure, enhance the power of understanding and learning of the subject.
* Two continuous periods club together twice a week.
* Allocate one more period for students of class XI and XII.
* Daily remedial classes for XI and XII class students.
* Conduct Math test every week in order to gauge the level of comprehension of every student and try to motivate everyone for a better performance next time.
* Make sure the participation of students in various inter-school competitions, such an exposure shall promote the competitive skills.
* Citation certificate to every student who scores 98% or more marks in weekly test.
* Citation certificate and clapping by students inside the class-room for those who score 100% in weekly tests. Introduce some better awards who score 100% in half-yearly and final exams. Distribution of awards, in assembly for excellent performance shall be a perfect motivational activity.
* Yearly academic performance of each student is required to be maintained for comparative study monitored by a core group of teachers, including the Math teacher/s.

**An effective Math teacher**

* An effective Math teacher is well aware of the capability of his/her students and motivates them at their existing level to learn more and acquire improved knowledge through persistent practice.
* An effective teacher is knowledgeable in the theory of learning of the subject.
* An effective teacher knows how the students learn the subject and its extent.
* An effective teacher has the understanding of concepts and utilizes multiple ways to represent and explain them.
* An effective teacher guides his students to adopt procedures those are easy and fluent in successfully solving the problems.
* An effective teacher encourages persistent practice for a purposeful learning experience.
* Effective teaching promotes the deep conceptual understanding and promotes the application of mathematical skills and concepts.
* Effective teaching is based on the previous knowledge of the subject.
* Effective teaching is a continuous learning process that enables the teacher develops through research.
* Different students have a different level of understanding. Misconceptions of different students can be judged through their class work/home work or through assessment and re-teach the material at their level of comprehension.
* The teaching of the subject is truly effective when the teaching of it makes a major difference to the students’ outcome in the classroom.

**11.3 EFFORTS TO IMPROVE**

**ENGLISH SPEAKING SKILLS**

English is a global language: international trade, etc have encouraged the use of English as a international lingua franca in any field—be it law, commerce or science. In India it is a special case because the country has so many languages and English along with Hindi provides convenient bridge for different communities to communicate. English as a language can be used to unite a community or society in terms of economic opportunities.

Thus it becomes imperative to learn English and improve the standard of it in schools, aided or unaided, from the very beginning.

**New admissions in different classes**

* New admissions in different classes need special attention, guidance and coaching because of their deficient Primary School-education and poor knowledge. We are required to help them even though it is not our responsibility. Stride in this Specific direction may lead to wish-for results.

**Advice to students**

* To read English news paper every day.
* Sometimes the difficult thing about English speaking is not the language itself, but how you think about it. If we think in Urdu/Hindi, we will have to translate it which is not an easy thing to do. The solution lies in thinking in English. We can do it anywhere any time. So, it is better to think in English when we are thinking about our day to day activities.
* Try to use English to English dictionary. When we, think in English, it is easier to speak in English.
* Whenever alone anywhere, try to speak to yourself in English at any chosen topic.
* If thinking in English, then try to speak the thoughts aloud. Confidence comes after practice.
* To make it a habit to watch English news and English channels. Choose a short part of a TV show and repeat it line by line. Try to match the tone.
* Choose a topic and speak in front of a mirror. The point of this exercise is to watch the face and body language during the practice. Talk continuously without a break at least for two or three minutes. If you stuck on a word you don’t know, try to express the idea in a different way.
* Stopping in between should not be a problem. Have a challenge, and try to speak next time even better. Practice makes a man perfect.
* Don’t worry about the construction of sentence or about the grammar just focus on speaking fluently.
* Knowing the correct way to use a word in any kind of sentence is important. This knowledge is helpful in spoken English.
* Practice the difficult words and tongue twister.
* Write a small essay and letter on different topics to different people for different purposes.
* Debate with friends on any given topic.
* Communicate with each other in English.
* Develop reading habits and read good books available in the library or purchase new one on the topics you like.
* Learn phrases, idioms, and synonyms to improve English.
* Choose a story that you really know well and tell it in English. Remember to think this story in English as you are telling it in English.
* Start with three activities a day and then gradually adopt all.

**Tips to improve English**

1. Don’t be afraid to make mistakes. Be confident. People can only correct your mistakes when they hear you.
2. Surround yourself in English. Put yourself in an English speaking environment, where you can learn passively. The best to learn is through speaking.
3. Practice every day. Make a study plan. Decide how much time a week you are going to spent studying and stick to it.
4. Tell your family and friends about your study plan. Get them to push you to study and also don’t let them interrupt you.
5. Practice 4 core skills, reading and writing, speaking and listening. These are all needed to be worked on for you to improve.
6. Keep a note-book of new words you learn. Use them in sentences and try to say them at least 3 times when you speak.
7. Do a lesson at least once a day.
8. Memorization of lists is one of the most common ways of learning vocabulary for a test. It’s only good for short term studying because you often do not retain the information that you have learn for a test.
9. Use your body clock. If you are not a morning person, study in the afternoon or at night.
10. Will you find words easier to remember? Try to remember an example sentence using that word rather than the word at its own.
11. Plan to take a test, you’ll find that you work harder when you need to study for something.
12. Saying that, it’s better not to study just to take a test. Think of the bigger picture. What can you do when you have a good command of English? How the quality of your life will improve?
13. Give yourself a long term goal. Focus on working towards it.
14. Give yourself short term goals too and reward yourself when you achieve each one.
15. Create an atmosphere in which you want to learn, not because you have to. You’ll learn more when you are learning because you want to.
16. Know what works best for you. Think about what methods have been successful for you in the past and stick with them.
17. Figure out how you learn. It can be by memorizing, reading, speaking, summarizing or other methods. Find out how you study best. It can be in a quiet place by you or with a group.
18. Get help, if you don’t understand something you have got to ask someone. Ask your teacher, class mates or friends for help.
19. **Review! Review! Review!** Make sure that you take the time to review things you have studied in the past.
20. It’s not a good idea to study on your own for more than 30 minutes at a time. Take regular breaks; get some fresh air and stretch your legs.
21. Don’t be in such a hurry to move up a level. Concentrate on the level you are at now.
22. Watch DVDs rather than TV. It’s better to use something that you can watch over again to catch information you might have missed the first time.
23. Watching TV only gives you the chance to hear something correctly first time. This is better for high level students. It can be great practice for speaking to native English speakers, so you don’t have to ask to repeat them!
24. **Read graded readers.** These books are especially written for your level. Read a whole novel. You can do it! You will feel great afterwards.
25. Children’s books have easier words and are a good alternative to graded readers.
26. News papers are a good place to find passive constructs. Read through an article and see if you can find the passive sentences.
27. Read for the general meaning first. Don’t worry about understanding every word. Then go back and look up new words.
28. For a word you don’t understand in a sentence, look at the other words around it. They will give you hint. Try to guess the meaning from the context.
29. Learn root words. They will help you guess the meaning of words. For example: *scribe=* write; *min=* small, *bios=* life, *logos=* study of etc.
30. When you learn a new word, think of all its other forms such as;
31. *Beautiful* (adjective), *beauty* (noun), *beautifully* (adverb).
32. Learn prefix (dis, un, re) and suffix (*-ly, -meant, -ful*), these will help you to figure out the meaning of words and build your vocabulary.
33. English, unlike Japanese, French, uses word stress. For new words’ count the two syllables, and find where the stress is? Only one stress per word and always on a vowel. Two syllable verbs have a stress on the second syllable (be**GIN**). Two syllable nouns (**TEA**cher) and adjectives (**HAP**py) stress the first.
34. Use English whenever you can. It’s as simple as that.
35. Don’t translate into English from your own language. Think in English to improve your fluency. Whenever alone, talk to yourself, of course not in a bus.
36. You can’t learn English from a book like driving a car, you can only learn through doing it.
37. The most natural way to learn the grammar is through talking.
38. Keep an English diary or journal. Start by writing a few sentences a day and then get into the habit of writing more.
39. Why not start an online **blog** and share your writing with the world.
40. To become a better writer brainstorm as many ideas and thoughts onto paper without worrying about grammar or spelling. Then think about the structure, after that write your piece using good grammar and spelling. Finally read it through or give it to someone else to check mistakes.
41. Keep an eye at your punctuation as it can totally change what you are trying to say. Check out the difference in meaning between these two sentences:
42. A woman without her man is nothing
43. A woman: without her, man is nothing
44. Sing your heart out! Show the world your beautiful voice. Learn English songs and sing along with them to improve fluency and intonation.
45. Get a pen friend or use chat-rooms, forums and community sites. If you can’t speak to someone in English. This is the next best thing.
46. **Shadow English CDs.** Listen to a few sentences, and then repeat what you heard. Focus on the rhythm and intonation.
47. **Have English radio on in your house.** Even ifyou are not actively listening to it, you will still be training your ears.
48. **Mirror CDs.** Read out loud along with a CD. Again this is great for intonation, punctuation and rhythm.
49. **Dictation,** listen to a CD or friend and write down what you hear.
50. Nobody likes to hear his own voice, but be brave and try it. Record your voice and listen to your pronunciation and intonation. It will help you to identify your problem areas.
51. Ask your helpful teacher if you can record his lessons. This is a great way to review; you can also listen to your teacher’s speaking speed and intonation.
52. Use an English/English dictionary as it will help you to keep thinking in English and not translating.
53. If an English /English dictionary seems scary, there are learner’s dictionaries for English students of your level.
54. Don’t become too reliant on your dictionary. Your dictionary should be an aid, not your main teacher. Try to guess the meaning of words rather than going straight for your dictionary.
55. Don’t give up! Stay positive! Sometimes you will feel that you aren’t learning quickly enough. Everyone feels like this, don’t worry about this. You’ll get there in the end.
56. Enjoy it! We learn more when we are having fun.
57. If you get nervous when speaking, take two deep breaths before you say something. You’ll speak better when you feel relaxed.
58. Keep yourself motivated by looking back at the textbooks and CDs you used in the past. You will be surprised at how easy that seem to you now! Congratulations, our level is improving.
59. You are never too young or too old to start learning English. Don’t make excuses not to learn, what are you waiting for?
60. Procrastination (hesitation) can stop you from being successful. To stop procrastination it’s important you understand if your procrastination is to avoid studying, or if it is your bad habit.
61. If you haven’t gotten the results you wanted yet, it’s not because you are bad at language, it’s because you have not found your own special way of learning it.
62. Use resources which match your level. Don’t use text/listening exercise which are too difficult or too easy. Use materials which challenge you but don’t frustrate you.
63. Don’t worry about making your accent perfect it’s an important part of your culture identity to keep your accent. Native English speakers enjoy hearing English spoken with an accent.
64. **There are many types of English:** British, American. South African, Australian and so on. None of these are wrong or not as important, English is English.
65. Instead be aware of the differences in America and British English and use your words accordingly. For example *Elevator* (US), *Lift* (British).
66. Carry cue card with you. These are small cards on which you can write new words. You can pull them out and look at them whenever you have a free minute.
67. Use post-it notes and stick them around your home. You can use them to label things.
68. You can’t ignore phrasal verbs (two words verbs), there are hundreds of them in English and they are widely used. The more you focus on their meaning, the more you will be able to guess the meaning of new ones. You will start to recognize their patterns.
69. Use your intuition. Go with your gut feeling. You will be surprised how often your first guess is the right guess, Be confident.
70. Gather your thoughts. Take a second to think about what you are going to say. You know the grammar but, may be you don’t use it correctly when you speak.
71. Meet new people. Make the effort to mix with English speakers in your town or city. You could join a club.
72. Be the person to start conversation in English. Try to keep the conversation moving and use listening words (‘really?/ ‘go on’ ‘what happened then’?). Don’t wait for others to speak to you. Go in there.
73. **Debate.** Discus topics in a group. Each person should choose a viewpoint (even if you don’t agree with it) and debate it within the group. Make sure you get your point across. Learn to listen actively. Active listening will help in the classroom and it will help you to get more out of. And contribute to more to, group study sessions. Focus on the person who is talking. Don’t fidget (nervous) or become distracted by other people or events. Concentrate at the speaker with your ears and eyes open. Follow the movements the speaker makes in an effort to hear more. It may help to repeat what you hear others say in an effort to understand their thoughts.
74. It is not enough to only learn English words. You can teach a parrot English word, but that doesn’t mean that it can speak English. You still need to have an understanding of grammar.
75. Verb, tenses are used by English speakers to talk about the timing of actions. You might not have the same expression in your own language. It’s important that you know these tenses and when to use them.
76. English has many irregular verbs. You should drill yourself on them.
77. Keep it up! If you take a break from speaking English, you will find that your level decreases and all your hard work has been wasted.
78. Don’t be put off by a bad taste score. Sometimes students have the ability to pass an English test, but can’t communicate well with English speakers. If you can speak freely in English, you should be proud of yourself.
79. Remember that, as long as you have tried your hardest, you succeed.
80. Learn English with a friend. You will have someone you can practice with and you can motivate each other to study.
81. Remember, the way we write English is not the same as how it is pronounced. For example ‘*ough’* has over 6 pronunciations. Familiarize yourself, the phonetic Alphabet. It will help you correctly pronounce words in the dictionary.
82. Get used to the ‘*schwa’* sound an unstressed and toneless neutral vowel sound. *‘schwa’* is the most common vowel sound in English. For example *‘a’* in *‘about’* and *‘u’* in ‘*supply’*.
83. Keep in mind that it takes longer to improve when our level is high. Usually the fastest progress is made when we are beginners. Don’t think that you are suddenly not learning anymore, it is just a less noticeable progress.
84. Make sure that your English matches the occasion. It’s OK to use slang with friends, but not in a business meeting. Decide in which situation it’s appropriate to use the words and phrases you have learned.
85. Textbook English is often different from the way we casually speak. To learn casual ‘slang’ watch movies.
86. Idioms can difficult to memorize, but they are great fun to use and they’ll make your English more colorful.
87. Make use of the internet. It is full of resources to help you learn.
88. Think about your strong and weak points. Write down which areas you want to improve on and work on improving them. Of course don’t ignore your strong points. Congratulate yourself on how well you have done.
89. Unlearn (recall) your mistakes. You probably make the same grammar mistakes over and over again. Use English test results as a study tool. Go over your mistakes and choose one or two that you want to focus on. Use your favorite grammar book to check rules.
90. Use the correct article (a, an, the). Be aware that there is more to this rule than a/an=nonspecific, the= specific. For example: a *university (*not *an university* because it begins with a consonant sound*)*, *an hour (*not *a hour* because *h* is often silent).
91. For fluency, try image training. Before you go to that restaurant think through what the waiter is likely say to you. Think of what phrases you are going to use.
92. Much communication comes through body language and gesture. These can be due to different cultures and countries. For example, the two fingered ‘V’ for victory symbol is fine palm-out. If you make it your palm facing towards you, you will offend a British person. It means …. Well you ask a British person and find out for yourself.
93. The easiest one—sleep! You’ll be able to concentrate more.
94. Take an English course in English speaking country’
95. If you are studying abroad, mix with people from other countries, not only the people from your own county. It’s not a good idea for you to live in a shared house with people from your own country. Enjoy a more cultural experience by spending time with people of other nationalities.
96. Have you thought about getting a job or doing an internship abroad?
97. Get yourself a qualified teacher.
98. Nobody can learn all of English language. No need to worry about trying. A useful short cut to learning is that in English we have lots of words that have the same pronunciation, but with a different spelling and meaning. For example ‘*here’* and *‘hear’* and many more. Build the vocabulary by knowing the different meanings.
99. Once you have a basic level of English, explore the different ways you can say the same thing. This makes your English more interesting to the listener and it should not be too difficult for you because you already know the basics. For example in how many ways can we say ‘*goodbye’* in English?
100. When you are on your English course, be prepared for your class. Do your home work as soon as possible and hand it in time. Review your notes and your last lesson a few minutes before the class. Doing this will refresh your memory and you’ll be warmed up for lesson.
101. Don’t get disturbed in class. Focus on the lesson; don’t stare out of the window; don’t be late; arrive a few minutes before the start of the lesson. Don’t sit next to people who won’t speak to you in English. Switch off your phone. Be organized; remember to take your text book and pen.

***Find a comfortable and peaceful place for quiet study. You need a place where you can focus 100%.***

**SECTION 12**

**SCIENCE LABORATORIES**

**12.1 SCIENCE LABORATORIES.**

**12.2 PHYSICS LABORATORY**

**12.3 CHEMISTRY LABORATORY**

**12.4 BIOLOGY LABORATORY**

**12.5 SCIENCE TEACHERS**

**12.1 SCIENCE LABORATORIES**

**History**

Science laboratories were introduced in 1800s in America and Europe. Even though laboratories have been part of school education for two centuries, yet a clear and authentic articulation of their role in students’ learning of science remains elusive.

A fact finding committee in America, gathered information on a wide variety of approaches to laboratory education, arrived at the term “laboratory experiences” to describe teaching and learning that may take place in a laboratory room or in other settings.

**Definition of laboratories**

* A laboratory is a facility that provides controlled conditions in which scientific or technological research, experiments and measurements may be performed.
* “Science laboratory experiences provide opportunities for students to interact directly with the material world (or with data drawn from the material world), using the tools, data collection techniques, models and theories of science”.
* “Laboratory experiences” describe teaching and learning that may take place in a laboratory-room or in other settings.
* Rapid developments in science technology and cognitive research have made the traditional definition of science laboratories as under,

***“A room in which students use special equipments to carry out well defined procedures”***

**Previous Definition of Laboratories**

* A form of practical work taking place in a purposely assigned environment where students engage in planned learning experiences and interact with materials to observe and understand phenomena (some forms of practical work such as field trips are thus excluded)

**Goals**

* The secondary goal of preparing the future scientific and technical work-force.
* Secondary and senior secondary school science education aims to provide scientific literacy for all as part of a liberal education and to prepare students for further science study, work and citizenship.

**Objectives**

Objectives that may be achieved through the use of the laboratory in science classes

* **Skills:** e.g.manipulative, inquiry, investigative, organizational, communicative.
* **Concept:** e.g. hypothesis, theoretical, model, taxonomic category.
* **Cognitive abilities:** e.g. critical thinking, problem solving, application, analysis, synthesis.
* **Attitude:** e.g. curiosity, interest, risk taking, objectivity, precision, confidence, perseverance, satisfaction, responsibility, consensus, collaboration and living science.
* **Understanding the nature of science:** e.g. scientific enterprise, scientists and how they work, existence of a multiplicity of scientific methods, interrelationship between science and technology, and among the various discipline of science.

**Advantages of science laboratories**

Science laboratory is a work place for the conduct of scientific research and experiments. It is imperative to have the latest and high quality science labs these days.

* Effective teaching and learning of science involves seeing, handling and manipulating real objects and materials.
* Students get a first-hand learning experience by performing various experiments on their own.
* Students are made to use the models and understand different scientific theories and concepts.
* It helps students to remember the concept better.
* It helps to transfer the experience to other learning situations.
* It is a facility that provides controlled conditions in which scientific research, experiments and measurement may be performed.
* Besides offering the hand-on experience, science lab equipments teach students how to make a scientific argument.
* Conducting experiments, reviewing them closely, developing logical reasoning and responding to analytical comments, are the valuable skills that help in preparing the next generation of scientists, engineers and medical professional.
* Science labs develop abilities to use inductive and deductive reasoning to arrive at a valid conclusion which,
* Distinguish among facts and opinions.
* Identify false premises in an argument.
* Use mathematics to solve problems.
* Achieving the goal of scientific literacy for all our students, as well as motivating some students to study further in science, may require diverse approaches for the increasingly diverse body of science students.
* Contribution of laboratories lies in helping students develop skills in manipulating equipment and acquire a feel for phenomena.
* The laboratory experiences help students understand materials, phenomena, concepts, models and relationships.
* Laboratory activities are co-ordinated with text-books in order to deepen students’ understanding of the books.
* The curriculum integrates the laboratory activities into class routines. The activities are more effective than the traditional curriculum in boosting the students’ science achievement and interest in science.
* Students are required to improve the quality of science education in order to improve employment opportunities, including opportunities in science. Laboratory activities help to achieve the objective.
* Role of the laboratory is to elevate the important new approaches to science education in order to help students understand the nature of modern scientific research.
* Laboratory is a way of thinking about scientific investigations--an intellectual process rather than building with specialized equipment.
* An approach deserves the introduction that “laboratories should go further than simply engaging students”. Senior secondary students must actively participate in scientific investigations and—use the cognitive and manipulative skills associated with the formulation of scientific explanations.
* In response to the growing awareness most of the schools/institutions have made efforts to improve laboratory education for students. Scientific study and literacy for all students is the primary goal of secondary school science education.
* Cognitive psychologists and science educators have found that the teacher’s expectations, interventions and actions can help student’s development, understanding of scientific concepts and ideas.

**Importance of lab work**

* Science is essentially a practical activity which proceeds through the testing of theories by means of experimental work and observations.
* The experiments carried out in the laboratories are an integral part of the teaching and learning process of the course.
* The students are encouraged to prepare in advance of each laboratory session by reading the experiment sheet, searching the literature for information on the theoretical background of the experiment and planning the layout report.

**Main aims of the laboratory work**

* To make the students familiar with some of the equipment and terminology used in science.
* To help students understand the underlying principles, theories behind the experimental techniques and test the theoretical knowledge with real data.
* This will enable students to appreciate the applicability and limitations of the theory.
* To train the students in the analysis of data in its presentation in tables and graphs.
* To help students develop the skills for writing and presenting technical reports in the most effective manner.
* To give students experience of working in a team.
* Team work will be of Importance to the students whatever they finally pursue.
* To train students in carrying out procedures.
* To train students in experimental methods.
* Laboratory training is also frequently used to develop skills necessary for more advanced study or research.

**Laboratory experience includes the following students’ activities.**

* Physics experiments
* Chemistry experiments,
* Biology experiments,
* Experiments in earth science etc.
* We too need the excellent quality of science labs for literacy of our students of secondary and senior secondary classes—both to meet the economy’s need for skilled workers and future scientists, doctors and engineers.
* To develop scientific habits that can help citizens in their everyday life,
* A goal is required to establish that **“all students should achieve scientific literacy”**. All students should try to develop,
* Abilities necessary to do scientific inquiry.
* Understandings about scientific inquiry.
* Internet facility nowadays can give remote access to scientific instruments and observations. Students sitting in a classroom can experience laboratory activities enabled by internet links to remote instruments. It necessitates the establishment of a smart-board in addition to the required equipments and chemicals in the laboratory.

**Importance of science lab equipments**

* Students get a first hand learning experience by performing various experiments on their own.
* School’s science lab equipments make teaching and learning easy both for the teachers and students.
* By virtue of equipping themselves with the latest and advanced materials, schools are able to contribute a lot in the scientific advances yet to come.
* Children develop interest in scientific research in science laboratories.
* Laboratory plays a vital role in bringing up the next generation of engineers, doctors and scientists.

***Therefore schools are required to have the latest science lab, supplies and equipments to make science interesting and effective for students and to encourage them to make significant contributions in the fields of physics, chemistry, biology and other streams of science later in their life.***

**12.2 PHYSICS LABORATORY**

Physics is that branch of science where experimentation is an integral part of the core subject. Physics laboratory is the place where experiments of physics are carried out.

* Every recognized school has a physics lab, but sophistication varies from institute to institute.
* It is in the laboratory that physics students learn to practice the activities of scientists—asking questions, performing procedures, collecting data, answering questions and thinking of new questions to explore.
* Physics is a vast subject and includes various disciplines in it.
* At school level a student is taught fundamentals of all these disciplines.
* In each of it there is a multitude of experiments to be performed at school level.
* For students to acquire the manual and mental skills associated with learning physics, it is essential that they be fully engaged in laboratory activities.
* This requires sufficient equipment and material.
* The integration of laboratories activities with classroom work requires that the students be able to move smoothly between their desks and the laboratory area and that there is sufficient space for equipment to remain set up.
* At the senior secondary school level it is especially desirable for the laboratory area to be integrated with classroom.
* Although excellent physics learning can take place using the simplest equipments, computers and measuring instruments incorporating modern technology can be powerful tools for learning physics concepts and developing skills of measurement, analysis and processing information.
* Evaluation of student learning in physics should include assessment of skills developed in laboratory activities as well as the knowledge acquired during these activities.
* Effective employment of laboratory activities requires that teachers have adequate and convenient storage for equipment.
* Meaningful learning will occur where laboratory activities are a well-integrated part of a learning sequence.
* The separation of laboratory activities is not desirable in school physics.
* No. of students doing the physics experiment should be small enough for the teacher to supervise the safety of students’ activities and to have sufficient time to actively work with the student or a group of students.
* There is a wide range of equipments from most common ones like magnets, pulleys, pendulums, beakers, lenses, glasses, tuning forks, scales etc. to the sophisticated ones like spectroscope, microscope, electromagnet, ammeter, voltammeter, potentiometer etc.
* Some public schools have a sophisticated physics laboratory with the latest state-of- the art facilities that equip the students to have hands on experience.
* Interactive board and an LCD projector are the other equipments which allow the teacher to incorporate the latest technology in their lessons. It arouses the interest and curiosity of students.
* Microcomputer-based laboratories are one of the most promising perspectives in physics laboratory teaching at higher level.

**Purpose and importance of physics laboratory**

* A physics lab aids a student in establishing the relevance of the theory.
* It brings clarity in the minds of students regarding the basic concept of the subject.
* Students understand the difference between the theory and application of it through experiments.
* Physics laboratory helps students in improving their approach towards the subject.
* Experiments carried out in the laboratory help them in learning how to keep patience and be careful while taking observations and calculating inferences.
* Physics labs at school level motivate students to carry out research at higher level.
* Working in a physics laboratory actually puts a fundamental slab for them.
* It provides an experimental foundation for the theoretical concepts introduced in the lectures. It is important that the students have an opportunity to verify some of the ideas for themselves.
* It familiarizes students with experimental apparatus, the scientific method and the methods of data analysis, so that they will have some idea of the inductive process by which the ideas were originated.
* It teaches how to make careful experimental observations and how to think about and draw conclusions from such data.
* To learn how to write a technical report, this communicates scientific information in a clear and concise manner.
* Practical ability to do experiments and analyze data is usually acquired through practice and experience. Practice is very important in learning any discipline.
* Practice is important for being able to make the connection between theory and practical experience.
* There are different procedures of different experiments in physics and then there are some basic behavioral rules in a laboratory, a student needs to be aware of all this.

**Functions of physics laboratory**

* Functions of physics laboratory are different for different levels. At school level the laboratory is aimed in enabling the students to learn physics theories in a more elaborative manner with the involvements of its application. Experiments carried out are mostly ones in coherence with the curriculum.
* For higher studies the objective is to carry out researches and studies relevant to the contemporary industry of science.

**12.3 CHEMISTRY LABORATORY**

At every stage in life we are connected to different aspect of chemistry directly or indirectly. Be it agriculture, food, medicine, fertilizers, polymers, metallurgy etc. Thus the knowledge of chemistry is imperative. To develop or analyze or synthesize different compounds or substances there exists a requisite of chemistry laboratory.

The chemistry lab is designed to support and illustrate chemical concepts studied in the lecture portion of the course, as well as to introduce important laboratory techniques and encourage analytical thinking.

* School chemistry laboratory deserves to be equipped to cater the needs of the students up to standard 12.
* Students show great enthusiasm in hands on experiments by using laboratory chemicals.
* The use of smart board with real/animated version of experiments increases the interest of students.
* It is mandatory for the lab to be well equipped with all safety measures. The established guidelines by CBSE are to be followed.
* The lab inculcates curiosity in students and plays a very important role in developing a scientific temperament.
* Chemistry laboratory is designed to provide practical applications for many of the concepts and chemical principles learned in the class.

**Importance of chemistry laboratory**

* Chemistry has a great importance in life, so it is very important for students to understand lab work.
* A student can easily develop his ability of understanding the chemical experiments.

**Understanding different compounds and their function**

* It is important to know, how a compound works optimistically.
* How the properties of compound give suitable results in a practical way?
* Use of an element to combine with other element/s in lab gives perfect compound.

**Reactions and its product in real way**

* What is studied in a book will be there in front of us trough lab work.
* Time consumed in a chemical reaction varies, but with the help of lab work we can easily understand it in a proper way.

**Use of chemicals in a proper way**

* Quantity of an element or compound to be used in very important for getting a perfect result.
* If the use of chemicals is not in required quantity, problems are expected to take place.
* Through chemical reactions we can calculate the exact amount of chemicals to be used.

**Enhance the interest in experiments**

* Lab work is important in boosting up the interest in different experiments.

**Proper ability of explanation of an experiment**

* With the help of lab work we do the experiment and work everything properly and can explain the steps or the sequence of the procedure followed. This develops an ability of explanation of an experiment.

**The exact way of using catalyst**

* Sometimes a catalyst is required to boost up the reaction, a compound that does not take part in chemical reaction directly.
* With the help of lab work we can easily understand its exact action and how to use catalyst in different reactions.

**Use of different apparatus in a practical way**

* It is important to know about the way to use the different apparatus in chemistry lab.
* Proper care and handling the apparatus results in proper understanding of the use of it.

**Clear the view of a student**

* Through various observations students can easily clear their view.
* They understand its exact use in life, but only through the experiments.
* The need to describe the observations whenever asked enhances the concentration level of the student.

**Safety measures**

* In almost all chemistry labs, laboratory hazards are there. These include poisonous chemicals, flammable and explosive materials, extreme temperature, lasers, strong magnetic fields and high voltage etc.
* Therefore safety precautions are vitally important to minimize the risk of any untoward incident or accident.

**Things to be avoided in the laboratory**

* Avoid wearing open-toed shoes.
* Keeping long hair in control.
* No smoking, eating or drinking in the lab.
* No erasing of the data from the note book.
* No late coming.
* Always label the sample or material.
* Use of gloves is recommended when sterility is needed.
* Proper ventilation in the lab.
* Educators, staff and management must be engaged in working to reduce the likelihood of accidents and injury. Efforts are needed to show laboratory safety videos in order to ensure safety.

**How chemistry laboratory is different from physics laboratory**

* It is said that there is much more physics in chemistry lab than there is chemistry in physics lab,
* In a chemistry lab experiment, an experimenter usually analyses the physical properties of the chemical substance alongside analyzing the chemical properties
* The electron is basically a physical entity and its mass, charge, and energy that define its existence are all physical properties.
* Mostly all instruments that are essential for a chem. Lab are physical instruments, such as voltmeters, ammeters, spinners, mass-spectroscopes, microscopes, cloud chambers etc.
* Pipettes and burettes are precision instruments designed with the consideration of thermal expansion constants.

**12.4 BIOLOGY LABORATORY**

Biology is the study of living organisms, divided into many specialized fields that cover their morphology, physiology, anatomy, behavior, origin, distribution etc. To carry out the study and do the research work, “Biology laboratories” are required.

* Biology lab is well equipped with preserved specimens, slides, models and bio-visual charts, which emphasize on developing scientific temperament in students.
* Basic equipments used in biology lab:
* Microscopes
* Slides.
* Test tubes, Petri dish and Beakers.
* Dyes and other indicators.
* Performing experiment is an interesting task; students enjoy it as they learn something new from the result.
* Students of 9th—12th are guided to perform the practicals.
* One of the aims of a school lab is to invoke an interest for research at higher classes in different branches of biology such as micro-biology, molecular-biology, genetics etc.
* At higher level, it provides a broad range of biological and biochemical techniques with in-depth practical training offered by experienced staff.
* Important routine work at these labs is carried in the field of microbial and molecular analysis and biological sample preparation.

***Our schools are desperately in need of modern science laboratories and laboratory demonstration. We need trained scientists, doctors and engineers who are especially competent and fully trained teachers of science in our secondary and senior secondary schools.***

***Undoubtedly, by a determined campaign, we can accomplish these ends in our way, sooner than later. The purpose is a lengthy one and we cannot afford to lose time. Therefore the pressing question is how quickly we can act to accomplish these requirements.***

**12.5 SCIENCE TEACHER**

Teachers of science are professionals responsible for their own professional development and for the maintenance of the standard of teaching profession.

* Being an effective science teacher is a continuous process that stretches from preserve experiences in undergraduate years to the end of the professional career.
* Science teachers must have understanding of how students with diverse interests, abilities and experiences make sense of scientific ideas and what a teacher do to support and guide all students.
* Science teachers require the opportunity to study and engage in research on science teaching and learning, and to share with collogues what they have learned.
* Current science education requires a substantive change in the method of teaching the subject, and equally substantive change in professional development process.
* Knowledge about the process of teaching-learning requires continuous development and the teacher must remain informed.
* Teachers must be involved in the development and refinement of new approaches to teaching, assessment and curriculum.
* Science content increases and changes and a teacher’s understanding in science must keep pace with the changes.
* Teaching of science is both theoretical and practical understanding and ability.
* To lean more about the teaching of science is to conduct classroom based research.
* In any case professional development activities must be sustained.
* It is assumed that the teachers of science will continue to learn science throughout their career.
* Basic task of a teacher at primary level is to lay experimental, conceptual and attitudinal foundation for future learning in science by guiding students through a range of inquiry activities.
* In addition to solid knowledge of science, teacher of science must have a firm grounding in learning theory, understanding how learning occurs and is facilitated.
* Learning is an active process by which students individually and collectively achieve understanding.
* Effective teaching requires that teachers know what students of certain ages are likely to know, understand, and be able to do; what they will learn quickly and what will they struggle in.
* Skilled teachers of science have special understandings and abilities that integrate their knowledge of science content, curriculum, learning and teaching.
* Science teachers must develop understanding of how students with different backgrounds, experience, motivation, learning style, abilities and interest learn science.
* Teachers use all of that knowledge to make effective decisions about learning objectives, teaching strategies, assessment tasks, and curriculum materials.
* Effective teachers of science also have a broad repertoire of instructional strategies that engage students in multiple ways.
* They are familiar with a wide range of curricula.
* They have the ability to examine critically and select activities to use with their students to promote the understanding of science.
* Skilled teachers of science know how to create and manage the physical, social and intellectual environment in a classroom community of science learners.
* The primary job of a teacher is to promote learning, and it follows that teachers themselves are dedicated learners.
* Tomorrow’s students will have markedly different needs from today’s student; even today’s employers require employees who can frame problems and design their own tasks, think critically and work together.
* Teachers of science need to develop the skills to conduct research in their classrooms on science teaching and learning and he/she is required to be able to share their results with others.

**Elm hasil karein, yeh zaroori hai,**

**Lekin, elm se kuch hasil karein,**

**Yeh bahut zaroori hai.**

**ہے ضروری یہ کریں حاصل علم**

**کریں حاصل کچھ سے علم لیکن**

**ہے ضروری بہت یہ**

**SECTION 13**

**SCHOOL LIBARY**

**13.1 IMPORTANCE OF LIBRARY IN SCHOOL**

**13.1 IMPORTANCE OF LIBRARY IN SCHOOL**

A library is an important source of knowledge to students in schools. It develops the important habit of reading among the students. Every school deserves to have a good library.

* The school library plays a great role in the life of students by serving as the store house of the knowledge, when explored.
* While the role of school library remains constant, its design, digital platform, strategies and tools could change as the technology changes.
* School library impacts positively on the academic achievement of the students.
* Students can perform better during exams by reading various books.
* It facilitates the work of the classroom teacher and ensures each student has equitable access to resources, irrespective of home opportunities or constraints.
* Runs independent learning programs which integrate information resources and technologies.
* Equips students with the skills necessary to succeed in a constantly changing technological, social and economic environment.
* Provides and promotes quality fiction to develop and sustain in students the habit of reading for pleasure and to enrich students’ intellectual, aesthetic, cultural and emotional growth.
* Provides a wide range of curriculum resources—fiction and non-fiction, digital, print, audio and video.
* Provides teachers with access to relevant curriculum information and professional development materials within and outside the school.
* It’s hard to encourage students to use the library, if we don’t know what the library has to offer.
* Teachers should visit the library to see firsthand know-how of books arrangement and the layout plan, what technical devices are available for the students, what the check-out process is for books, etc.
* It is beneficial to contact the librarian too at the time of visiting the library. There always remains something new for the teachers.
* Librarian might be in a better position to suggest something supplementary for the lesson, the teacher is currently teaching.
* Ask the librarian ahead of time; be prepared to show the students where to look in the library for a particular book for reference.
* As the teacher starts to learn more about the library, he/she may pass on what he/she has discovered to his/her students.
* Replenish the library with books recommended by teachers/coaches those are required for preparation of different competitions such as JJE, medical entrance test, civil services, ITI, polytechnics and many other vocational courses.

**Suggestions for developing reading habits among students**

**1. Read**

* It is the first simple step to encourage students to read, we need to do it first. Read for pleasure, information, connecting with others and so on. Read a little more than you’ve been reading lately.

**2. Share your reading experience**

* Share it with your students. Tell them what you have been reading, what you have gained or learned from these texts, and recommend it for the first hand experience in pleasure of reading.
* Tell the students regularly about what you love to read, brought in books for reading; tell them that sharing the reading with family members is a great fun.

**3. Invite students to socialize around reading**

* Set up book-clubs, reading groups, literature circles.
* Many students, especially boys, need to interact with each other around text. It greatly enhances their comprehension and makes it so much enjoyable.
* Adults should join the read-club and spend time with students in order to help and have the joy of reading.

**4. Take a field trip**

* This is another way to make reading social and exciting.
* Students should be advised to visit a local library or public library, or a book store.
* It’s not about checking out or buying books—it’s about being surrounded by thousands of books, touching their gorgeous pages, seeing the world of possibility in print.
* Accompanied with parents or other family members, students should make it a habit to visit a good book-store. This is an event that parents can organize and school teachers can give advice and support.

**5. Listen to audio-books**

* Invite students to listen to them; play short passages. It is just like reading a book.
* Such an activity gives a chance to acquire a good vocabulary, applying comprehension strategies, and enjoying stories or accruing information.
* Sometimes carry out the activity of listening the audio-book, it affect the mind more than reading a book, because during the activity mind remains free to visualize the scenes that last in the memory.

**6. Invite authors to speak**

* Another activity that can be supported by teachers in the school. Kids greatly impressed from hearing an author. He can speak to motivate them for reading and writing.

**7. Tech reading strategies**

* All teachers in every content area should be responsible for teaching reading. Kids do not enjoy reading, if teachers can’t tell them how to enjoy reading.
* *There is so much more we can all do.*

**8. Responsibilities of a librarian**

* He/she is responsible for overall management of the library.
* Maintain documentation of books, journals, magazines, news papers, CDs and library materials.
* Prepare a periodical requirement of books and journals for students and faculty members.
* Responsible for maintaining and updating e-journals, and all teaching-aids
* Keep record of library materials and report to the principal for any discrepancy.
* Arrange periodical inventory of library materials.

**SECTION 14**

**MOTIVATION OF STUDENTS**

**14.1 MOTIVATIONAL ACTIVITIES**

**14.2 AWARD FOR STUDENTS**

**14.3 MOTIVATIONAL SPEECHES BY**

**VARIOUS PERSONALITIES**

**14.4 MOTIVATIONAL SPEECHES BY EX-STUDENTS**

**14.5 MOTIVATION AND MOULDING OF**

**STUDENTS’ FUTURE IS THE RESPONSIBILITY**

**OF TEACHERS**

**14.6 SCIENCE OLYMPIAD FOUNDATION (SOF)**

**14.7 STUDENTS’ PARTICIPATION IN NATIONA TALENT SEARCH EXAMINATION**

**14.8 QUIZ COMPITITION**

**14.9 QUIZ BEE COMPITITION**

**14.1 MOTIVATIONAL ACTIVITIES**

**Keeping students motivated**

* How do we keep students motivated?
* I would like to compare it to keeping a healthy successful marriage.
* Like passion, motivation eventually fades away, if we don’t feed it every day.
* It takes time, efforts and energy--but it is worthwhile.
* A motivated teacher keeps students motivated.
* If we have a passion for teaching, our students are more likely to show a passion for learning.
* However, if we don’t care about teaching, our students won’t care about learning.

**Involve the students**

* We may not keep our students motivated if we do not involve them and let them an active role in your classes.
* Long gone are the days when teachers talked for most of the lesson, with students taking a passive role.
* Classes need to be student-centered. The teacher should act as a coach and facilitator, to help, guide and direct the learning process.

**Give students the chance to shine**

* It is also very important to give students opportunity to be successful.
* Give them tasks where they can see the results of their efforts.
* That feeling ‘yes I did it’ that ‘ala’ feeling students get when they have done a difficult exercise, boost their motivation.

**Make learning fun**

* We need to make our classes memorable.
* Use games and competitions.
* Everybody loves competitions, and it gives students a nice opportunity to interact with each other, have fun and learn at the same time.

**Step away from the text books**

* Bring in the authentic material that our students connect with, and that matches their needs and interests. Create activities and show them that we are also prepared to put in a lot of efforts and time to help them succeed.

**Explain why the things are done in a certain way:**

* There is nothing more boring than a teacher telling students to open their books on a certain page and asking them to do a certain exercise.
* We need to explain them why it is important to do this exercise and what they are going to accomplish by doing it.

**Give very clear instructions**

* When setting a task, be clear and allow students time to prepare first and ask any question.
* There is nothing more frustrating for them than not being able to perform well, because they don’t understand the task. This is very important to students.
* They need to have a very clear idea of what they are supposed to do.

**Set clear, attainable goals for every lesson**

* Leave the class at a point when the students have a feeling of gaining something new.
* Start the lessons by writing down the lesson plan on the corner of the board, so that students know what they are going to learn.
* At the end of the class, point to the lesson plan and go over everything they have learned.
* It’s important for them to see where they are now, and where they will be taken next.

**Vary the social dynamics and include movements**

* Ask students to work in pairs or in groups.
* Get them out of their seats and moving.
* Ask them to change partners regularly.
* To keep the students’ attention, set a variety of engaging, meaningful activities, and create a friendly atmosphere where they feel they can talk freely and ask questions.

**Use different materials**

* We all know that our students prefer looking at a screen more than at a book, so, use visuals, flash cards, info graphics, quizzes and make use of new technology.
* There are plenty of sites that offer online quizzes, games or videos.
* As teachers, it’s up to us to seek-out new resources that may benefit our classes, and bring technology into our lessons in a great way to motivate students.
* We cannot expect our students to be motivated if we spend half the class doing endless grammar and vocabulary exercises.

**Don’t over correct**

* Avoid over--correcting, especially when students are speaking in front of the class.
* Don’t undermine their confidence by interrupting every single time they make a mistake.
* Listen to them, and when they finish, thank them for their contribution and point out one or two important mistakes they might have made.
* You can then remind students that making mistakes is a natural part of learning and that everybody makes mistakes, even the teachers.

**Believe in them**

* If we don’t believe that a particular student is going to complete his work, he probably won’t.
* So, stop assuming that they won’t, and start believing that they can do and they will do for sure.

**Be extremely encouraging:**

* Our words can extremely be powerful in inspiring them.
* Sometimes students who appear lazy are actually discouraged or frustrated that they are having trouble learning.
* But more importantly, we can encourage them by giving them one-on-one help and showing them that they can indeed do the work and be successful.
* It can make a world of difference when they see that they are capable of even small success.

**Make sure that students are the ones who are working:**

* The one who is working is the one who is learning.
* So, if we want our students to learn more, make sure they are actually working in our class, not just listening to lectures all the time.
* Plan the time when the students are working and the teacher is taking a round to help them one-on-one.
* Incorporating writing-to-learn is also another easy and powerful way to increase students’ engagement.

**Use memory work and recitation.**

* Although memory work has fallen out of favor in recent years, but that doesn’t mean that it is not a powerful tool.
* When the class cites facts and passages together, the students simply cannot help but learn them.
* We can make it interesting by adding variety to the recitation.

**Make learning fun**

* It is not necessary to intricate activities to make learning fun. Just be passionate about the teaching and let the passion shine through.
* Add some humor to the story telling, and simply show the kids that they can do it.
* Students enjoy learning when they feel that they are successful.

**Be wise with the homework**

* More homework does not necessarily means more learning.
* So, be considerate to students’ family time by only assigning homework that is truly valuable and necessary.
* When we limit the quantity of homework assignment, we can focus on quality and expect more from the students.

**Have one-on-one conversation**

* When a student has a chronic problem, get him aside and talk to him.
* Ask questions to try to understand why he is struggling, and ask him what needs to be changed so that he can be successful.
* Develop a plan together and then help student/s stick to it.

**Get the parents involved**

* This may sound impossible, but need not to give up on this one quite yet.
* Sometime, parents who seem to just not be interested in helping their kids are actually at a loss of what to do.
* So, give them some specific things they can do to help their kids, and see what happens.
* When speaking with the parents, solutions should remain a point of concentration rather than the problems.

**Help to the students needs to be more organized**

* Few things are more motivating for students than finishing their home work.
* Help them in organizing their book-bags, binders, lockers and folders.

**Praise**

* In capital letters, a ‘WELL DONE’ or ‘THAK YOU’ at the end of their contribution, even if their answer was not correct, will boost confidence a lot, especially for weaker students.
* There is always something positive to say.
* Start with the positive things, and then tactfully move on to what needs to be improved.

***“Teach them as we would like to be taught”. It is as simple as that.***

**14.2 AWARD FOR STUDENTS**

The purpose of this award is to motivate the students for studying and a healthy academic competition. It will motivate the students for the best and active performance. Award may be given for;

* **Best student of the year,**
* **Most active student of the year**.

**Criteria**

1. **Consideration of different acts of disciplines**
2. Discipline inside and outside the classroom, and outside the school.
3. Behavior with teachers.
4. Subject knowledge as reported by subject teachers.
5. Maintenance of books and note-books.
6. Punctuality in doing H/W as reported by subject teacher.
7. Aggregate of marks obtained.
8. Participation and performance in sports and co-curricular activities.
9. Comments of class-teacher as reported in PTM.
10. Work and efforts done for the safety of school property.
11. Follow of dress etiquettes and dress cleanliness.
12. Health and general cleanliness.
13. Any other important suggestions
14. **Punctuality in school reporting time and attendance**
15. Students are expected to establish good habits of punctuality and attendance as soon as they join the school.
16. Punctuality is considered to be very important.
17. Students are expected to be present at the prayer/classroom at the scheduled time.
18. A procedure is required to be formed for the acts considered to be negative to the of award scheme.
19. **Participants**
20. All students from 5th to 12th class.
21. The average annual grade of the student must not be less than 80%.
22. The students must not only maintain their academic average but also improve their academic standings in comparison to the previous year of their study.
23. Participation in Olympiad is an extra bonus.
24. **For the most ‘Active student of the school’**
25. A student for this award must actively participate in co-curricular activities in school and outside the school (debate clubs, specific interest groups, ecological activities, activities for mobilizing the community etc.
26. Such activities should only be carried out up to the extent where it does not negatively affect their studies.
27. Evaluation for awarding the above proposed awards will be done by the committee specially formed for the purpose.
28. **Awards may include,**
29. Scholar badges.
30. School blazer, tie, for those who score more than 90% marks for 3 consecutive years.
31. Bronze medal and cash prize who score more than 80% for 3 consecutive years.
32. Silver medal and cash prize for those who score more than 80% for 4 consecutive years.
33. Gold medal and cash prize for those who score more than 80% for 5 consecutive years.
34. Rs. 2100/= cash prize who score 90-92%
35. Rs. 3100/= cash prize who score 92-93%
36. Rs. 5100/= cash prize who score 95 or more.
37. (it is just an example, a collective decision is needed to be taken by all concerned)
38. Beyond academics students should have a host of activities designed to develop physical, intellectual, mental, social and creative skills through martial arts, health, culture, sports field, trips, knowledge club, IT, multimedia and animation etc.
39. **Award of monthly certificates**
40. Multi-colored monthly certificate may also be given to student of every class in the following areas. These certificates will be considered for deciding the ”best student of the year”;
41. Most clean student of the month in every class,
42. Most disciplined student of the month in every class. It will be decided on the basis of behavior with the teachers, with fellow students and classroom discipline during the month,
43. Appreciable performance in sports,
44. Appreciable performance in co-curricular activity,
45. Regular and neat and clean class work and home work during the month
46. Best disciplined student of the month,
47. Punctuality in doing neat and clean H/W and C/W as reported by subject teachers, monthly certificate is to be given in every class.
48. **An act of clapping by students and appreciation by teacher,**
49. Clapping for best academic performance in every subject,
50. 100% attendance during the month
51. Identify the habitual late comers, and make them aware of the importance of punctuality.
52. Identify those with the habit of casual attitude towards daily attendance and tell them the repercussions of the bad habit some times after the class is over. Responsibility lies with the class-teacher.

***Use of cell-phone in school premises is an act of gross Indiscipline; such an offender will not be considered for any award.***

**14.3 MOTIVATIONAL SPEECHES BY**

**VARIOUS PERSONALITIES**

Life is full of challenges and more challenges. Only those get success, who actually struggles to grab the opportunities through their hard work and dedication. This is the only *mantre* in the journey to success. Without being passionate and the willingness to work hard, no one can achieve success.

These successful people have a lot to share with students for their motivation. They may deliver the short stories of the success at occasions like ‘Teacher’s day’, Annual Day’ etc. in these stories participants should use very simple language rather than complicated sentences.

The invited speakers may be the successful medical practitioner, a chartered accountant, industrialist, an engineer, and a lawyer or may be a pilot. While delivering the success speech to the students, apprise the students about the route to success and steps to be followed.

* What is the basic concept of a successful life?
* As per the potential, personality and IQ, best career options deserve the selection by them.
* It is believed that success is achieved when hard work meets opportunity.
* But, opportunity takes its own time to come.
* Work hard to create an opportunity in the field of your choice.
* In the meanwhile some un-expected opportunity may knock the door of your fortune. Grab it with all of your potential.
* Do not lose a single bit of opportunity; just keep polishing your skills.
* Life is not the name of smooth sailing; one has to face different hurdles to reach a successful destination.
* How to fulfill the social responsibilities and obligations along with the endeavor for success?
* What kind of a successful person it is required to be?
* Do they have the ability to bring about the revolution in fields of their (students’) choice?
* How will they do it? Of course with full focus and concentration!
* Always encourage yourself during the days of your struggle, but never forget the ethics, the act of kindness and respect for elders, because these are the essential ingredients of a successful life.
* Determination is the principle secret of success.
* Never lose your heart if you encounter with failure at any juncture of your route to success.
* **Try again and again.** Failure and success are the two faces of the same coin.
* Celebrate every victory, big or small, with grace, it will boost up your enthusiasm and encourage you to achieve more in life,
* Your main aim should be to stay happy and satisfied.
* Remember that a healthy mind used to stay in a healthy body.
* Always stay motivated to do better than the past and the most important thing is that you should never compare with others.

***Yes! Do more to achieve more.***

**14.4 MOTIVATIONAL SPEECHES BY EX-STUDENTS**

* A good motivational speech by various personalities and ex-students does exactly that—it motivates.
* It engages the minds and hearts of audience in such a way that motivate them to think more clearly, see opportunities and move forward with action.
* When these speeches are done well, those are like planting of seeds.
* They create a human experience that awakens the audience and shine a light on the path ahead.
* The best speeches engage the minds and hearts of students and the best speakers cause each member in the audience to, **remember, rethink, and respond.**
* **Remember:** They move them beyond daily distractions and lead them back to remember what their mission is in their first place.
* **Rethink:** Students see their life and work with new eyes.

They create an environment and thought-provoking contents that lead to the pupils to dwell in possibility and see things from new angles of vision.

* **Respond:** compel words into action. They use powerful stories and illustrations that light a fire in pupils and stimulate an authentic desire to be a catalyst for positive change in their life and work.
* Promote reading habits and group discussions.
* It is about contributing authentic messages and stimulating progress.
* They incorporate the ideas into their culture and they follow through with action.
* It is advised not to strive for perfection, but to the best version of oneself that he can possibly be.
* Failure is not the opposite of success, but it is a part of it and once you accept that, you can do anything.
* Weaknesses and shortcomings are intrinsic part of one’s personality.

**14.5 MOTIVATION AND MOULDING OF**

**STUDENTS’ FUTURE IS THE RESPONSIBILITY**

**OF TEACHERS**

* One of the most difficult and the most important aspect of becoming a teacher is learning how to motivate his students.
* Students who are not motivated will not learn effectively.
* They expectedly won’t retain information, won’t participate in teaching-learning process, and may even be disruptive.

**A student may not be motivated for a variety of reasons**

* He may feel that he has no interest in the subject.
* Finds the teachers’ method un-engaging.
* May be distracted by external forces.
* A student, who is un-motivated, actually may have difficulty in learning and is in need of special attention and counseling.
* Motivating the students may be a difficult task but then the rewards are more than the worth of it.
* Motivated students are more excited to learn and participate in the teaching- learning process.
* Teaching a class full of motivated students is enjoyable for teacher and students alike.
* Some students are self motivated, with a natural love of learning. But, even with the students who do not have this natural drive, a great teacher can make learning a fun and inspire them to reach their full potential.

**Keeping in mind the following five points, students may find the learning more excited.**

**1. Encourage students**

* Students look at teachers for approved and positive reinforcement, and are more likely to be more enthusiastic about learning, if they feel that their work is recognized and valued.
* Teachers should encourage open communication and free thinking with the students to make them feel important.
* Be enthusiastic and often pray students, recognize them for their contribution.
* Make the classroom a friendly place where students feel heard and respected, they will be more eager to learn. But, indiscipline should never be allowed to creep in during such a friendly atmosphere. Students are bound to respect the teacher.
* A “good job” and “nice work” always go a long way.

**2. Get them involved**

* Make students work in groups and assign each student a task or role.
* Ask a student to erase the blackboard or pass out materials.
* Try to give the students a sense of ownership.
* One way to encourage and teach them the responsibility is to get the students involved in the class-room activities. Make their participation a fun by giving each student a job to do. Give students the responsibility of tiding up or decorating the class-room
* If you are going over a reading in the class, ask students to take turn of the reading sections out a loud.
* Allow them to feel accomplished and encourage their participation in the class-room teaching-learning.

**3. Offer incentives**

* Setting expectations and making reasonable demands encourages students’ participation, but sometimes students need an extra push in the right direction. Offering students small incentives make learning fun and motivate students to push them up.
* Incentives, big or small are the indicator of special privilege to an exemplary student(s).
* Rewards give students a sense of accomplishment and encourage them to work with a goal in mind,

**4. Get creative**

* Avoid monotony by changing around the structure of your class, If possible.
* Teach through games, stories, discussions etc. instead of relying only at lectures.
* Encourage students to debate and enrich the subject matter with visual and audio-visual aids.
* Show a movie in the AV room, that effectively illustrates a topic or a theme.
* Look of the class-room should always be attractive.
* Use posters, models, students’ projects and create a warm stimulating environment.

**5. Draw connections to real life**

* “Will I ever need this?”
* This question too often heard in the class-room indicates that a student is not engaged.
* If a student does not believe that, what they are learning is not important, they won’t want to learn, so it’s important to demonstrate how the subject relates to them.

**6. Other activities**

* Reading habits and group discussions.
* Speeches by alumni and eminent personalities to motivate the students.
* other ideas to motivate the students in order to make teaching-learning more disciplined and more attractive
* Use of Answer-key should strictly be discouraged rather it is to be banned.

***Students deserve an encouragement for developing a habit of thorough study of lesson before writing the answers. A good teacher inspires the students and helps them acquire the power of imagination and maximization their curiosity in the subject. Therefore the use of answer key should strictly be banned.***

**14.6 SCIENCE OLYMPIAD FOUNDATION (SOF)**

**What is SOF examination?**

SOF is an educational foundation and a non-profit organization, established in 1996, based in New Delhi, India which promotes science, mathematics, general knowledge, introductory computer education and English language skills among school children in India through various Olympiad examinations.

* It helps students in their studies by providing a higher level of education through their books, sample papers and Olympiads. Its official language is English.
* SOF is affiliated to CBSE, British Council, Institute of Company Secretaries of India, and Techfast.
* SOF organizes six Olympiads each year, namely, IEO, NSO, NCO, ICO, IGKO, and IMO.

**How to participate**

**Registration of students** –

* Open for class I to XII students. Prospectus containing the registration forms are sent to all schools registered with SOF (Science Olympiad Foundation).
* During 2016-2018 academic year, 45,000 schools from more than 1400 cities were registered, and millions of students appeared for the six Olympiad exams.
* Olympiads were conducted across 30 countries.
* About 5 lakh (5,00,000) students take part in each of the following Olympiads.
* **International General Knowledge Olympiad (IGKO)** is a single level exam. Students from class I-X may participate in the examination. This Olympiad was introduced in 2017-2018 academic session.
* **International English Olympiad (IEO)** used to be single level exam each year, but since 2017-2018 it is conducted on two levels. Students from I-XII can participate in this Olympiad. It is conducted in partnership with British Council.
* **National Science Olympiad (NSO)** is conducted on two levels each year. It was the first Olympiad conducted by SOF. Students from class I-XII may participate in the examination. It is conducted in partnership with techfast.
* **International Mathematics Olympiad (IMO)** is conducted on 2 levels each year. Students from I-XII may participate in the examination.
* **International Commerce Olympiad (ICO)** is a single level exam. Students from class XI-XII may participate in the examination. It is conducted in partnership with ICSI.
* **National Cyber Olympiad (NCO)** is a single level exam. It has been conducted since 2000. Students from I-XII may participate in the examination. It is conducted in partnership with TCS iON, a branch of TCS. **NCO** was formerly a 2 level exam, but it has been abandoned since 2017-18. The National Cyber Olympiad (NCO) is a cyber concept and knowledge competition for students of class I to class XII. It is conducted with the aim of identifying and nurturing future scientists, technologists and IT talent at the school level.
* **International Sports Knowledge Olympiad (ISKO)** was conducted only once during 2016-17 session. It was a single level exam conducted in partnership with **Star Sports.**

**Level 2 Exams;**

* From among the students who participate in each of these Olympiads every year, the top 500 students , top 10 students in each state, as well as school toppers from schools having participation of more than 10 students in the exam are selected for the second level.
* Three school toppers who get more than 50% marks mean 30 out of 60 or more than 30 marks get medals (gold, silver and bronze) and are selected for the second level of the examination.

**Eligibility and pattern**

* Students from class I-XII can participate.
* There is a different exam paper for each class. The question paper contains 35 multiple choice questions of 40 marks for class I-IV.
* 50 multiple choice questions for class V-XII of 60 marks.
* **Questions are to be answered in 1 hour.**
* Five questions that are part of the “Achievers’ section” carry 3 marks each, whereas the remaining questions carry one mark each.
* Students are required to mark their answers on an OMR sheet.
* Results are announced for every student and it includes the student’s international rank, zonal rank and the school rank.
* SOF also generates a performance report for all participating schools, as well as awards teachers and principals whose pupils excel in the examination.

**What are the benefits of Olympiad exams?**

* Improves the students’ problem solving ability and challenges them to think analytically.
* Prepares them for future competitive exams by testing the student’s aptitude as well as the knowledge in a particular subject.
* Motivate students to endeavor for better and deeper understanding of scientific facts so as to enhance their reasoning skills.
* Exams are perfect to test a student’s conceptual understanding of the subject.
* Provide exposure to students at the national as well as international platforms.
* Instill the quality of hard work in students by pushing them to prepare hard for the exams and improve their results.
* Students’ performance in the school is also improved as Olympiad shape their thinking and learning process which helps them to grasp the concepts taught in the school better.

**How to apply**

* Prospectus containing the registration forms of all exams conducted by SOF are sent to all schools registered with SOF. Schools which are not registered may also request for prospectus by sending e-mail at [info@sofworld.org](mailto:info@sofworld.org) or may contact at phone.
* School’s coordinating teacher generates the students’ roll nos. as per the guidelines stated in the prospectus.
* A copy of all these roll numbers along with the Students’ Registration Sheet (SRS) and School Registration Form (SRF) is then sent to the foundation’s office before the due date of submission of farms.
* The Foundation then dispatches the question papers after the applicant school and the students get registered.

**What is the syllabus of Olympiad?**

* Questions of level-1 **Olympiad exams** will be 60% from the current syllabus and 40% from the previous class syllabus.
* Questions of level-2 **Olympiad exams** will be from current class syllabus only.

**How to prepare for the Olympiad Exams?**

* Most of the Olympiad exams are conducted on the similar syllabus that is taught in the school.
* No additional reference books are required for the preparation of these exams.
* Students are required to be clear with all the concepts and basics.
* The questions asked in the Olympiad exams are quite different than what kids learn in the school.
* Questions are trickier and conceptual which require the students to have a wide thought process to solve the variety of problems based on logic and concepts.

**Tips to crack second level of NSO**

* Know your syllabus.
* Start your preparation well in advance.
* Identify study material and resources.
* Understand the pattern.
* Take real time mock test.
* Plan and execute.
* Continuous efforts.
* Take proper sleep before exams.
* Solve sample papers

**14.7 STUDENTS’ PARTICIPATION IN**

**NATIONAL TALENT SEARCH EXAMINATION (NTSE)**

NTSE is a National level scholarship program as well as one of the oldest and most prestigious examinations in India conducted by National Council of Educational Research and Training (NCERT).

* Duration of exam --- 120 minutes
* Medium of exam ---- Hindi and English
* Mode of exam – offline
* Registration: begins in the month of September
* Exam is held in two stages- Separate application forms for stage I and stage II needed to be filled
* Application fee only for stage I. no fee for stage II
* Fee has to be paid in offline mode only
* Application forms are required to be signed by Principal of the school
* Age limit: not more than 18 years on July 1 2019
* Mode of application: offline
* Official website: [www.ncert.nic.in](http://www.ncert.nic.in).
* Minimum qualification to apply for COMEDK – X CLASS.
* Candidature: Indian and foreign candidates studying in India
* Application fee: may vary, no fee for stage II
* Help line No. 011-26560464
* Timings: 2.30 to 4.30 PM only

**14.8 QUIZ COMPITITION**

Q**uiz competition**

A quiz competition is a mind sport wherein the player/s, as an individual or in team tries/try to reply correctly in an attempt to win it or notch a superior position by a better margin of scores than the opponent in order to have an upper hand, move to next round or win it.

* Quiz competitions also serve the purpose of a brief assessment to gauge the skills and knowledge of the participant/s.
* Over the years people have been fascinated by these quizzes, which have been broadcasted on television.
* The most popular Quiz competition in India is KBC “Kaun Banega Karorepati” (a multiple choice quiz) watched and enjoyed by children and adults alike. It tests the general knowledge of the individual participants. Interesting part of it is that everybody who uses to watch the program feels himself a part of it. This is only because testing one’s own general knowledge is more fascinating than any financial benefit involved in the program.
* The objective of quiz competition for school students is to encourage them to peep beyond their textual knowledge and establish a relationship between theory and application of the learnt concepts.

**Types of school quiz competition**

Quiz competitions can be conducted for different age groups in a school or outside of it over varying cultures. Types of Quiz competitions may loosely be divided as under

* **Solo or individual quiz competition as in KBC,**
* **Inter class (individual or team competition):** To engage and enlightened the students, an inter-class general knowledge Quiz competition on different selected topics may be held for students of different classes.
* **Inter school quiz competition:** objective of this competition is good for describing interactions between different schools,
* **Inter-state quiz competition:** Its one of the aims is actively enhance interaction between people of diverse culture living in different cities and states of India. it promotes mutual understanding amongst them

**There are many more types of quizzes such as**

* Personality Quiz
* Scored Quiz also known as “tally Quiz” is commonly used in Online test and assessment competition
* Multiple choice Quiz
* Yes or No Quiz
* True or False Quiz
* Knowledge Test
* **Trivia Quiz;** such as guessing a celebrity from his/her original name or identifying an important event, giving the more relevant clues gradually to identify it.
* And many more

The Quiz may comprise of oral questions, riddles, audio-visual rounds. Through various interesting as well as challenging rounds, the knowledge of the participant may be put to the test in Quiz competitions. Participating children and audience will thoroughly enjoy it. Quiz competitions enhance eagerness among students in the way similar to “Kaun Banega Karorpati” as referred above.

**Benefits of quiz competitions**

* Quiz competitions are a source of general/specific knowledge improvement,
* If designed properly, they help to promote a fun way to study,
* Quiz competitions improve the horizon of thinking and invite the students to think from a different angle,
* Quiz competitions promote a healthy debate amongst students/participants and help learn with each other,
* Quiz competitions help in language and subject area development,
* Quiz competitions can be used as a tool to measure the growth in the knowledge, abilities, skills of the school students in general/specific fields for instance science, technology, engineering, mathematics, history etc.,
* Quiz competitions help in team building process, synchronization of talents and competitive abilities,
* Quiz competitions promote group harmony,
* Inter-state group competitions provide a chance of making new friends from different cities and cultures,
* Spelling bee competition too is a sort of Quiz competition that improves the students’ spellings and vocabulary,

***School authorities have a responsibility to encourage their students to take part in quiz and spelling bee competitions in an endeavor to improve students’ skills and prepare them for a stiff competition they might face in their future practical life.***

**14.9 QUIZ BEE COMPITITION**

**What is Quiz Bee Competition**

* It is one of the events held in schools to test the intellectual capabilities of students in different subjects such as science, mathematics, social science, current events general events etc.
* Sometimes Quiz Bee Competition is confined to a specific area such as mathematics, “**Quran”** or other religious Books,chemistry, physics, technology, livelihood education, information technology and the list go on.

**How to prepare and win Quiz bee competition?**

* it is the most anticipated event in different school levels, viz; primary, middle, secondary and senior secondary,
* It attempts to test the intellectual abilities of the students in various fields such as mathematics, science, general knowledge etc.
* Students with a tough knowledge are supposed to pull through the tough field,
* Students who sail through along with their teachers feel proud and honored,
* A hard earned triumph can give enormous joy and respect.

**Useful tips for preparation**

* Thorough preparation, constant reading and solving all types of math problems for math bee competition,
* Master the basics such as capitals and currency of different countries, capital of different states in India etc,
* Common but useful terms and the definition like (photosynthesis, hemoglobin, inertia, friction and hundreds other),
* Names and fields of past and present prestigious award winners,
* Past, present and future hosts of the significant sports and other events (tennis, cricket, badminton, hockey, football, Summer and winter Olympics) etc,
* Name of those who provided great contribution to the society,
* Always keep trying to raise the bar of the knowledge,
* Go through the questions asked in the events held during previous years in order to keep yourself aware of the trend,
* Subject teachers will research in their subject for helping those who intend to participate in the competition,
* Review math problems which can be solved in one minute or less than the allotted time,
* Avoid tackling problems which require a lot of time,
* Acquaint with various concepts, laws, theories and principles in different branches of science and technology,
* Boost the preparation further in social science, history, literature, and general knowledge,
* Keep updated with the important current events that happened in India and across the globe,
* Stay focused at preparation, do not depend on prayers alone,
* Watch actual quiz bee competitions at TV and other electronic media,
* Stay calm and compose during the competition. Concentrate to all what the quiz master says,
* Being a bit nervous is normal in the beginning, but as the contest progresses it becomes normal gradually.

**SECTION 15**

**ACTIVITIES TO STAY IN LIME-LIGHT**

**15.1 IMPORTANCE OF PLANTATION**

**15.2 BLOOD DONATION CAMP**

**15.3 INTER SCHOOL SCIENCE FAIR**

**15.4 DRAWING COMPITITION**

**15.1 IMPORTANCE OF PLANTATION**

Take a deep breath in, now release it out. Of course everybody knows that oxygen is inhaled in and carbon dioxide is exhaled out.

* No one can deny the fact that oxygen is the most essential element for our survival and almost for all other living beings.
* Joseph Priestly discovered this gas (O2).
* But point of our reference here are “green plants and trees” which naturally manufacture oxygen as by-product by the process called “photosynthesis”.
* We can then appreciate that plants are extremely important in the lives of people throughout the world.
* People depend upon plants for other basic needs too, such as food, clothing, shelter (*i.e roti, kapra aur makan—a Manoj Kumar starrer film*) and health care, fuel, flower, fruits, vegetables, rubber, wood, and many other important goods.
* Trees conserve water.
* Preserve soil.
* Preserve climate and help in preventing global warming.
* With the increase in population all around the world the need of more and more plants is growing at a fast pace.
* Nothing but the plants and trees can play an act for sustaining life and ecosystem on earth.
* Trees serve as homes or habitat to various species of birds.
* Tree plantation helps battle deforestation.

***The ecological system of our planet is a shared responsibility of all of us. Because of urbanization, deteriorating condition of the forest and global warming, importance of plantation is emerging fast. It is therefore extremely important to motivate school children for “knowing the importance of trees” and taking part in “tree plantation” program carried out in schools or elsewhere.***

**15.2 BLOOD DONATION CAMP**

Blood is the body fluid of warm-blooded animal that delivers oxygen and other nutrients to the cells, tissues and organs all over the body and transport metabolic waste products such as carbon dioxide, away from those cells. Blood is composed of three types of living cells *erythrocytes* **(RBC)**, *leucocytes* **(WBC)** and *thrombocytes* **(platelets).**

* It plays an important role in regulating the body’s system,
* It is pumped by heart to different parts of the body carrying oxygen and other nutrients and returns to the heart with body waste products such as carbon dioxide etc., those are then purified by different organs of the body,
* It regulates the body temperature,
* Its color is red because of hemoglobin, a protein that forms a complex substance with iron,
* Platelets clot blood at site of injury,
* Blood brings waste products to liver and kidney for purification,
* There are four types of blood groups, i.e A, B, AB and O.
* Named after “Rhesus monkey” Rh factor is a protein that may or may not be found on the surface of RBCs of human blood.
* On the basis of presence or absence of Rh factor in human blood, there are 8 types of blood groups found in human beings.
* An adult has about 6 litres of blood in its body,
* Sometimes there arises a need to transfuse blood in accidental cases or blood diseases.
* There exists no fluid that can replace the human blood.
* Human blood is the only option to supplement the insufficient volume of blood in the body.
* This vital importance justifies the demand of collection and preservation of human blood.
* Consequently “blood-donation camps” are held to fill up the pressing demand.

Cognizant of the exigency, school authorities are required to make the students aware of “voluntary blood donation”, a remuneration free activity of donating plasma or whole blood. Organizing “Blood Donation Camp” is the perfect way to cater to the demand of blood, a valuable contribution to the society and humanity.

**In order to hold a “Blood Donation Camp” steps to be followed are;**

* **Contac the Red Cross Society:** and fill up the required form.
* **Finalize a venue:** camp can be held at the site in the school recommended by the school authorities.
* **Confirm a date 2-3 weeks in advance:** after confirmation of the date Red Cross Society contacts various blood banks on school’s behalf, which usually takes 2-4 days to finalize the formalities with blood bank. Two weeks time is taken to publicize the camp.
* **Publicize the camp day:** publicity of the camp is carried out in all possible ways; online mailing, posters and standees. A collection of sample posters that the Red Cross Society provides will be helpful in publicity campaign. An awareness program, if required, can be held by Red Cross Society.
* **The pre camp work:** before the starting time of the camp, volunteers of the Red Cross Society will arrive and help in arranging the venue properly. They will plan out the decorations so that the donor feels special while donating blood at the camp. Information regarding the required things on the camp-day (such as water, electricity supply and its alternate arrangement, tables etc) will be given by the society well before time.
* **Post camp work:** Red Cross Society sends e-mail of thanks to all the donors for their valuable contribution towards the humanity. They will also be asked for feedback on the facility provided at the camp for further improvement of the activities.
* Red Cross Society use to organize the camp in collaboration with government Blood Banks. Their perception is that the government hospitals use the major quantity of blood collected by such camps is to cater for the needs of underprivileged people.

***Blood Bank is finalized on the basis of three factors,***

* ***Shortage in Blood Bank at the time***
* ***The distance of the venue from the Blood Bank***
* ***The preference of the authorities who hold the camp.***

**15.3 INTER SCHOOL SCIENCE FAIR**

**Aims and objectives**

* The science fair is a fair where students present their science project results in the form of a report, display board and models that students have created.
* Purpose of science fair is to instill scientific attitude in the young generation to make them realize interdependence of science, technology and the society.
* Science fair provides a platform for the students and teachers where they can learn from each other’s experiences and got motivated to designed and develop something new and innovative.
* A science fair is one of the unique ways of celebrating science.
* It provides the opportunity for students, teachers and other people to improve their understanding in science.
* Share their research projects and investigations.
* Science fair is a form of knowledge-building and social development event.
* To have fun exploring science, technology, engineering and mathematics (STEM).
* To understand the practical application and utility of science.
* To see the performance of other students and their work.
* To create interest in students and to make science learning joyful.
* Encouraging scientific and technological creativity among students and inculcating a sense of pride in their talents.
* Acquire knowledge, conceptual understanding and skills to solve problems and make informed decisions in scientific and other contexts.
* Basically, one of the creativities for the science fair is the showcasing of the students’ investigatory and research projects.

**Basic steps in conducting a successful science fair**

* A science fair should be prepared 2-3 months ahead of the actual fair date.
* To start organizing the science fair, formation of the group is required, who will be responsible for the conceptualization and the implementation of it in the science fair.
* It could be a group of teachers, students and researchers among others.

**Set goals for the science fair**

* The science fair should be celebrated for a reason.
* Set goals for the program and objectives which the participants have to achieve at the end of the fair.
* Make the experience positive for the participants, they should feel a sense of accomplishment at the end.
* Ample opportunity should be provided for the students to show case what they researched or developed.

**Set the date and venue**

* Location is to be set that can accommodate the expected participants and the material that is needed in the fair including the furniture, and display board etc.
* A date should be chosen when school has the least academic activity.

**Creative and interactive activities**

* Devise other fun and creative and interactive activities such as science inspired games.
* Prominent resource speakers can also be invited to have talk about any selected subject.

**Plan the schedule**

* Plan the schedule of the fair.
* Distribution of invitation is required for a sizable attendance.
* Calculate the amount of time for each activity.
* The preparation should be started the day before the fair’s date,
* Allocate the time for booths visit.

**Parent participation**

* Parents play an important role in supporting their children throughout the duration of the science fair process.
* They can also be of a huge help by volunteering to help before and during the fair itself.
* Start off on the right foot.
* Establish good communication with parents early on so they understand expectations and anticipate deadlines

**Other activities and arrangement for science fair**

* Staff and volunteers recruitment.
* Distribute certificates and awards.
* Invite visitors.
* Register the participants.
* Orient the judges, if appointed.
* Monitor the fair, tabulate the scores.
* Evaluate the program when it is over, and
* Publicize the fair.

**Conclusion/project report**

A good science fair project also requires writing a clear scientific report. The purpose of a science fair project report is to carefully describe the results and the scientific process you used so that other people can understand your project and may even reproduce it themselves;

* Summarize your science fair project results in a few sentences and use this summery to support your conclusion,
* Include key facts from your background research to help explain your results as needed,
* If appropriate, state the relationship between the independent and dependent variable,
* Summarize and evaluate your experimental procedure, making comments about its success and effectiveness.
* Suggest changes in the experimental procedure (or design and/or possibilities for future studies.

**15.4 DRAWING COMPITITION**

School level competitions are about more than just participation and winning prizes; they are likely to play major role in uncovering and nurturing natural talents of the students. This seems to be true with the drawing and coloring competition where the students find a platform to display their creative and artistic abilities for themselves, other children and teen agers. This can often have a life-long effect.

**Aims and objectives**

* Drawing and coloring are visual arts and these competitions allow students to uncover their natural talents in sketching and illustrations.
* Drawing is also all about storytelling and art competitions can prove to be a valuable learning ground for potential writers.
* Drawing competitions give a chance to budding artists of all hues to showcase their skills and experience, a diverse form of learning which they might not otherwise have access to.
* Competitions allow the students to test out their creative ideas in a risk free manner.
* This allows for learning and growing as artists and this period can also be an investment for future success.
* The aim of the drawing competition is to engage children in a creative exercise to identify their hopes and dreams for the future**.**
* It allows complete self expression and support their creativity and innovative ideas expressed through art.
* Building confidence through exercise that helps the student explore different types of mark making and to develop both unique approaches to materials and aesthetic decision making.
* Art make the students realize the importance of pursuing their passion and expressions.
* Medium of art allows the young minds to explore their own thoughts and imagination.
* It helps in reinforcing the principles of traditional drawing skills.
* It enables learners to achieve a balanced growth as a social being in tune with their culture through project work.
* It assists learners to use aesthetic and artistic sensibility in day-to-day life situation.

**Importance of drawing competitions**

* Competitions are important to motivate young ones and help them to develop their creative skills by exposing them to the contemporary talent in the field.
* By observing the work of their peers, students have the opportunity to analyze and evaluate their techniques and outcome vis-à-vis those of other artists.
* Inter-school art competitions offer the students a chance to meet new people and make new friends.
* Meeting people from other disciplines and sometimes different geographical locations offer young people a chance to develop new ideas and broaden their outlook.
* Sometimes, competitions provide opportunities for students to travel to new places and observe different cultures
* All of these chances and opportunities can be life-changing for any student who aspires to be in the creative field where new ideas and new ways of thinking are deeply cherished.
* Taking part in drawing and painting competition helps the students to develop a right attitude towards the career as an artist.
* It allows them to challenge themselves and move out of their comfort zones.
* In face of competitions, students learn to think of art competitions as more than just about winning or losing.
* They learn to appreciate the experience and move on to become better and stronger artist.
* Constant learning and self-motivation is the key to success as an artist and these competitions help to instill these habits in them.
* Participation and success in prestigious art competitions make for great imprints on a student resume when applying to art schools he/she can definitely be a stepping stone to a great future as an artist.

**Target groups**

* Participants may be divided in the following categories of students’ viz;
* Kindergartens (nursery, KG, 1st)
* Primary (2nd to 5th )
* Middle (6th, 7th, and 8th)
* Secondary (9th and 10th) and
* Senior secondary (11th and 12th)

**Online drawing completion**

* National and international sites hold online competition.
* Most of these sites provide a platform for the bright and talented students in contemporary art to showcase their works and win exciting prizes.
* All the school students may join the online art competing and can win prize money, scholarships, vouchers, overseas trips, promotional opportunities and other bulk prizes.
* Principals, drawing teachers and other responsible authorities of the school need to take notice of such sites, and encourage their students who may have the creative and artistic abilities and excellent talents to excel.
* Authorities may search for such sites, national and international, at Google and try to find all the information to take part in such drawing and color contests. Search the following sites along with other sites;
* **ORA India;** [ora@mojarto.com](mailto:ora@mojarto.com)
* https:wwwstudrntartguide.com> h
* [*www.dessinacademy*](http://www.dessinacademy) *online-c*
* Search for many more

**SECTION 16**

**FUTURE BOOSTER**

**16.1 TALENT SEARCH**

**(EDUCATIONAL TALENT SEARCH)**

**16.2 PERSONALITY DEVELOPMENT ACTIVITIES**

**16.1 EDUCATIONAL TALENT SEARCH**

Identification of students who have potential to succeed in higher education. The activity is to help students in academics for a better career as per their potential.

* They will be encouraged from lower classes to secondary and senior secondary level up to the college and University level.
* The goal of ETS is to encourage the students to complete the education with their specific goals and potential.
* All children have unique strengths and talents. However some children have particularly advanced or well developed skills and abilities in one or more areas.
* ‘Gifted’ refers to children with high potential while ‘talented’ means that they display skills which are advanced when compared to other children of their age.
* Genuine talent identification is not a high priority in our schools. In contrast, we are quick to identify weakness rather than strengths.
* Surely our first task should be to identify what each one of our student can do. What talents do they have?
* If students show a preference, passion or natural aptitude for a certain area, then ultimately there is a good chance that it will be those areas that will provide them with their best career and life choices.
* Indeed, we need to provide our students an opportunity to become exceptional and to be able to go deep beyond classroom schedules, timetables and curriculum in search of greater expertise.
* Just make school one big talent search place.
* We would seek, identify, develop, and nurture those selected as talented.
* Initiate with a plan for developing the existing talents from the initial class itself.
* Begin the activity from class VI.
* Motivate and prepare those who have the potential for police, civil and defense services and other govt. opportunities.
* Identification of talent and grooming for higher studies and competitions required for admission and selection in medicine, engineering and other fields.
* Search the meritorious and intelligent students and prepare them for next stage of coaching program (civil services) being run by different agencies/institutions including Jamia Millia Islamia (JMI).
* Preparation for advance professional courses, animation and fine arts etc.
* Preparation and participation in National talent search Examination.
* Identification and encourage the talents for sports and co-curricular activities.
* IQ testing and talent search from class VI

**16.2 PERSONALITY DEVELOPMENT ACTIVITIES**

Personality means the characteristics and appearance of a person—his thoughts, feelings, behavior, communication ability and physical features.

* A crucial factor that moulds the personality of a child is the environment to which he is exposed.
* School is supposed to be the best place for personality development.
* It is an activity that develops the mindset and helps children to develop their own thinking habits that suit their character traits.
* Working at honing of the specific hobbies, public speaking, presentation skills, development of moral values, acquisition of best quality general knowledge etc are required to be taken into account for an endeavor of all round personality development.
* With the help of simple methods anybody can develop a winning personality and change his/her future.
* With the help of good training a child can learn communication skills, different languages and subjects, driving or computer operating.
* It improves self worth and self confidence.
* Similarly, training in personality development enhances the general as well as unique traits (characteristics which differentiate from one another) of a person.
* A teacher of personality development helps a person to get positive thought pattern, gain confidence, improve behavior, learn better communication and develop a healthy physique.
* Good personality doesn’t mean wearing of good dress or a well build body. Inner personality has a longer lasting impact.
* Therefore, inner and outer personality of a child needs to be developed.
* It includes the development of communication skills, effective expression of ideas and thoughts which are crucial for future success.
* Development of writing skills, effective expression of ideas and thoughts which are crucial for future success. Through it one can command better relationship and earn respect.
* How well you communicate will determine how well you succeed socially, academically and professionally?
* Achievement of the objective can also be through co-curricular activities like debates, speeches on given topics and group discussion and dramatics etc.
* Seeking guidance and consultation with individuals/agencies who are expert in the field (a program that is regularly conducted by India Islamic Cultural Centre--IICC).
* Students are required to be transformed into good students and an endeavor is to be undertaken to improve their mind’s ability as an act of personality development.

***Students deserve some tips for setting an aim/goal in their life;***

* Life is not an aimless destination that is driven by sheer luck. But, is a target that is achieved through a plan of action.

**Power of knowledge,**

* Knowledge is a weapon that is required to impress others. To update the knowledge read
* News papers.
* Watch informative programs at TV.
* Read good and popular books
* Interact, interrelate, and communicate with intelligent persons.

**Confident look,**

* Confident faces impress others; so, feel confident rather than looking frustrated.
* Think positive then looks will be automatically positive.
* Always wear a smile at your face. While shaking hands, have an eye to eye contact with others.

**Style of speaking,**

* Speak clearly and forcefully with sweetness and command.
* No mistakes of grammar and pronunciation.
* Speaking power is an essential trait of a good personality

**Smart dress,**

* Successful persons in every field usually wear smart dress to feel more confident and relaxed.

**A healthy body**

* A healthy and smart look is absolutely essential to attract others.
* Exercise regularly, play games and go for a morning walk.
* Eat a balanced diet.

**Good habits,**

* Cleanliness, punctuality, completing your work in time.
* Fulfilling your promises.
* Being sincere and dedicated to your work.
* Listening to other people with empathy.
* No smoking and no drinking are the essentials for a sparkling overall personality.
* **What we are** Is the result of what we think? So, think big and live big.

**What makes someone a good student?**

* A good student is somebody who has a keen interest and a desire to learn and a willingness to work hard.
* What makes a good student is his perseverance and discipline.
* You have absolutely got to make a lot of mistakes, if you want to learn anything it is by trial and error.
* If you are not making mistakes, you are not learning anything.
* A good student should be hard working, should be eager to study, and try to start learning by himself, not only depending on teachers and just doing what they are told to do. They have to be volunteers and should have motivation to study.
* One needs a passion about what he is studying.
* He should be a disciplined person having a desire to learn new things
* A student should have wills and should be confident to achieve them.
* There should be some target and goal for every student in life.
* A student should obey their teachers.
* Class participation and behavior are other aspects of the definition of good students.
* He should be a good listener and good speaker.
* Participating in CCA and Sports.
* Focus at the end result.
* Sharp observer.
* Manage relationship.
* Have a sense of respect towards his elders.
* Prioritize his life; doing well in the school should be his top priority.
* There should be no substitute of studies for him.
* Always keen to attend his classes.
* Do all of the H/W and other assigned work.
* Develop self discipline.
* Should be able to manage time properly.

**Improve the mind’s abilities by improving memory**

* Intelligence is simply ability to remember things well.
* Observing something or paying attention is not enough.
* The key is to retain that information.
* Associate things one wants to memorize with things he already remembers.
* Associating new information, observation or data with old memories would make it easier to memorize in comparison to creating new memories.
* The technique of connecting and associating memories would be unique.
* Practice, practice and soon he will be developing new techniques to learn and retain information faster. Only the first attempt is hardest.

**Be more curious**

* How do people get to know so much?
* Good memory skills are only part of the answer: you also have to be curious.
* If you are satisfied gaining through life with little or no understanding of things you are un-familiar with, you won’t learn much.
* Make a conscious effort to be more curious by reminding yourself that developing your curiosity will broaden your horizons and help to make you more intelligent.

**Exercise the mind in different ways**

* Most of us are good at things we excel in naturally or the activities we do every day.
* Challenge yourself to learn a new skill or to think in a different way, however you will mentally become more intelligent.
* Choose something you would like to learn to do, may be math and focus at it.
* Initially you may be uncomfortable and feel even less intelligent than you did before, but if you are steady and practice more diligently, you will become confident, and you will make new connections in your mind.

**SECTION 17**

**DISCIPLINE**

**17.1 MAINTENANCE OF DISCIPLINE**

**17.2 CELLPHONE POLICY**

**17.1 MAINTENANCE OF DISCIPLINE**

Discipline plays a vital role in maintaining a civilized life. Proper discipline can significantly decreases un-necessary chaos existing in daily life.

* For the effective operation of a school, discipline is very much essential.
* School discipline is a system of a certain code of conduct and behavior for regulating students and making school well organized.
* For making teaching-learning process effective, the classroom environment must be favorable and opportune.

1. **Be organized**

* If there is no proper organization in the class-room, kids feel bored and start misbehaving.
* It will be better if the lessons are properly planned and organized in everything as possible.

1. **Deal with problems right from the start**

* It is advisable to deal with problems before they become too large to handle.
* You can address each and every small issue happening in the classroom.
* A tiny mistake in discipline issue can be a nightmare in future.

1. **Have good control procedure**

* Certain good control procedures are developed to prevent problem.

1. **Teach the procedure well**

* Making good and appropriate procedure is not enough. They should be taught to the students properly as well.
* Clearly explain the procedure
* Practice it with children
* Correct the parts that were done incorrectly
* Repeat it constantly until they do it in the right manner

1. **Keep the students engaged**

* The more students are engaged in activities, the less they cause problems.
* Make sure you give interactive classes and teach the students passionately.
* It is better to make students involved than just giving lectures.
* Hence it would be advisable to make the students write while teaching.

1. **Move around the classroom**

* Most of the teachers stand at the front of the room without even moving their position.
* It would be a good idea to walk around as you teach.
* It is not only a different approach of teaching, but also helps to keep an eye on what the students are doing.

1. **Develop a rapport with students**

* If we want students to follow us, and also create an impression that we care about them, always be genuine, kind, approachable and ready to admit mistakes.

1. **Be professional**

* Rather than becoming a too friendly teacher.
* Try to become a true mentor.
* Interactions must be made friendly but not familiar.

1. **Require students to clear their desks**

* Students should be asked to keep only the required items on the desk.
* When desks are clear, teachers will be able to know exactly about the activities done by their students.
* Then, teacher will have better control of students.

1. **Establish structure first**

* Train the students to work and do their activity in a structured environment.
* Once they understand the structure, they should be able to work in an unstructured environment without losing control.

1. **Stick to the rules but don’t be too strict**

* Rules and routines help to communicate and also establish the kind of behavior and discipline you expect from your students.
* Stick to the rules you create but make sure that the classroom environment does not become too strict and rigid that students feel suffocated.

1. **Deal with misbehaving students personally**

* Ask a misbehaving student to talk you in person and speak to the student in a calm demeanor.
* Try to be a friend with them but be firm with what behavior you would and would not accept.
* When you truly get to understand them you might often be able to recognize patterns and issues the child tries to make up with his/her mischievous behavior.

1. **Keep calm and carry on**

* It is important to have control over your emotions to have better control of your classroom.
* A teacher who loses his/her tempers and yells at the students often lose the battle.
* If a situation gets unruly, try standing in silence and look at your students.
* This will alert them to a change in your demeanor and will make them aware that something they did was not right.
* When everyone falls silent you can resume your lessons.

1. **Connect to your students on a daily basis**

* Classroom management tips are to greet your students every morning and at the beginning of class to connect with them on a daily basis and also to set the tone for the day.

1. **Build Positive Relationships**

* To help a student be his absolute best.
* It is important to wear their shoes and walk a mile in them from time to time.
* This will help you look at things from the student’s perspective and be empathetic with them.
* Support them by encouraging them not only in academics but also with their co-curricular activities.
* This will help building a trusting and honest teacher-student relationship.

1. **Reach out to the parents**

* While you support a child from school, parents should also be considered as active contributors to a child’s growth.
* Make sure to address the drawbacks, but also highlight the positive qualities of the child to his/ her parents.

1. **Be interactive and friendly**

* Interact with your students and speak to them in simple terms to help them be more comfortable in the class-room.
* Communicating and engaging them in conversations will boost their confidence and interest in studies.

1. **Change your teaching style from time to time**

* Classroom management strategy is to adopt multiple instruction methods and styles.
* Students often lose interest when the lessons are conducted in a mundane manner.
* Following a single mode of teaching often leads to a boring classroom session and disengaged students.
* You can change this routine and keep your students engaged by frequently varying your instruction style.

1. **Keep students engaged and involved**

* It is a challenging task, but if you gain mastery over this, your students are less likely to misbehave.
* Having an engaging classroom session will make the students actively participate in the lessons or task at hand and will prevent their mind from wandering.

1. **Keep them busy**

* Following the points mentioned above, you can create an engaging classroom sessions by tightening up time management and by staying organized.
* This will greatly improve classroom culture as well as teaching and learning time.

1. **Motivate students to work hard using rewards**

* A single reward system can be a great motivator.
* The reward could be something that adheres to the school’s policies.
* It is also important to remind that help is always available when you need it.
* Remind them that they don’t have to battle it out alone.
* Encourage students to ask questions to receive timely advice.

1. **Show that you care**

* Teachers’ attitude can easily rub off on their students and most often in the wrong way.
* Make sure to leave your emotional attitude outside the Classroom.
* If you are feeling any negative emotions like anger, sadness or boredom, make sure you do not show it to your students.
* A bad emotion spreads as fast as the flue and your student should be the last one to catch it.
* As an educator, it is important for you to show that you are happy and excited about the lessons you are going to teach.

1. Any reported incident/wave of indiscipline among students calls for high measures of proper planning. Something drastic action needs to be done immediately if we intend to save the school from lawlessness that seems to be creeping in.

**Control of Indiscipline**

* Efforts to boost up moral values through daily moral lecture in assembly on selected topics by principal, teachers, students and eminent personalities.
* Maintenance of school’s discipline through CCTV.
* Rusticate the offenders for a recommended period.
* In case of repetition of offence more severe action is recommended, their parents are liable to be called and informed about their ward’s caustic behavior.
* Habitual offenders deserve even expulsion from the school after following the proper procedures.
* Late coming and early leaving is an offence that requires proper control.
* All types of indiscipline are required to be discussed elaborately in the General Body Meeting of PTA for its control and recommendation of punishment for specific offence committed by students.

**Maintenance of Discipline**

**The role of the Head-teacher**

* Lead in the formulation and implementation of Code of Conduct and a disciplinary policy for the school.
* Ensure that all teachers have written class-room rules and access to the ‘’Code of Conduct, and disciplinary policy for the school’’
* Establish a “Misdemeanors Book” to record instances of disciplinary actions being administered.
* Monitor ‘order and discipline’ both inside and out of the school.
* Draft and monitor the implementation of plan of co-curricular activities to keep the learners constructively occupied.
* Screen all visitors to the school. Visitors of the school must be reported to the head teacher.

**The role of the teacher**

* Participate in the drafting of the “Code of Conduct and Disciplinary Policy”.
* Develop, in collaboration with learners, written class-room rules and sanctions.
* Accept responsibility for maintaining discipline and order inside and outside of the school.
* Impartially dispense punishment and reward.
* Expect support from parents, head-teacher and students in the implementation of disciplinary strategies.

**Role of students**

* Treat each other and school staff members with respect and courtesy.
* Follow established class rules and school rules.
* Report contravention of class-rules, school rules and code of conduct to the class-teacher or head-teacher.
* Avoid use of threats and intimidation against others.
* Protect the school property.
* Avoid engaging in immoral activities.
* Obey teachers, prefects and class monitors.
* Participate in co-curricular activities, debating clubs, and organized in-door and out-door games etc.
* Refrain from carrying, using or being in possession of any weapon, illegal drug or prohibited electronic device in the school or on the school compound.
* Maintain high academic and non-academic standards.
* Attend school regularly and punctually.
* Maintain personal hygiene and practice good grooming.
* Accept responsibility for his/her behavior.

**The role of parents**

* Participate in drafting and reviewing the class rules, school rules, code of conduct and disciplinary policy.
* Study the class rules, school rules, code of conduct and disciplinary policy with their child/ward.
* Keep the school informed of the needs, peculiarities and health status of their wards/child.
* Seek the information of child regarding his performance and behavior at least once each month.
* Encourage the child to adhere to the class rules, school rules and code of conduct.
* Visit the school to discuss the child’s performance and behavior with the teacher.
* Be involved in school activities.
* Ensure that school can make contact with you during the day in case of an emergency, by phone at home or work, by mail or at residence.
* Treat the child with love and respect.
* Seek assistance of the school or a relevant agency if you experience difficulties in your attempt to discipline your child.

**17.2 CELL PHONE POLICY (Incidence of Indiscipline)**

**Cell phones/Electronics policy**

Cell phone use during the school hours has created an increasing distraction for students and teachers.

* All electronic devices including but not limited to cell phone and smart watches must be out of sight during school hours in the premises of the school.
* Smart watches cannot be worn.
* Cell phone must be off and in backpack. If a student has a cell phone on his person and any part of it can be seen, it will be taken away and the appropriate consequence will be issued.
* If a student’s cell phone is insight, the teacher will reach (remind the student of the policy). The teacher will ask the student to shut the cell phone off and then take the cell phone.
* The teacher will document the incidence and bring the cell phone to the Principal as early as she/he can.
* **First Offence:** Phone will be confiscated for the day and returned to the student at the end of school hours. Phone call and e-mail will be sent home.
* Consequence for refusing to turn in: one day off and 3 hours detention the next day or the day when the student remains present in the school, parents will be informed about the offence of their ward.
* **Second Offence:** Phone will be confiscated for the day and will be returned to the student’s parent/guardian only at the end of school hours.
* Phone call to parent/guardian.
* The student will also be given a thee hour detention, the same day.
* Consequence for refusing to turn in or not attending detention, two days off and Monday detention along with social suspension for 15 days.
* **Third Offence:** Phone will be confiscated for the day. Phone call to the parent. Phone will be returned only to the student’s parent/guardian at the end of the day just before the school is over.
* Student will be placed in isolation. Social suspension for 15 days.
* Consequence for refusing to turn in: three days of isolation and two Mondays detention for three hour each – social suspension for 25 days.
* **Fourth Offence:** Phone is confiscated for the day and will be returned to the student’s parent at the end of the day just before the school is over. Parent/guardian will be contacted on phone of the parent/guardian.
* Student is placed in isolation.
* Social suspension for 3 days.

***Every school is required to work out a cell phone policy of its own in order to bring the cell phone offences under its control.***

**SECTION 18**

**EXAMINATION EXERTIONS**

**18.1 EXAM STRESS AND MANAGEMENT**

**18.2 GUIDANCE FOR PREPARATION OF EXAMS**

**18.3 FEAR FACTOR ( EXAM-PHOBIA)**

**AND ITS MANAGEMEN**

**18.4 WRITING ANSWERS IN EXAM**

**18.5 WRITING IN BOARD EXAMS**

**18.6 GUIDANCE FOR PREPARATION OF EXAMS**

**18.7 WHAT TO DO AFTER BOARD EXAMS**

**AND BEFORE RESULT**

**18.1 EXAM STRESS AND MANAGEMENT**

Exam stress is a feeling of pressure that many young people feel coming up to exam time.

* It usually occurs during exam time. It occurs during the revision period before exams and immediately before exams.
* Stress can be defined as an individual’s response to pressure.
* A small amount of pressure can be usual to keep the student focused during the exam time.
* However, for some students, when they experience too much pressure for a long period of time, it becomes stressful and exam preparation and study seems impossible.
* Why do people experience exam stress?
* A large amount of learning and recalling is pending,
* About the uncertainty of exam papers,
* Expectations from the family, teachers or need to gain higher results for admission in a particular course or career.

**Managing exam stress**

* If the student is experiencing the exam stress, it’s important for him to try to remind him that it is a small part of his life (even though it might not feel like it at the time), it won’t last forever.

**Study ideas**

* It is never too late to set up good study and revision habits.
* Have an uncluttered space to work with ready access to any material in need.
* Find out exactly what the exam involves, are there past exam papers that can be looked for help and understand what to expect?
* Teacher may be consulted for the pattern of exam.
* Learn to make ‘mind maps’. Use them to collect ideas and summaries thoughts, and use bright colors to remember important links.
* A clear plan is required to be made to cover the study material in each study period.
* Taking a regular short break of about 5 minutes to have a cup of tea or something to eat.
* It may be useful to ask for help for oral presentation.
* Stick to the routine of going to bed at a reasonable time, eating regularly and still making time to have fun and exercise.
* Cut back on coffee or any other stimulant. Drink lots of water instead.
* Fresh fruits, veggies, cereals, grains, nuts and protein are all good for the brain and blood sugar levels.
* Taking of soft-drinks is not recommended.
* Watching a small TV show may be the reward of completing a task of exam preparation finished in time.

**18.2 GUIDANCE FOR PREPARATION OF EXAMS**

Preparation of exams is an important part of academic life. Students learn their courses by attending lectures and studying on daily basis. They need to appear in exam which assesses how much they have learnt throughout an academic session.

Students, who know the methods of preparing for exam, score high in their exam. The important tips for making preparation for exam are as follows.

1. **Making a plan for studies to manage your time**

* Making a plan and managing time for achieving something ensures your success.
* Normally the preparation for exam starts from the very first day of the academic session.
* You must make a clear plan to complete studies in time to avoid getting stressed during exam.
* Your plan should be based on calculation of how much work you require in the academic session to complete your studies before the exam starts.
* You should devise a road map reflecting no. of lessons and chapters, as well as a schedule for them.
* You can make such a plan by calculating available time in an academic session and the amount of course you have to study in the session.
* It will help you utilize your time properly to complete your studies in time.

1. **Attend your class regularly and keep on studying till exam day.**

* Never skip your lectures.
* Lectures play important role in success in exam.
* Apart from your lectures, you should also continue your study on regular basis.
* Never stop. If you miss your lectures or stop your self-study for long, your studies will become burden for you and you will not be able to cover all of your studies in the short time available during exam for making preparation for paper.
* Continuous study helps in many ways: it helps you learn properly, it saves your time and it enables you to complete all your course in time.
* The most important benefit of continuous study is that you have ides from your previous studied topic which help in learning the next topic easily.
* Persistence is a habit of successful people.

1. **Prepare study notes for exam.**

* Study notes are crucial for preparation of exam.
* Good study notes have all the study material.
* It ensures speedy preparation for exam.
* Try to write your study notes on regular basis during your academic session.
* Collect points from your class-lectures as well as the books you study yourself.
* It should be prepared in proper sequence.
* It should have everything you require for speedy preparation for your exam.

1. **Revise your course many times.**

* Studying a subject only once is not enough.
* Study course should be revised by student as many times as possible during the academic session.
* One time study may make you to learn the subject to some extent but when you revise it you learn more and more.
* Student needs to retain what he learns, so that he may be able to reproduce the learning in writing in his exams.
* Revising a subject few times enables students to retain the learning (understanding) of the subject in his mind for quite longer time.

1. **Don’t skip topics or chapters considering them un-important’**

* Each topic of a subject has equal importance.
* Don’t skip any topic thinking it to be un-important and may not be asked in exam.
* It leads to failure in exam.
* Nowadays exam paper is set from the entire syllabus.

1. **Practice the question-papers of previous exams.**

* Every subject has some sample papers.
* There exists a need to read these sample papers.
* It reveals the nature and format of your exams.
* It tells you which kind of questions will be asked in your exams i.e. long explanatory, short explanatory or multiple choice questions.
* Always take the exams seriously which are conducted as the pre-board exams.
* Get a good night sleep
* Make sure you get at least 8 hours of quality sleep a night.
* You can’t afford to stay awake all night studying for an exam, because you won’t be able to effectively recall information for the exam.

1. **Exercise for at least 30 minutes a day every day.**

* Often students stop exercising when exam time comes because they begin to think that they don’t have enough time.
* A big mistake, because exercise helps us study more effectively for various reasons.
* Firstly, it is a great way to relieve stress and anxiety.
* Secondly, it gets blood flowing to the brain (supplying oxygen, antioxidant and glucose) which helps in thinking more clearly.

1. **Drink plenty of water**

* Often when we fail to think clearly, our brain needs to be hydrated that’s why drinking in sips regularly is required.

1. **Remember your teacher want you to do well.**

* Try to write a perfect answer.
* Your teachers are always at your side.
* If you are not sure still, write it down (even if it is in dot points), you may not get any marks for it, but there will be no negative marking unless specified.

1. **Focus on what you know rather than what you don’t know.**

* Chances are, there will always be something that you could have studied more thoroughly or don’t know so well till the day of exam.
* By that stage, you can’t do much about that, so, there is no point to be worried about that.
* You are better off focusing at the fact, you now know so much more than you did before and you’ll be able to answer many questions in exam.

1. **Eat a nutritious breakfast.**

* Studies have found that students who skip breakfast, experience a 20-40% reduction cognition (i.e. concentration, memory and alertness).
* You want to eat nutritious breakfast to satisfy for longer, stabilize your mood and give you a plenty of energy for the day.

1. **Avoid drinking caffeine (i.e. energy drinks, coke and coffee)**

* Caffeine is stimulant. It gives a rush and makes you feel good in short term, but eventually it wears off and leaves you feeling cranky and wanting more.
* It is also a diuretic, so it makes you urinate that means you lose water and become thirsty and want to drink more soft drink.
* Caffeine in coffee drives the adrenal gland to produce stress hormones, that in turn produces the fight or flight response.
* Take sips of water and fruit.

1. **Go straight to home after exam.**

* Students always try to know the worth of their fellow friends.
* In case the answer seems to be incorrect, a sort of pressure is created, that may exert a negative impact at the performance of the remaining papers.
* The exam is over; there is nothing you can do.
* So, it is better not to discus and come straight to home.

1. **Dealing with writer’s cramp/elbow.**

* This can be due to holding too tight. Loosen the grip or get a pen that won’t have to press down so hard on the paper.
* Even with a good pen, your elbow will start to hurt at some point if you are taking a 3 hour exam.
* When it does hurt, have a rest of few moments and stretch it out on your desk.

1. **Your preparation should be according to the nature of exam.**

* Prepare yourself according to the format and nature of questions asked in your exams.
* It is better to understand the format first and later start the preparation.

1. **Avoid social media.**
2. **Some subjects require more study time than others,**

* Organize your study space.
* Practice on old exams.
* Explain your answers to others.
* Organize study groups with friends.

**18.3 FEAR FACTOR (EXAM-PHOBIA) AND ITS MANAGEMENT**

Examinations are often considered as **fear factor** among the children. The extent of exam stress is too much that drives them to take extreme measures. The fear of exams is more before the exams causing their underperformance on the exams day.

* Exam fear is a very common phenomenon among many a students.
* Exam-phobia is an intense fear situation that may or may not possess any actual threat in reality from the examinations.
* This phobia may turn you down and at times may become your greatest enemy or hurdle in your life.
* That may be the disastrous effect, no doubt.
* To counter it make yourself comfortable
* Teachers and the parents are required to think and try to find out the causes that may slightly vary among individual students.
* An act for removing of the fear is needed in order to make the exams an enjoyable task rather than a scaring one.
* Focus upon the students in order to make them capable to overcome their fear especially on weak students to make them stronger.
* Majority of students who fear tests are those who are quite conscientious and care a great deal about their grades or marks.
* They often fear that they have not covered all their bases and one weakness will do them in.
* This fear is groundless, a kind of free floating anxiety.
* Also fearful are students who have had bad experience in the past and relive them, like a flashback, every time a test paper is placed in front of them.

**Management**

* There is no real way to prevent students from having some fear.
* Management of fear factor varies from student to student and varies for different subjects.
* Specific measures are needed to be adopted for special cases in order to get the optimum results..
* Students are encouraged to take notes inside the class and on their own.
* Any notes they have taken in their class note-book can be used while taking a test.
* They are not allowed to use the downloaded material from internet until it is in their own handwriting.
* When these notes are consulted at the time of exam, will easily be comprehensible for the student, thus will act as a fear reducing factor.
* The results may be impressive. Knowing that they can use their own notes reduces test anxiety instantly. Their note-books become their safety net.
* When students focus and listen, the class-room lecture, learning goes up and the problem decreases.
* Early in the year, student may use his notes a lot, while testing, but as the year proceeds, they depend on them less and less.
* Practice and practice as much possible, and then try to find some way to relax before you take to the exam.
* Thorough study of the subject infuses a confidence and reduces the fear of exams.
* Try to teach the students to relax and just do the best they can.
* It’s like in playing sports—if you care who wins, each thing you do is a bit scary, because you care about the consequences if you make a mistake.
* The only way to remove the fear is to remove consequences, and that doesn’t seem very practical.

**18.4 WRITING ANSWERS IN EXAM**

Every year students have to appear in the examination, and the examination brings the stress for some students. The same is the case with board examination. However they might have worked hard and prepared for the exams, still they are likely to feel nervous or worried about remembering the entire course and the correct reply of the entire questions in the exam paper. Students might worry about forgetting something or everything studied so far.

There exists no concrete remedial steps that may nullify the nervousness or stress of exams, however there are few tips and tricks that may reduce or remove the apprehension of forgetting the subject matter.

1. **Different variables**

* Work out what you need to take with you into your exam the night before and have everything ready.

If you feel yourself getting anxious just before your exam then spend some time focusing on your breathing. Breathe in to a count of 3 and then breathe out to a count of 3. Repeat this steadily for a few minutes.

* On exam day, keep away from other people who may be feeling anxious or who may say unhelpful comments that you may feel more anxious.
* Be at the examination hall at least ten minutes before the scheduled exam time.
* When you first sit down to your exam, take time to slow your breathing and relax.
* Read through the exam paper carefully. Underline key words and instructions. Work out how long you will take, for each question or section?

1. **Prioritize and solve the questions that you know**

* There is no need to answer in the same order as have been asked. Try to solve the easiest question you think you remember it.
* It is highly recommended to attempt, first the questions that you know well.
* It will consume the minimum time.
* Doing so, will boost your confidence and will help you utilize your time in thinking answers and attempting questions that you are less confident at.

1. **Write the appropriate answers**

* Do not get enthusiastic and write everything that you know in order to make it look like a lengthy reply.
* Watch out for the wording of questions and make sure that you answer what is being asked.
* Presenting well defined answer to each question is indeed advisable.
* **Use simple and easy language**
* Whatever you write should be clear and easy to understand.
* Explain your ideas in your own way and in your own language rather than follow the language used in NCERT books or other books you study.

1. **Choose the questions cautiously**

* Normally in every paper, choices are usually given.
* Take some time to study and understand every question; make a sketch in mind about what has to be written in answer.

1. **Use passive voice for the fact base answers**

* The key strength of using passive voice in long answers is, it appears more educational.
* Always use passive voice while writing long answers such as historical events or the experiment base answers containing stepwise procedures.
* Strictly avoid the use of abbreviation or short forms for certain words as ‘hav’ for have or ‘shud’ for should.

1. **Attempt all the questions**

* The best thing in CBSE examination is that there is no negative marking for the wrong answers.
* So, attempt all the questions.
* If you are confused about any question, then reconsider answering it by reading the question thoroughly.
* Cautiously reading the question will help you understand the genre of the questions and what it asks.
* If you know the answer, you can write it, if you don’t then make a smart assumption and write it
* Read the instructions carefully about the negative marking before attempting the answer.

1. **Don’t panic**

* There may be some questions, the answers you do not know. Don’t be afraid or get panicked.
* Panic can affect the performance ability of the brain, sometimes making it blank, and you may not be able to answer the question.
* Thus keep calm and try to think wisely so that you can answer all the questions.

1. **Maintain the spaces and be specific**

* Make it sure that each word is properly spaced out or separated.
* Overlapped words are difficult to understand.
* Don’t force too many words in single line.
* Answer each question precisely and write the answer in points.
* Just don’t repeat the same thing in an attempt to make the answer lengthy.

1. **Be presentable**

* An answer sheet with neat, readable handwriting, proper margins and pencil sketched illustrations represents an excellently presented answer sheets.
* Good presentation is one of the key-rule for writing board exams.
* Suppose you know every answer, but if your answer sheet is without margins, subheadings, underline poor handwriting, or blotted answer sheet, will create a bad impression.
* Decoration of answer sheet is not recommended.
* Don’t try to write sub-headings or drawing lines etc in multi-colored ink.
* Just a blue pen is recommended for giving the answers and black pen for writing the headings.
* Only a pencil should be used to draw the margins.

1. **Drawing of a figure/diagram**

* The diagrams, if any, must be properly and neatly drawn.
* Label the required points accurately.
* Uses of different colors make the line of demarcation clear.

1. **Revise and check your answer sheet at the end**

* Revise thoroughly all the answers carefully before handing it to the invigilator.
* Make it sure that no question is being skipped, proper question number is written, check your roll no.
* Rechecking the answer sheet will help to find out little mistakes which can be changed that will prevent the fall in marks.

1. **Take time out**

* Remember when you finish your exam; take time out to relax a bit before you start preparing for the next exam.
* Go for a run or have a chat with a friend.

**18.5 WRITING IN BOARD EXAMS.**

**Avoid careless time management**

* After having worked hard for more than a year, you don’t want to ruin that due to careless time management during the exams. Especially for the boards,
* You have to be clear about your tactics to manage time as mostly students tend to lose focus due to pressure of time constraints.
* Chalk down a plan and stick to it. It’s only for a month anyhow.

**Order of attempting the questions**

* As soon as you receive the question paper, the first thing you should do is to go through all the questions once, so that you get a fair idea of difficulty level of the questions.
* It is recommended to attempt easy looking and high scoring questions first as it will save time, fetch more marks and boost the confidence.
* Sometime students tend to do the mistake of leaving the easier questions for the end only to realize later that time is not sufficient to solve all of them and thus they lose easy marks. In any case it should be avoided.

**Do not neglect figures and diagrams**

* In boards answers need to be exhaustive, meaning that everything is to be written about the answer in order to fetch maximum marks.
* You need to do everything that is expected. Although it usually remains unclear what should be the perfect answer,
* Any relevant figure or diagram associated to the answer definitely carries some marks.
* So, during preparations make sure you study all the relevant diagrams with labeling and, if you do not have enough time to answer the question in detail, drawing relevant diagram will definitely fetch you some important marks.

**Don’t include irrelevant points**

* Every answer should be precise
* Adding irrelevant points to an answer just to increase the length of the answer won’t do any good to your marks.
* In fact, many a times, answering more than what is asked will reduce your marks, as it leads the moderator into doubting your ability to understand the question.

**Presentation matters a lot in the board**

* Try to keep your answers neat and without much scribbles as no moderator likes to put effort in trying to find out what is written.
* Maintain an appropriate pace and handwriting throughout the paper.
* A good presentation will certainly cast a good impression on the moderator.
* You may underline the bullet points you wish to make – this saves a lot of moderato’s time.
* There are just few of the points that one should carefully address while writing boards.
* Also, make sure you get enough sleep before each exam and don’t let yourself get too much stressed.
* You can always visit topper in case any other doubts regarding the exam.
* Remember, the ball is still in your court, it is up to you to get the best out of it.

**18.6 Guidance for Preparation of Exams**

Preparation of exams is an important part of academic life. Students learn their courses by attending lectures and studying on daily basis. They need to appear in exam which assesses how much they have learnt throughout an academic session.

Students, who know the methods of preparing for exam, score high in their exam. The important tips for making preparation for exam are as follows.

1. **Making a plan for studies to manage your time**

* Making a plan and managing time for achieving something ensures your success.
* Normally the preparation for exam starts from the very first day of the academic session.
* You must make a clear plan to complete studies in time to avoid getting stressed during exam.
* Your plan should be based on calculation of how much work you require in the academic session to complete your studies before the exam starts.
* You should devise a road map reflecting no. of lessons and chapters, as well as a schedule for them.
* You can make such a plan by calculating available time in an academic session and the amount of course you have to study in the session.
* It will help you utilize your time properly to complete your studies in time.

1. **Attend your class regularly and keep on studying till exam day.**

* Never skip your lectures.
* Lectures play important role in success in exam.
* Apart from your lectures, you should also continue your study on regular basis.
* Never stop. If you miss your lectures or stop your self-study for long, your studies will become burden for you and you will not be able to cover all of your studies in the short time available during exam for making preparation for paper.
* Continuous study helps in many ways: it helps you learn properly, it saves your time and it enables you to complete all your course in time.
* The most important benefit of continuous study is that you have ides from your previous studied topic which help in learning the next topic easily.
* Persistence is a habit of successful people.

1. **Prepare study notes for exam.**

* Study notes are crucial for preparation of exam.
* Good study notes have all the study material.
* It ensures speedy preparation for exam.
* Try to write your study notes on regular basis during your academic session.
* Collect points from your class-lectures as well as the books you study yourself.
* It should be prepared in proper sequence.
* It should have everything you require for speedy preparation for your exam.

1. **Revise your course many times.**

* Studying a subject only once is not enough.
* Study course should be revised by student as many times as possible during the academic session.
* One time study may make you to learn the subject to some extent but when you revise it you learn more and more.
* Student needs to retain what he learns, so that he may be able to reproduce the learning in writing in his exams.
* Revising a subject few times enables students to retain the learning (understanding) of the subject in his mind for quite longer time.

1. **Don’t skip topics or chapters considering them un-important’**

* Each topic of a subject has equal importance.
* Don’t skip any topic thinking it to be un-important and may not be asked in exam.
* It leads to failure in exam.
* Nowadays exam paper is set from the entire syllabus.

1. **Practice the question-papers of previous exams.**

* Every subject has some sample papers.
* There exists a need to read these sample papers.
* It reveals the nature and format of your exams.
* It tells you which kind of questions will be asked in your exams i.e. long explanatory, short explanatory or multiple choice questions.
* Always take the exams seriously which are conducted as the pre-board exams.
* Get a good night sleep
* Make sure you get at least 8 hours of quality sleep a night.
* You can’t afford to stay awake all night studying for an exam, because you won’t be able to effectively recall information for the exam.

1. **Exercise for at least 30 minutes a day every day.**

* Often students stop exercising when exam time comes because they begin to think that they don’t have enough time.
* A big mistake, because exercise helps us study more effectively for various reasons.
* Firstly, it is a great way to relieve stress and anxiety.
* Secondly, it gets blood flowing to the brain (supplying oxygen, antioxidant and glucose) which helps in thinking more clearly.

1. **Drink plenty of water**

* Often when we fail to think clearly, our brain needs to be hydrated that’s why drinking in sips regularly is required.

1. **Remember your teacher want you to do well.**

* Try to write a perfect answer.
* Your teachers are always at your side.
* If you are not sure still, write it down (even if it is in dot points), you may not get any marks for it, but there will be no negative marking unless specified.

1. **Focus on what you know rather than what you don’t know.**

* Chances are, there will always be something that you could have studied more thoroughly or don’t know so well till the day of exam.
* By that stage, you can’t do much about that, so, there is no point to be worried about that.
* You are better off focusing at the fact, you now know so much more than you did before and you’ll be able to answer many questions in exam.

1. **Eat a nutritious breakfast.**

* Studies have found that students who skip breakfast, experience a 20-40% reduction cognition (i.e. concentration, memory and alertness).
* You want to eat nutritious breakfast to satisfy for longer, stabilize your mood and give you a plenty of energy for the day.

1. **Avoid drinking caffeine (i.e. energy drinks, coke and coffee)**

* Caffeine is stimulant. It gives a rush and makes you feel good in short term, but eventually it wears off and leaves you feeling cranky and wanting more.
* It is also a diuretic, so it makes you urinate that means you lose water and become thirsty and want to drink more soft drink.
* Caffeine in coffee drives the adrenal gland to produce stress hormones, that in turn produces the fight or flight response.
* Take sips of water and fruit.

1. **Go straight to home after exam.**

* Students always try to know the worth of their fellow friends.
* In case the answer seems to be incorrect, a sort of pressure is created, that may exert a negative impact at the performance of the remaining papers.
* The exam is over; there is nothing you can do.
* So, it is better not to discus and come straight to home.

1. **Dealing with writer’s cramp/elbow.**

* This can be due to holding too tight. Loosen the grip or get a pen that won’t have to press down so hard on the paper.
* Even with a good pen, your elbow will start to hurt at some point if you are taking a 3 hour exam.
* When it does hurt, have a rest of few moments and stretch it out on your desk.

1. **Your preparation should be according to the nature of exam.**

* Prepare yourself according to the format and nature of questions asked in your exams.
* It is better to understand the format first and later start the preparation.

1. **Avoid social media.**
2. **Some subjects require more study time than others,**

* Organize your study space.
* Practice on old exams.
* Explain your answers to others.
* Organize study groups with friends.

**18.7 WHAT TO DO AFTER BOARD EXAMS**

**AND BEFORE RESULT**

There are many ways to utilize the intervening period after exams and before result

1. Join hobby class or learn swimming.
2. Engage in a cultural activity.
3. Read as many books as you can.
4. Read News-papers religiously. This will improve knowledge about current affairs and will be helpful in your group discussion.
5. Good spoken English and knowledge of current affairs carry extreme importance.
6. Work with an NGO. You can work as an intern in different organizations or NGOs. You may not be paid well, but you will get exposure and this will also help you built your profile.
7. Attend a career counseling session. Spend enough time in exploring careers. Don’t just run for engineering, medicine or law, but there is much more to explore.
8. Learn a foreign language
9. Learn to set mobile phones.
10. Join Math and English classes.
11. Visit to industrial cities and historical places.
12. Go to hill station with family or friends.
13. Planning for your future is very important.
14. The 2-3 months which every student gets, should be utilized to the fullest.
15. This time should not be taken for granted.
16. Remember course and college brand means a lot.
17. Play and stay fit. Join a sports academy for the sport you like.
18. Learn computer related courses, web designing etc.
19. One of the biggest problems with majority of students is the low-confidence.
20. The reason of this belief is that we are good for nothing.
21. It is highly recommended to all the students to write down the weakness and plan certain steps to overcome this.
22. Most of the time students are weak in Math. Practice, practice and more practice is the mantra to overcome the weakness.
23. Really, one good option is to join a summer school,

It is a great learning experience and, it helps you meet and interact with new people. It also adds a great deal of value to your CV and makes you stand out from the rest of the crowd.

**SECTION 19**

**SPORTS**

**19.1 SPORTS AND GAMES**

**19.2 ANNUAL SPORTS DAY**

**19.1 SPORTS AND GAMES**

Sport is a physical activity carried out under an agreed set of rules, with recreational purpose; for competition or self-enjoyment or combination of both.

A game is a recreational activity involving one or more players, defined by a goal that the players try to reach, with some set of rules to play it. Games are played primarily for entertainment or enjoyment. The difference of purpose differentiates sports from games, combined with the notion of individual or (team) skill or prowess.

The importance of sports and games is not only for the physical activity but, it also provides mental alertness and increase self esteem’

If we go through the history, kings and the rulers fought all year around and the winners were hailed as heroes. Sport in the same way not only gives us heroes but employment to them and to a lot of people too.

* It is imperative for school age children to have access to sports and games.
* It motivates the students; enables them to earn better grades.
* Numerous physical benefits include maintaining a healthy weight, preventing chronic diseases and learning the skills necessary to maintain a healthy lifestyle in the years to follow.
* Promoting physical activity should start from the nursery class.
* Plying teaches them the importance of being active.
* Children, who prefer not to play, are usually not selected in school team.
* Every year Department of Education invites school students at zonal level, state level, and National level for participation in different sports competitions.
* Students are required to participate in the sports events held during an academic year by Department of Education at zone and state level
* Our students have the capabilities; they will certainly excel in individual and team games and co-curricular activities too. We need to show our presence in school sports.
* Our students will certainly, be sport persons of tomorrow, if they are given the necessary chance, guidance and training.

**Aims and objectives**

* Provide the best possible sporting experience for all students so as to encourage lifelong participation in sports.
* Provide supportive environment for enjoyable participation in a wide variety of physical activities, through the development of skills and good sporting behavior.
* Provide the safest possible environment for the conduct of junior sport.
* Make provisions for all students with special needs to participate in sports.
* Encourage and actively cater for talented sporting students.
* Positively promote parental involvement in all areas of the sporting activity.
* Promote the playing of sport for enjoyment with participation the main focus.
* Students are encouraged to participate in a variety of sports; however they may not change from one sport to another during a physical session. Once nominated, students are expected to play in that team for the session.

**(1) Sports development**

* The importance of games in school encompasses more than just the benefit of physical activity.
* Increment in self esteem and mental alertness make school sports and games necessary for every child of school.
* It teaches children the life skills like team work, leadership and patience.
* The quality of leadership, sharing team spirit and tolerance are learnt from sports.
* Sports education not only teaches the students to maintain the physical stamina, but also the habit of obedience, discipline, determination to win and will power etc.
* What can be learned on the ground cannot be learned in the class-room.
* Physical development of a child can best be achieved through sports.
* It develops and enhances skills like strength, endurance, speed, agility, flexibility, control, balance etc.
* Sport today has also evolved as a form of entertainment and also offers promising careers.
* Every student should be encouraged to join at least one school sports team.
* The PET should be an energetic person with a good amount of expertise in sports and should provide coaching for sports like foot-ball, basket-ball, throw-ball etc.
* Adventure sports and swimming during summer vacations.

**(2) Selection of team-games:**

* The team is formed on the basis of talents among students, depending on their age group from VI to secondary classes in a

particular game.

* Group games are formed from each and every class depending on their interest and talent in a particular game.
* Inter-class tournaments in the school in selected games.

**(3) Endeavor to excel**

* Set weekly achievable goals for the different skills required for a particular sport and train the students accordingly.
* Inter-section and inter-class matches are required to be scheduled to a well thought plan for every four months.
* Beside the game knowledge, make the students aware of the development of strong muscles and the body parts involved in the sports activity.
* School should have a well prepared team in any of the following team games,

**A;** cricket, **B;** foot-ball,

**C;** badminton, **D;** volley-ball,

**E;** base-ball, **F;** hand-ball,

**G;** table-tennis (individual and team), etc.

* In the beginning of the academic year, PET may draw a plan in detail in order to promote and prepare the students for any of the following sports,

**A;** Skating,  **B;** javelin throw,

**C;** discus throw, **D;** shot-put,

**E;** high-jump, **F;** long-jump,

**G;** archery, **H;** taekwondo,

**I;** martial arts, **J;** wrestling (Olympic style),

**K;** sprint (all kinds), gymnastics etc.

* Special emphasis is to be given to “FOOT BALL” because of the importance it has assumed in current years. Available are the opportunities more in Foot-ball than Cricket.

***Today sport is much more than just an entertainment or physical exercise. It is not considered as wastage of time by students any more. This is only because big companies are pumping big money in a big way. You name any sport, big sponsorship is available for the same with huge financial assistance that cannot be ignored. Millions of rupees have been invested, especially in cricket. But this is not all, boxing, wrestling; archery, shooting, athletics, badminton and tennis have all been promoted with financial assistance. Even* “KABADDI” *and base-ball have been included in school-sports.***

**19.2 ANNUAL SPORTS DAY**

* Sports days are events staged by many schools in which students participate in competitive activities often with an aim of winning trophies or prizes.
* It has been observed that physical education and sport is important for the development of children and young people.
* Sports’ day in schools is a proven fact that enhances mental and physical level as well as social skills and even improvements in academic performance.
* This is a chance for children who have a passion for outdoor sports and team games to shine.
* Many schools also divide children into different houses to add a competitive team element, giving them the chance to score points for their house as well as gaining individual kudos.
* Good for more than just child’s health.
* As well as helping children to be more competitive.
* School sport day is also a chance to enjoy a day in the sunshine, if the weather allows it, of course.
* It is good to play sport for health reasons, but there is so much more to it than that.
* Students also learn hands-on about the need to abide by the rules, team work, difference between fair and unfair play game and respect for others.
* Children also learn how to cope in a competitive environment as well as learning all about winning and losing.
* These are important life skills to assimilate in preparation for the working environment.
* On sports day they will have spectators, other students and their parents encouraging them.

***It may be a chance for pupils to earn wider recognition for their sporting process.***

**SECTION 20**

**CO-CURRICULAR ACTIVITIES**

**20.1 CO-CURRICULAR ACTIVITIES**

**20.2 ANNUAL CULTRAL PROGRAM**

**20.1 CO-CURRICULAR ACTIVITIES**

Co-curricular activities facilitate in the development of various domains of mind and personality such as intellectual development, emotional development, social development, moral development, creativity, positive thinking, development of civic values, cultural values etc. These are some of the facets of personality development and the outcome of extracurricular and co-curricular activities. There is a long list that is included in these activities. Sport and games are also included under these headings.

* For all round development of a child only the academic curriculum is not sufficient.
* Students need to be encouraged for participation in sports and co-curricular activities
* Therefore for the holistic growth as well as to develop the various facets of personality development of children, class-room teaching should be supplemented with co-curricular activities,
* These out of the class activities affect all round domains of life such as cognitive (intellectual), emotional, moral, cultural and athletics.
* Co-curricular activities mean more focus upon cognitive aspects, and intellectual development.
* Competitiveness, excellence, quality achievements, creativeness and enthusiasm are few of the ethics of co-curricular activities.
* Bring pleasant changes and develop joyous experiences.
* Co-curricular activities make a child responsible for family and society.
* Develop the capacity of organizing events and enable for managerial and leadership activities.
* These activities create avenues to meet with various people thereby help in socialization, self identification and self assessment.
* Activities like field trips, tours and excursion help to know about other people and their work, culture and customs.
* Develop the ability of decision making.
* Develop the sense of belongingness.
* Many of the skills are essentially required in future practical life. Thus we cannot afford to ignore them.
* These activities are organized during school hours and after the school hours too.
* The activities those are organized during school hours may be termed as co-curricular activities.
* And those organized after the school hours are termed as extra-curricular activities.

**Co-curricular activities**

**Debating Society**

* English, Hindi, Urdu debate for senior and junior classes.
* Speeches in English, Urdu and Hindi on different topics (to be a good orator is a quality of leadership, (it will help in search of orating talents among students).
* Hold an annual English festival (or inter school festival) with an objective “to create awareness about the significances and utility of English in today’s world”.
* In order to promote this perception and boost the confidence of our students we may organize the events such as,

*(1) Spell-well/spell-bee competition for classes I-V, VI – VIII and*

*IX-XII*

*(2) Essay competition, recitation of poetry*

*(3) Play in English, Hindi and Urdu*

*(4) Paragraph writing etc.*

*(5) Quiz competition in English, Hindi and Urdu language,*

*(6) General Knowledge, Science, History, Geography etc.*

*(7) Learning synonyms and antonyms, phrases and idioms etc.*

* CBSC holds essay competition annually; participation in the same.
* Periodical essay writing competitions.
* English speaking competition.
* Any other activity in consultation with suject teacher/s.
* Wall paper in English, Urdu and Hindi.

**Urdu Bazm-e-adab**

* Debates and speeches on different topics.
* Urdu and Islamic quiz competition.
* Bait Bazi
* Essay and letter writing.
* Different activities in consultation with Urdu teacher/s.

**Hindi Sahitya Sabha**

* Debates in Hindi.
* Organize speech contest.
* Hindi synonyms and antonyms competition.
* Wall paper in Hindi.

**Quiz contest in Hindi, General knowledge, Science, History, Geography etc.**

**Arts and Craft & Work experience**

* Best out of waste.
* Mask making.
* Poster making competition.
* Painting competitions.
* Creative and performing Arts.
* Any other activity suggested by Arts and Craft teacher.

**Drama Club:**

* Drama is a form of artistic expression and storytelling that has existed and been celebrated for centuries.
* It entertains shocks and delights the—both on stage, back stage and the audience.
* It is for the schools to establish it in order to train the little kids as the leader of future.
* The ‘Drama club’ is dedicated for bringing the joy and power of drama to students by providing high quality dramatic programming at the beginner and intermediate levels.
* It pledges to offer the participants the chance to experience the excitement and rewards of theater arts while developing poise, social skills, confidence and the ability to work with others.
* All members are introduced to both the theory and practice of drama, as part of their programming.
* Plays in English, Hindi and Urdu by drama club.

**Science Club: Activities**

* Creative Science and development of scientific attitude.
* Organizing lectures, debates, seminars, symposia etc’
* Holding science exhibition and fair.
* Celebrating birthdays of eminent scientists.
* Conducting visual programs of scientific interests.
* Participating in science fairs.
* Arranging visits to places of scientific interest.
* Preparing charts, posters, models etc.
* Displaying science news at wall paper.
* Preparing and improving hand-made apparatus.
* General reading of scientific literature.
* Participation in science competitions.
* Speech contest at topics in science.
* Science clubs channelize the energies of students and make use of their skills and talents.
* Satisfy their instinct and urges and help in their overall personality development.
* Learning of science becomes joyful.
* Students organize thoughts and translate them into action.
* Develop a zealous enthusiasm to strive for the cause of scientific enterprise.
* Laboratory is considered as heart of science curriculum whereas science club is considered as the blood of it.

**Suggested functions of Science Club**

*Usually following activities are under taken in a science club.*

* Arranging lectures of the subject experts on the subject of scientific interest.
* Arranging cleanliness and health weeks in the institution.
* Arranging excursions and short trips for the club members to places of scientific interest.
* Creating in the school healthy environment for carrying out scientific studies and activities.
* Decorating the walls of the class-rooms, library and laboratory with scientific articles and charts..
* Organizing school services in the field of health and sanitation.
* Publishing science magazine and news bulletin of scientific events.

**Commerce Club**

* Commerce club is a great way to spark a child’s interest in learning.
* It can give students safe environment to learn and interact with others having similar interests.
* It provides a safe place for students to explore and discover, especially for those who may not have strong support at home.
* We do not need to be teachers, economists or managers to start a commerce club. That is easy to start at school level.
* It prepares students for commerce fairs, projects, tests and material they will learn in future.
* By starting a commerce club in the school, we are helping the young students, by inspiring to learn and earn.
* As the part of commerce club students need to meet once in a week for training.
* These sessions promote unity in the group and impart values like discipline which remains part of their life even after school.

**Objectives of commerce club**

* To expose the students to meet the practical challenges in the current business scenario (market job opportunities, economy, development of business etc).
* To let the students interact with business experts of industry (help to develop business attitude).
* To encourage students to become managers of various events of the school (annual day, food festival etc.)
* To built self confidence and proactive approach (personality development, development of speech skills, writing skills, sports skills and arts.)
* To increase financial literacy among students (management of time, money activities like bank formation etc.)
* To develop the knowledge of e-commerce for earning money through internet (new ways for earning money, computer literacy etc.)
* To generate and discuss new business ideas and business plans (set an event to present student’s business ideas and its applications).
* To make students ‘prospective entrepreneurs’ who are not job seekers but job creators (self employment)

**Activities of the Commerce club**

* Manage and plan the school event such as Art day, Sports day, PTA meetings and other programs.
* School magazine management and planning.
* Students’ bank.
* Competition to improve communication skills.
* Power point presentation.
* Developing personality and attitude of students.
* Business quiz.
* Collection for certain events and financial management.
* Guest lecturers (business economics experts, share etc).
* Industrial visits.
* Debate and case study.
* Group discussions and interview models.
* Food festival management and marketing techniques, sales etc.

**Other Activities**

* Blog formation and graphic design.
* You tube monetized videos.
* Free lectures and study materials.
* On line pdf notes and paid notes.
* Use of social media for business and economic activities.

**20.2 ANNUAL CULTRAL PROGRAM**

Schools use to celebrate an annual event usually in the month of Nov-Dec in the form of a cultural program. The annual cultural program gives an opportunity to student for presenting their talents in different activities such as music, dance, drama and other co-curricular activities. The program is carefully designed to enable the students to maximize their opportunities for linguistic and cultural development.

Culture can be defined as the arts as well as the intangible shared beliefs, values and practices of a community. Students participate in arts and craft and culture at varying levels of skill and engagement.

* The importance of social and cultural activities is to prepare students for real life and strengthening their personal skills.
* Social/cultural activities not only help students to identify themselves with the school environment, but also assist them to develop themselves in a desired field.
* Also improve skills such as organization, presentation, intrapersonal communication and leadership.
* As social and cultural activities are of paramount importance, the school is required to encourage all co-curricular activities that are both in line with the educational objectives of the school and meet the needs of the students.
* Some create, while others use to watch, teach, critique, or learn a cultural activity, art form or expression.
* Some are professional artists, designers and inventers, while others engage informally in expressive activities or create innovative tools, relationships or products.
* Together these formal and informal activities, tangible and intangible, professional and amateur, artistic and cultural activities constitute a community’s cultural assets.

**SECTION 21**

**HEALTH AND ENVIRONMENT**

**21.1 SCHOOL HEALTH PROGRAM**

**21.2 ECO-GREEN CLUB**

**21.1 SCHOOL HEALTH PROGRAM**

Generally speaking, there is lack of medical facility in our schools. This is a highly neglected area which usually fails to attract the attention of management, principal, teachers, parents and other stake holders.

* It takes only one adverse incident that may ruin all the reputation of the school.
* In the wake of recent spurt in child abuse cases, parents, school and the government have a collective responsibility of making sure that the children are provided with a safe learning environment.
* Accidents during play and medical problems in children are inevitable part of childhood.
* Often schools do not stock first-aid equipment or basic medicine.
* In most cases schools are not attached to a medical establishment of any sort.
* There is a tacit understanding that the parents are responsible for all medical issues, while the school is only concerned with imparting education.
* If and when there is an adverse incident/accident, there is an unfortunate tendency on the part of the school authorities to hush it up. This is a sorry state of affair.
* A school is a place where parents send their children with the hope that they would receive quality education in a safe environment. It is the school’s responsibility to ensure such a safe environment.
* Schools should ensure that the sports and games equipments are regularly checked and first-aid items/ medicines are updated.
* Staff members should be given responsibility to ensure that the medical help is given right in time when there arises a need.
* At least there should be a health-care facility within the school intended to provide basic healthcare for students.
* The school clinic should also have necessary equipment needed for the optimum medical service for students including the oxygen nebulizer.

**Components of school health program**

* Screening of general health of students; twice in a year.
* Assessment of anemia/nutritional status.
* Visual acuity (sharpness).
* Hearing problems.
* Dental check up.
* Skin conditions.
* Heart defects.
* Physical disabilities.
* Learning disorders.
* Behavior problems.
* Basic medicine kit made available to take care of common ailments prevalent among young school going children.
* Serious cases referred to hospitals. Information of such cases should immediately be given to the concerned parents.
* Supervision of different activities related to food and health.
* *Food festival,* an event held at least once a year.
* Handling of medical emergencies such as
* Cases of fainting during assembly or standing for long duration in an event especially held in summer.
* Student suffering from any ailment, noticed during school hours.
* Different kinds of injuries and remedial measures.
* Case of medical emergency such as contusion, cut and laceration, sprain, epistaxis (bleeding from the nose), epilepsy, skin injury or abrasion etc.
* Awareness programs like drive against malaria, dengue (awareness and its prophylaxis) and the most recent **Covid-19.**
* Holding of workshops for health programs etc.

**21.2 Eco-Green Club**

Eco-Green Clubs in schools will empower students to participate and take up meaningful environmental activities and projects. It is a forum through which students can reach out to influence, engage their parents and neighborhood people to promote sound environmental behavior.

* It will empower the students to explore the environmental concepts and actions beyond the confines of a syllabus or curriculum.
* While everyone, everywhere asserts the importance of learning to live sustainably, environment remains a peripheral issue in the formal schooling system.
* Create awareness and sensitivity among students towards environmental issues and their connected problems.
* Impart knowledge to help individuals and social groups gain variety of experiences in and acquire a basic understanding of the environment and associated problems.
* Build attitude to help individuals and social groups acquire a set of values and feeling of concern for the environment, and the motivation for actively participating in environmental improvement and protection.
* Teach skills to help individuals and social groups to identify and solve environmental problems and lead students towards action to participate in appropriate action to help solve these problems and avoid future problems.

**Implementation methodology**

* The Eco-Green Club will be made up of teachers and a group of

motivated students to learn about the environment and to take action to improve their immediate environment.

* They will also provide wonderful opportunity to help generate awareness, built attitude and enable students to take up activities in the real world, in a way that the constraints of the class-room will not be affected.

**A written guide to setting up and running the club**

* It is provided by the National Eco-Green club board.
* The guide will illustrate clearly how an Eco-Green club can be initiated in the school.
* How many students should ideally be in the club and what kind of activities and projects can be undertaken by the club?

**SECTION 22**

**PARENTS’ PARTICIPATION**

**22.1 PARENT TEACHERS’ ASSOCIATION**

**22.1 PARENT TEACHERS’ ASSOCIATION (PTA)**

Parents, teachers and the people interested in the welfare of children sincerely believe that only through united efforts; a confidence can be created in home, school and community which will be conducive to the creation of better and more responsible citizens for the nation.

**An accepted motto is:**

*“Better homes, better schools and better community for better citizens”*

* *As per the direction of Department of Education, a meeting of PTA executive is to be held every month.*
* A record of performance and the advice given by the teachers is to be discussed with parents.
* Parents’ complaints should seriously be discussed for a possible remedy.
* Compulsory should be the attendance of parents.
* Regular monthly PTA meetings to show the progress of their kids. Parents may have casual attitude in the beginning; persistent counseling is required to change their attitude.
* Regular counseling sessions for parents to apprise them for their parental duties. Advise the parents for a constant vigil at the performance of their wards in the PTM for their uplifting.

**Poor students**

* Identify the poor performers in every class. Parents of such students should mandatorily be involved for a desired improvement.
* A report compiled by Class-teacher with his/her comments regarding poor academic performance should also be discussed in the meeting in order to evolve a comprehensive plan for improvement.
* Those students who secure 80-90% and more marks may be the potential leaders in their choice of fields, they are required to be watched regularly and steps should be taken for their further improvement.

**Constitution of PTA**

**Name of the school PTA--------------------------------------**

**Aims and objectives**

* To develop a close and harmonious relation and co-operation among the parents and teachers.
* To help parents and teachers to motivate students for smooth and persistent academic atmosphere.
* To encourage creative involvement of parents and teachers in order to help the students to build their all round personality.
* To give the parents a confidence that their complaints or suggestions are properly listened and redressed.
* Try to encourage the young ones for better values and distinguishing features that will help them to meet the demands and problems of the community.
* To apprise the parents to the fact that the school though work on a tacit assumption that every individual student wants to attain status, but those who work hardest on their own behalf are the most likely individuals who may achieve this goal.
* To advise parents as well as the teachers to be vigilant towards the performance of individual student and make it sure that the future of kids may not be ruined by negligence and ignorance.
* To help teachers acquire the latest skill for an efficient and better pedagogies.

**Functions**

* To arrange frequent meetings where parent-teacher consultations are possible in a group as well as individually.
* To prepare programs that can increase co-operation between the school and the community.
* To arrange for social get together and programs of recreation for teachers and parents.
* To make it sure that parents visit the school on appointment days and discuss the progress of their children.
* To mobilize community resources for the welfare of children.
* Try to implement/adopt moral boosting measures for young ones.
* To provide opportunities to parents and teachers to meet on equal footings and discuss problems of students in order to ensure their all round progress.
* To organize activities for the welfare of children.
* Try to encourage the young ones for better values and distinguishing features that will help them to meet the demands and problems of the community.
* To arrange personality development programs at least once a year in addition of personality development activities taking place all through the year.

**Policy**

* This will purely be a non-commercial, non-sectarian, non- political association.
* It will not seek any interference directly or indirectly in the administrative policies of the school.
* Its function will be purely advisable.

**PTA shall comprise of two bodies**

1. Genera body

2. Executive Committee.

**1. General body**

* The Principal and the teachers shall be the ex-officio members.
* All the parents of students who are studying in the school shall be enrolled as the member of General body.

**2. Executive Committee**

*The Executive Committee shall consist of the following.*

(a) Office bearer

(b) Nominated members.

(c) Guest members.

**(a) Office bearers**

* **Chairperson:** Principal (ex-officio)
* **Vice-chairperson:** 2 (one each from among the parents and the teachers).
* **Honorary Secretary:** 1. Nominated from among the parents.
* **Honorary Joint Secretary:** 2 (one each from among the parents and the teachers).
* **Honorary Treasurer:** nominated from among the teachers.
* One of the Vice-chairpersons shall preside over the meetings of association in absence of the chairperson.
* Honorary Secretary shall be responsible for all correspondence on behalf of the association.
* Honorary Joint-Secretary shall help honorary Secretary.
* Honorary Treasurer, Honorary Secretary shall maintain the minutes and all the records of association including income and expenditure.
* One of the elected members is nominated to the Managing Committee of the Public School.

**Fee**: All the members of the general body will pay a nominal fee, as decided by the management of the school.

**(b) Nominated members**

* Members shall be nominated in the meeting especially convened for the purpose.
* There shall be 12 (or as decided by the management of the school.) numbers of parents nominated in PTA.

**(c) Guest members**

* Any one or both Manager and secretary shall be the guest member(s) of association.

**Duration**

* Duration of PTA Executive shall be 2 years.

**Meetings**

* Honorary Secretary (in consultation with the President) shall convene the meetings.
* PTA Executive meetings will be held regularly in order to discuss the compelling matters of academics (or any other important matter).
* General Body meetings shall be called at least once a year.

**Quorum**

* Quorum of the Executive Committee shall be one third of the existing members.
* Quorum for the GBM shall be 1/5th of the total no. of parents.

**Funds**

* All the funds of the association will be deposited in the bank in the name of association and the account will be operated by any two of the following,
* 1. Honorary President,
* 2. Honorary Secretary,
* 3. Honorary Treasurer.

**Utilization of funds:**

* All the funds will be utilized for the purpose of association.
* Sanction of Executive Committee is mandatory for all expenditures.
* President is empowered to spend Rs. ---- and Secretary up to Rs. ---- without prior sanction from the Executive Committee.
* Accounts will be audited annually by the school’s auditor.
* Try to adopt moral boosting measures for young ones and encourage them for better values and distinguishing features.

**SECTION 23**

**FORMATION OF DIFFEREN COMMITTEES**

* 1. **MANAGING COMMITTEE**
  2. **SCHEME OF MANAGEMENT OF AN AIDED SCHOOL**

**23.3 SCHEME OF MANAGEMENT OF AN UN-**

**AIDED SCHOOL**

* 1. **ACADEMIC EXCELLANCE COMMITTEE (AEC)**
  2. **FORMATION OF A “PEACEFUL LEADERSHIP COMMITTEE” UNDER THE UMBRELLA OF AEC**
  3. **FINANCE MANAGEMENT COMMITTEE**
  4. **PROPERTY MAINTENANCE COMMITTEE**
  5. **MANAGEMENT OF PURCHASSE**
  6. **LEGAL COMMITTEE (LC)**
  7. **STAFF RECRUITMENT COMMITTEE**
  8. **DISCIPLINE COMMITTEE**
  9. **SPORTS REGULATORY COMMITTEE**
  10. **CO-CURRICULAR ACTIVIT**

**COMMITTEE**

* 1. **EXCURSION COMMITTEE**

**23.15 LIBRARY COMMITTEE**

**23.1 MANAGING COMMITTEE**

There are different functions of administration in school management program. These are planning, organizing, directing and controlling. In the absence of these functions school cannot function effectively.

**(a) Planning**

* Planning is an essential component.
* It is a useful exercise to be undertaken by Manager.
* It involves systematic, organized and an articulated scheme of working.
* So, planning can be thought of at the beginning of session.

**(b) Organization**

* It is also an important function of good administration.
* The effective and efficient work of the school depends upon the good organization.
* The essential element of the organization is people, what they do and how they work together.
* So, for good administration, the manager should define the purpose, analyze and identify the task required to meet these objectives, allocate relative activities at each level of responsibility and establish a reporting channel.

**(c) Direction**

* It is an important function of educational administration.
* Direction involves getting the work done through instructions and orders.
* There should be proper supervision, motivation and communication on the part of manager for getting the work done.
* The ultimate aim is to see that the work is accomplished according to policies and programs and given instructions.
* Directing involves exercising leadership motivating people, determining accountability and developing guidelines for action.

**(d) Controlling**

* Controlling involves measuring and monitoring performance, comparing results with plans and taking corrective action when required.
* It indicates how far the goals have been achieved and to what extent there is deviation from the plans.
* Control deals with the difference between planned and actual performance.
* So, administration is concern with managing resources, allocating tasks, making decisions and solving problems.
* The function is to create favorable conditions for the educational process and their maintenance at an effective level.
* For effective organization, good administration should involve planning, controlling and decision-making.

*Section 21 of Right to Free and Compulsory Education Act 2009 (RTE) mandated (authority to carry out a policy) the School Management Committees (SMCs) in all elementary, government, government-aided schools and other special category schools in the country. The RTE Act envisions an SMC as the basic unit of a decentralized model of governance with active involvement of parents in the school’s functioning.*

1. **The scheme of management** in relation to a recognized school (government or aided) shall provide that;
2. The managing committee of **a recognized aided school shall consist of not more than 15 members**, and the managing committee of a **recognized unaided shall consist of not more than 21 members.**
3. Subject to the total no. of members as specified above **(clause ‘a’),** every managing committee shall include the following namely;
4. Head of the school;
5. Two teachers of that school, to be elected by the teachers of that school from amongst themselves.
6. One parent, who is the member of PTA of the school constituted in accordance with such instructions as may be issued by Administrator, and is elected by the Association;
7. Two other persons (of whom one shall be woman), who are or have been teachers of any other school or of any other college, to be nominated by the Advisory Board.
8. Two members. To be nominated by the Director, of whom one shall be educationist and the other an officer of the Directorate of Education, Delhi, not below the rank of Principal of a Senior Secondary School.
9. The remaining members to be nominated or elected, as the case may be, in accordance with the rules and regulations of the society or the trust by which the school is run.

**Provided that in the case of (a minority school) such members of the managing committee, as are required by this rule to be elected, may instead of being elected, be nominated by the society or trust by which such an unaided minority school is run.**

* **Provided further that in the case of a minority school, the educationist to be nominated by Director shall be a non-official who shall belong to the minority by which the school is established and run.**
* **Provided also in the case of a minority school, the managing committee shall co-opt two senior most teachers out of a panel of ten senior-most teachers of the school by rotation and in case the school works in two shifts, then one senior-most teacher shall be co-opted from a panel of 5 senior most teachers in each shift by rotation.**
* **Provided also that nothing in sub-clause (iv) shall apply to a minority school.**
* **Provided also that the members nominated under the clause (V) shall not be entitled to take part in the management of the minority schools and shall function as advisors and observers to put forward the views of the government in the meeting.**

**23.2 SCHEME OF MANAGEMENT OF AN**

**AIDED SCHOOL**

**Shall also provide for the following, namely:**

* The term of the office of the members of the managing committee and the manner of its reconstitution or filling of any vacancy occurring there in.

**The manner of elections to the managing committee**

* That for the purpose of elections of the managing committee, the head of the institution shall be the returning officer and shall conduct/be in charge of election.
* That any change in composition of managing committee of the members referred to in sub-clause (ii) and (iii) of clause (b) of sub-rule (1) shall be communication to the Director within 7 days from the date when such change takes place;. the duties, powers and responsibilities of managing committee, which shall include control over appointments, disciplinary action, and control on staff, and shall also provide that no financial irregularity is committed or any irregular procedure is followed.
* that the managing committee shall ensure that the school gets the full complement of the staff;
* that the managing committee shall ensure that the school gets furniture, science equipments, library books and other teaching aids, and requisite sports’ materials;
* the duties, powers and responsibilities of the head of the school are described under the Head of **‘Requisites of a good Principal’**
* No employee of an aided school (other than head of school) shall be appointed as the Manager; the head of school may be appointed the Manager of a school, whether aided or unaided.

**23.3 SCHEME OF MANAGEMENT OF AN**

**UN-AIDED MINORITY SCHOOL**

**Scheme of Management of a recognized un-aided minority school**

Managing committee of a recognized unaided minority school may be nominated by the society or the trust by which such unaided school is run.

**Clause (1)**

1. ***Managing committee of a recognized unaided minority school shall consist of not more than 21 members.***
2. ***Every managing committee shall include the following;***
3. The head of the school,
4. One parent who is member of PTA of the school is elected by the Association,
5. Two teachers of the school to be elected by the teachers of the school from amongst themselves/provided that in the case of a minority school, the managing committee shall co-opt two senior most teachers out of a penal of ten senior-most teachers of the school by rotation,
6. The remaining members to be nominated or elected in accordance with the Rules and Regulations of the Society.

**Clause (2)**

***The Scheme of Management shall also provide for the following, namely;***

1. The duties, powers and responsibilities of the M.C., which shall control over appointments, disciplinary action, and control on staff, and shall also provide that no financial irregularity is committed or any irregular procedure is followed,
2. That the M.C. shall ensure that the school gets the full complement of the staff.
3. That the M.C. shall ensure that the school gets furniture, science equipments, library books and other teaching aids and other requisite sports’ materials.
4. That the M.C. shall assist the principal in discharging his/her duties, powers and responsibilities.

**Confidential reports of principal/teachers and other employees.**

* Confidential Report shall be recorded every year by the head of the school in respect of the employees working under him/her, and every year such confidential reports shall be reviewed by the managing committee.
* The confidential report in respect of the head of the school shall be recorded, every year, by the Chairman of managing committee and every such confidential report shall be reviewed by the managing committee.
* The confidential report in relation to the head of the school shall be kept in the safe custody of the chairman of the managing committee and the confidential reports in relation to the other employees of the school shall be kept in the safe custody of head of the school.

**Manager**

* The educational and other qualifications of the manager and his duties and responsibilities, the position of manager shall be as per the provisions of Delhi Education Act--1973
* Manager shall not be at the same time the manager of any other school and a person shall not be at the same time the Chairman of the Managing Committee and the Manager.
* The manager shall be at least a graduate with experience of at least ten years of teaching and educational administration.
* He will discharge all the duties and functions of the managing committee and shall function under the guidance and control of the Managing Committee and shall be accountable to the Managing Committee for his actions. He/she will get all his decisions ratified by the Managing Committee whenever it meets next.
* He/she shall make all correspondence on behalf of the Managing Committee, and shall represent the Managing Committee before the government, courts and other offices.
* He/she shall sign appointment letters of the employees;
* He/she shall submit the required information to the directorate of Education whenever required to do so, and comply with such instructions of director as may be issued.
* Bills, including the bills related to the salaries and allowances of the teachers and non-teaching staff, shall be jointly signed by the manager and head of the Institution.

**Removal of the Manager**

* Manager can be removed by a resolution to the effect passed with the approval of 75% of the total Executive Board members present in its meeting specially convened for the purpose. After alleging the Manager with some definite charges and after giving him in writing the charges and obtaining his explanation in respect thereof;
* Vacancy caused by the removal of the Manager shall be filled by Executive Board in its meeting called within 30 days and the person so appointed shall work as the Manager for the remainder of the term;
* The manager shall not interfere with the day-to-day administration and academic work of the school. But, he shall ask the report of the individual teachers, work and conduct for his information and take necessary action thereon through the head of the school. Similarly, the employee of the school shall have all official dealings with the Manager through the Principal only.

**23.4 ACADEMIC EXCELLENCE COMMITTEE (AEC)**

Students opt for higher education to find better opportunities in employment rather than for the sake of education only. Opportunities for higher education begin at school level itself. Students have a right to get best quality of education that may help them to stand straight with dignity in a fiercely competitive world. Beside guiding and preparing them for higher education, employability should also be a key feature of our endeavor in academics in order to shape the future of our younger generation.

**Objectives of academic council**

* It is important to note that AEC will have a governance function, not a management function
* It is anticipated that the President/Chairman of the society will have a great deal of inputs into the work and composition of the committee’s main role which is to assure academic Excellence.
* That the full board approves and monitors the progress of annual goals to attain academic excellence.
* The Academic Excellence Committee is required to form for exploring the ways and means for revamping, reformation and systemic overhauling of the academic frame-work at the school.
* The main purpose of AEC is to measure the academic results of the institution against the goals established in strategic planning. A persistent vigil is required to block entry of any of the expected problem.
* Supervision of ‘Academic Calendar’, review of timetable and preparation of academic guidelines before commencement of the new academic year.
* Supervise the test, examination, results and other related activities.
* Monitor the implementation of school curriculum by school administration.
* Over see the school administration in the development of the school library.
* It will ensure that the learning should stimulate and sustain the child’s interest and therefore should be a joyful confidence building process for his future.
* To encourage participation of students in different activities outside school pertaining to academic, co-curricular and sports events held by govt. or private institutions, department of education, CBSE, or any other agency, workshops, meetings, camps for students /teachers etc.
* Development of common interest program with other institutions, social initiative, communal harmony and awareness program.
* Planning professional development of teachers, and evaluation of performance for giving awards to the teachers/students.
* An annual report on school’s achievements.
* Academic Excellence Committee should not be involved in management level work such as;
* Evaluating teachers.
* Selecting the curricula, and its approval.
* Interacting with teachers or other staff members on regular bases in association with principal.
* Interacting with parents on regular bases, but parents’ co-operation deserves appreciation to boost up the confidence level and to bring out the creative best from among their wards.

**Members of the Academic Excellence Committee**

* President/Chairman of the Managing Committee.
* Manager of the school
* Principal of the school
* V. P/s of the school.
* Counselor, if any.
* Two senior members of Executive Board/Managing Committee, preferably the educationists.
* A senior teacher each from Humanities, Commerce and Science.
* Its composition as per the guide-lines set forth by school managing committee.

**23.5 FORMATION OF A “PEACEFUL LEADERSHIP COMMITTEE” (UNDER THE UMBRELLA OF AEC)**

The explosive social conditions prevailing in India call for an immediate measure to counter the same. The objective is to develop a culture of ‘peaceful unity’ at the school level.

* To achieve the motive we are required to establish a ‘Peaceful leadership Committee’, comprising students, parents and staff representatives.
* Desirable is its monthly meeting to focus on one of the fundamentals of the school and the community that is *Integrity, Perseverance, Excellence, Stewardship and, Grace and courtesy, etc.*
* With the focus on each topic students will collaborate on developing strategies that will enable them to overcome difficulties both personal and academic.
* Students and overseeing staff should aim to create camaraderie between all students of the school, where everyone may create a tightly knit community.
* Students’ representatives are chosen every month from each classroom to organize an assembly that instructs the theme to their fellow students’ representatives.
* **Students’ representatives** are selected from primary sections, middle sections and, secondary classes.
* **Parents’ representatives,**

Encourage the parents to attend and communicate with students regarding strategies, for the topics mentioned, at their home and family activity.

* **Teachers’ representatives**

***This is difficult to achieve without the concerted efforts of all concerned. It is therefore, imperative to infuse the required power to the “AEC” so that it may get up and go for the better academic achievements and social harmony.***

**23.6 FINANCE MANAGEMENT COMMITTEE**

**Importance of finance committee**

* Although the Managing Committee has clear responsibility for school finances, it often delegates specific powers to certain other committees for the smooth running of the school. The Finance Managing Committee has a special and important role to play in maintaining the school expenditure at a minimum low level.
* Monitoring and planning for the school’s financial position and financial control systems is normally undertaken by the finance committee. Its role is crucial to ensure that the Managing committee discharges its financial responsibilities correctly and that the school remains financially viable at all times.
* Its duty is to stop potential overspending arising during the year.
* Make financial decisions, as authorized on behalf of the managing committee between meetings, and reporting such decisions to the committee.
* Helps in preparing the accounts for audit.
* Its responsibility includes financial planning and budgeting
* Financial reporting
* Monitoring the procedure established for expenditure is properly followed and scrutiny of all bills received before the payment is made.

**Members of the finance sub-committee (suggested)**

* Treasurer
* V.P -- one
* Joint. Secretary
* Manager
* One Ex. Board member
* Members recommended by managing committee.

**23.7 PROPERTY MAINTENANCE COMMITTEE**

**(PMC)**

Maintenance is the process of ensuring the safety of the building and other assets of the school.

* It is an endeavor to keep the property in a possible good shape and optimum efficient condition.
* Inadequate maintenance can result in decay, degradation and reduced performance and can affect health and threaten the safety of those present in the school.
* Deterioration in school property requires a constant monitoring and repair/maintenance of the damaged property.
* Maintenance of school building, hostel, if any, ground/s, furniture, electrical and electronic fittings, computers etc. is a gigantic task and could be frustrating for an individual. It can comparatively be an easy task if a committee is assigned the responsibility to looked after the repair work.
* Property committee will look after the stability of the property.
* Optimize the performance of electric/electronic gadgets.
* Help inform the plans for renovation, refurbishing, retrofitting or new buildings.
* Determine the cause of defects and so help prevent re-occurrence or repetition.
* Ensure continued compliance with statutory requirements
* Common maintenance tasks include,
* School building painting and other repair work.
* Carpentering required for school furniture and other wood-work.
* Rubbish clearance.
* Sanitary work— repair or new.
* Repair, maintenance or purchase of electrical items.
* Maintenance, repair or purchase of electronic items.
* Ensuring the supply of water for drinking and other purposes.
* (SMC) can elect, nominate, and guide the members of PMC.
* Prior approval of the work to be carried out requires the approval of school managing committee (SMC)

**23.8 MANAGEMENT OF PURCHASE**

**A well planned procurement process can help achieve value for money.**

**Plan the process**

* As a maintained school, we have a duty to make sure that we obtain the best value for money from any contract we enter into.
* To make arrangements for purchase of the equipments/items/devices required by any department in the school as per the recommended guide lines.
* Specify what is needed, why, whom and by when.
* Approval for procurement.
* Entry in purchase register
* Creating an on-line and offline specification of what is needed to be purchased.
* Collaborating with other schools, for example by sharing resources, comparing prices and experiences, and buying items together, if possible.
* Estimating the whole year purchase at a time, and comparing it with the total monthly purchase.
* Following the school’s established process for obtaining formal approval for the procurement.
* After receiving the items/devices/equipments in good quality and condition make arrangement for payment.
* It is the responsibility of purchase committee to make arrangements for servicing/repairing of faulty items/devices/equipments.

**Write specification**

* A precise description of the material/goods work or services required. It allows the supplier to understand exactly what is needed to buy.
* An explanation of how these should meet the school’s needs.
* The quantity and the quality required.
* Timeframe for the delivery.
* When writing the specification, consult those who are likely to use the items to find out what they need, what should be the quality of the items required, and how they plan to use it.

**Make the procurement**

* There are 3 ways the school can make procurement.
* Select a supplier directly from a framework.
* Run a mini competition between suppliers on a framework.
* Run a procurement for lower-value tenders

**Stationary:** School purchases stationery items from different suppliers. All the purchase entries are maintained accurately in the stock register/school software with all the relevant details.

**List of stationery items/other material**

* Chalk sticks/dust free white and colored chalk,
* White boards and green boards,
* Portable compact study table with white board,
* Teacher’s log book,
* Daily attendance register for students,
* Drawing and color material,
* Artist’s Acrylic colors,
* Professional Canvas board,
* Duplicating stencil paper and ink,
* Teacher’s attendance and other registers, log book etc.
* Drawing paper,
* Full-Escape papers,
* A-4 Xerox papers (required in bulk),
* Legal plain papers,
* Pasting file. Box file, spring file, plastic file, plastic folder, stamp pad, towing thread/tag,
* Register of different quires as per requirement.
* Notice board, wooden duster, rubber board etc. etc.
* Educational DVD,s on different subjects for different classes, plain DVD’s, pen drive, CDs.

***Inventory Management software is required to keep the record of items.***

**23.9 LEGAL COMMITTEE (LC)**

To file a law suit against a school in Europe and America is not so easy. The act there sets forth some specific requirements which must be strictly followed otherwise, the law suit is dismissed. But, schools in our county do not enjoy such immunity. Fortunately we see the least number of instances when parents go against a school and file a law suit. Yet there are cases of legal suits which are filed as a result of seeking the so called justice against one party or the other.

* Aided and un-aided schools are required to constitute a Legal Committee for discharging the responsibilities and duties to counter the stumbling blocks effectively, that may exist or created, in favor of the institution under the wings of Managing Committee of the school/Executive Board/SMC of the Society.
* Try to resolve infighting and disputes among the teaching and non-teaching staff.
* Try to resolve infighting and disputes among the teachers.
* To fight law suit against the school by parents or the community.
* To fight a law suit filed by a teacher of school against the school or its management.
* To fight against a law suit filed in connection of an existing dispute/s with an external agency.
* To fight against the law suit involving the management filed by school employees.
* To fight against the law suits involving the management filed by an external agency.
* Members of the Executive Board/SMC are supposed to be collectively responsible for ensuring the performance of Legal Committee is steered well and solvent.
* It is required to act in accordance with vision, values and reputation of the Society/school.
* The ultimate responsibility lies with Executive Board/SMC for directing the activity of LC, ensuring it is well run and delivering the outcomes for which it is set up.
* The executive Board/SMC ensures compliance with all relevant legal and regulatory requirements and seeks guidance around any uncertainties.
* Everything the Executive Board/SMC do must be in line with Memorandum of Association of the Society.

***Selected members of LC are required to be conversant with “Delhi Education Act 1973” and other legal Acts.***

**23.10 STAFF RECRUITMENT COMMITTEE**

* In an un-aided minority school the rules and regulations in chapter XI of “THE DELHI EDUCATION ACT, 1973” are required to be followed.
* Recruitment of employees in each recognized un-aided minority school shall be made on recommendation of selection committee to be constituted by managing committee of the school.

**The selection committee shall include**

1. **In the case of recruitment of principal of the school**

* The chairman of the managing committee;
* An Educationist nominated by the managing committee; and
* A person having experience of administration of school, nominated by managing committee.

1. **In the case of recruitment of any teacher other than the head of the school:**

* The chairman of the managing committee;
* The head of the school; and
* An Educationist nominated by managing committee.

1. **In the case of recruitment of any other employee:**

* The chairman of the managing committee or any member of the managing committee nominated by chairman.
* The head of the school.
* The selection committee shall regulate its own procedure, and in the case of any difference of opinion amongst the members of selection committee on any matter, it shall be decided by the society running the school.
* Where a candidate for recruitment to any post in an un-aided minority school is related to any member of the selection committee, the member to whom he is related shall not participate in the selection and a new member shall be nominated in his place by the managing committee of the school.
* The appointment of every employee of a school shall be ratified by its managing committee.
* Where any selection made by the selection committee is not acceptable to the managing committee of the school, managing committee shall record its reasons for such non-acceptance and shall refer the matter to the society running the school and the society will decide the same.

**Minimum qualification**

* The minimum qualifications for appointment as a teacher of an un-aided minority school shall not be less than those as are specified by the Affiliating Board.

**Contract service**

* A copy of the contract of service, shall be forwarded to the Administrator by the managing committee of the concerned un-aided minority school either by registered post, acknowledgement due, or by a messenger written 13 days from the date of which the contract is entered into.
* On receipt of a copy of the contract of service, the Administrator shall cause the particulars of such contract to be entered in a register to be maintained for the purpose, to be known as the “Register of Contracts”
* The administrator shall also cause the copies of contracts received by him to be preserved in such manner as he may specify.
* If on scrutiny of the copies of contract received by him, the Administrator is of opinion that the contract does not comply with the provisions of sub-section (3) of section 15 (page -9), he may draw the attention of the school concerned to the deficiencies in the contract and require the school to modify the contract so as to bring in conformity with the provisions of stated section and thereupon the school shall take urgent steps for the rectification of the contract.

**23.11 DISCIPLINE COMMITTEE**

For maintenance of discipline in the school, certain steps are required to be taken. Constitution of **discipline committee** is essentially a step that will help in maintaining the atmosphere conducive to education in the school.

The primary task of this committee is to ensure that the students follow the rules and regulations recommended by the committee in order to maintain the discipline in the school, an essential ingredient in the scenario of an educational institution. Pursuit of academic objectives and goals are not possible without the imperative discipline.

**Composition of discipline Committee**

* Principal
* Administrator/manager
* Counselor of the school
* Voice-principal/head teacher
* Students representative
* Two teachers representatives selected by principal
* One of V.P shall be the convener of the discipline committee
* A parent representative

**The disciplinary committee will care for the following objectives and rules and regulations;**

* Framing the “rules and regulations” and their implementation deserve the guidance of the principal.
* To promote and encourage good behavior among the students and the teachers as well.
* Committee members will help the students to follow the objective and rules and regulations set forth by the discipline committee.
* To create an environment that is conducive to academic progress and peaceful co-existence among the students.
* It will try to inculcate the sense of self discipline among the students. In order to achieve the objective the school counselor will held frequent counseling sessions with individual classes.
* **Parents** will be made aware of objectives and rules and regulation of ‘discipline committee” and probable “disciplinary actions’ against the wrongdoers.
* To administer consequence commensurate with offence committed.
* **Students need to develop a sense of discipline** in order to keep school property safe.
* Students are required to have a sense of belonging and love for the school property.
* Advertent acts of inflicting the damage to the school property can attract the imposition of drastic fines.
* It is the duty of all students of a class to keep safe the furniture, black-board, electrical fittings and electronic items such as computers, smart boards etc.
* If any article is found damaged in a class-room a collective fine will be charged from all the students (i.e. from all the classes) who studied in it during the day.
* The student who points out the offender will be rewarded suitably in cash or will be given extra marks while judging for “Best student”. More over no collective fine will be imposed to the classes studied in it earlier during the day.
* The offender will be imposed a fine of Rs. 1000/= (at least) or an amount equal to the price of the damaged item for inflicting (even a minimal damage) to the property.
* The fine imposed for the damaged property by students/s shall be brought immediately to the notice of parents.
* Make the Monitor of every class responsible for keeping the property safe.
* Students will be instructed in the school for maintaining the discipline but parents also ought to inculcate the sense of discipline in their wards for keeping the property of school safe.
* Damage to it will attract an unnecessary financial loss to the parents.

**23.12 SPORTS REGULATORY COMMITTEE**

It is suggested to encourage all students to participate in sporting activities regardless of ability,

**Role and responsibilities of sports regulatory committee**

* Monitor the developments in school sports.
* Discussing and monitor the upcoming sports events.
* Regularly review the “School Sports Policy” and recommend amendments to the SMC.
* Approve budget and expenditure (up to an authorized level).
* Organize sport co-coordinators and ratify coach appointments.
* Organize clinics for coaches, managers and players.
* Make people aware of codes of conduct.
* Prepare a report to be presented in SMC and AGM.
* Making suggestions to improve delivery of physical education and sports.
* Suggest possible developments to sporting facility on-site.
* Order new equipment/tidy existing sports store.
* Adding information to school web site.
* Deliver sports activities to younger children.
* Determine the training time for each sport.
* Maintain and keep equipments in a safe condition.
* Supervise the selection of team members and captains

**Composition of sports committee**

* Sports committee chairperson/coordinator (member of the executive board/SMC).
* SMC representative (other than the member of executive board).
* Physical education teacher.
* Manager
* SMC rules may be followed in selection of the committee members.

**Meetings**

* Meetings of the sports committee should be held at least three times in an academic year.
* The chairperson shall be responsible for preparation and distribution of agenda to the members concerned.
* All the committee members are required to remain present for their important comments/suggestions for the development and promotion of the school s[ports.
* Report of the previous committee meeting is to be presented in the current meeting for approval, by sports coordinator/s.

**School responsibilities**

* The school will arrange for sports venue.
* All sports club/s will be operated from the consolidated amount sanctioned by SMC.
* Sports committee shall approve the demand of sports material, in-line with the procedure already by the established and approved by the committee.

**Parents’ responsibility**

* Parents are required to inform the school about a chronic disease, asthma or allergy for an appropriate medication with them for each game and training.
* It is the responsibility of parents to ensure their child, who is selected for individual or team game, is covered for injury. The school accepts no responsibility for injury to students in sport competitions.

**23.13 CO-CURRICULAR ACTIVITY COMMITTEE**

Co-curricular activities like group discussions, debates, inter school competitions, quiz competitions etc are regularly held to stimulate the thinking process and intellect of students. It is an integral part of the holistic personality development of students. Students committees some of which are mentioned below are being constituted to provide an expression to the latent creative talents of the students.

* Culture and fine arts committee,
* Debate and quiz committee,
* Events management committee,
* News letter and journal committee,
* Eco-club,
* IT club,
* Drama club,
* Science club,
* commerce club,
* Annual cultural program,
* Guest lectures,
* Seminars and workshops,
* Education trips,
* Inter college meet and event etc, etc.

**\*Proper execution of such a vast number of Co-curricular and extracurricular activities that too in a very short time, demands organization, innovation and implementation, communication and co-ordination of a number of selected members.**

**There remains no option but to form a dynamic “*Co-curricular Activity Committee”*, so that the students could gain maximum benefits from the concerted efforts of committee members.**

* Ordinarily one/two period is/are assigned for co-curricular activity in a week.
* Only one/two periods seem to be insufficient for giving an opportunity to excel in any of the co-curricular activities.
* Therefore, role of the teacher who is assigned the duty for co-curricular activities assumes a significant importance.
* In association of committee members, it requires a good planning by the teacher, so that the different activities could be carried out systematically.
* Every student deserves the participation in one or the other activity.
* The members of the committee are required to be visionary so as to innovate the programs and also carry them out within the available time frame.
* Managing these activities is a gigantic task to handle properly,
* The constitution of the committee requires at least three members (or more). One of them should be the vice principal besides the co- curricular activity teacher.

**Meetings**

* Meetings of the committee should be held at least three times in an academic year.
* Convener shall be responsible for preparation and distribution of agenda to the members concerned.
* All the committee members are required to remain present for their important suggestions for the development and promotion of the school sports.
* Report of the previous committee meeting is to be presented in the current meeting for approval by committee members.

**23.14 EXCURSION COMMITTEE (EC)**

**Excursions**

Are activities organized by the school where the students are taken out of the school e.g. a camp, day excursion, adventure activities, visit to a historical city, a pleasure trip, etc.

**Importance of excursion**

* An excursion is usually a pleasure trip.
* It is an activity organized by the school during which students leave the school premises to engage in educational adventures.
* Schools are encouraged to adopt the practice of excursion because of its tendency to add reality to learning experience which consequently enriches the courses of study and motivate both teachers and learners.
* It gives exciting educational experiences deeper than the regular school environment affords.
* Findings also reveal that children learn about different professions, ideas and opportunities when they travel outside their own neighborhood which increases their desire to try new things owing to the interest it sparks in them.

**School Excursion Committee**

School Excursion committee is responsible for making a detailed policy for taking out the students for excursion. The trip is liable to be approved by the **Excursion Committee,** as it includes;

* External providers.
* Parents/guardians consent.
* Any contract entered into with third parties
* Any contingency funds required for unforeseen circumstances especially in excursion of overseas travel.

**Management system**

* It is desirable to have a management system, documented by **Excursion Committee** to tackle the hard tasks or emergency situations.

**Planning summery**

* A planning summery is useful at all stages of excursion program especially before final dates are confirmed or booking of railway tickets or other means of travelling is finalized.
* Principal’s approval and support is recommended for the planning of the program even before the start of drawing the detailed planning. Detailed planning has to be carried out only after the recommendation of the principal.
* Prior to departure, the documentation that might assist with emergency management must be submitted with the principal to designate 24-hour school contact person.

**Consideration of detailed planning**

**Venue selection**

* Excursion venues must be safe and suitable for the activities proposed.
* It is recommended that the venues are selected based on its recent first-hand knowledge.

**Educational purpose:**

* Explain the educational benefits the students will gain and how they relate to the school’s curriculum.
* How will you determine that students have gained from the experience?
* Does the educational purpose of the activity justify any potential risk?
* Is there another less risky activity that could be done that meets the same purpose?

**Location and environment**

* When planning for an excursion, field trip, camp or an outdoor education experience it is important to take note of the following.
* The opportunities and the specific risks and challenges that are reasonably foreseeable in the environment in which the activities are being operated.
* How to manage and minimize the impact of the program that will have on the environment.
* Seek the required and specific knowledge of location.

**Adventure activity**

* The identification of potential risks and difficulties.

**Communication.**

* Ponder over the communication strategy within the group for day-to-day operations.
* Communication strategy in case of an emergency.

**Weather.**

* Common weather features of the environment in the season when the visit is intended.
* Weather forecast has been taken into consideration before the plan is undertaken.
* React as per the weather acts.

**Transport.**

* Decide mode of transportation to be used and collect all the relevant information.
* See for the requirement of permission needed for entry of transport vehicles in the area to be visited.

**Clothing and personal equipments**

* Ensure the weather conditions of the area and make arrangements as per the requirements.
* Ensure that the students have been given the relevant suggestions regarding the requirement of clothing.

**Informed consent from parents.**

* Informed consent needs to be taken from parents/guardians before going to the trip.

**First aid**

* First-aid training for member/s of the staff those will be with the tour is mandatory.

**Emergency management**

* A detailed report (all activities included) of trip is to be approved by **Excursion Committee.**
* If additional information is required during an emergency, school is expected to provide it from the documentation prepared and submitted before the excursion.

**Learn about the emergence response procedure**

* **Venomous bite**
* **Bush fire**
* **Injury**
* **Lost**
* **Search**
* **Medical condition**
* **Sun exposure**
* **lightning**

**Teachers participating in an excursion should;**

* Understand the purpose of the program and its connection to students’ learning.
* Be aware of their supervisory responsibilities throughout the program.
* Know who is the nominated member of staff, who will provide first-aid, if required?
* Know the exact location of students, they are responsible for at all times including during travel.

**Nominated teacher-in-charge should**

* Know the exact location of students at all times including during travel.
* Maintain a record of telephone contacts for the supervising staff accompanying the excursion.
* Know who the school contact persons are and their contact numbers.
* Have a copy of the names of family and their contact numbers for all students and staff on the excursion.
* Have copies of parental approval and medical advice forms for the students on excursion.
* Maintain a copy of the completed approval proforma (including all attachments).

**Submission of the excursion report**

* In charge of the trip shall submit the excursion report consisting of all the minute details relevant to the trip.
* Besides the educational benefits it is also required to include the following.
* Duration of the tour (including all important dates).
* Number of students who went for the trip (Class-wise number of students).
* Name of the visited place/s.
* Purpose of excursion.
* Mode of transportation.
* Detail about those who made the necessary arrangements.
* Total expenditure with details
* Amount collected from each student.
* Amount contributed by the school.
* Name of the Head in charge.
* Name of the in charge for financial matters.
* Name of the first-aid in charge teacher/person.
* Names of other teacher/s.
* Any special program/activity carried out during excursion or at the site of excursion.
* Any specific incident worth mentioning.
* Any untoward accident.
* Steps taken for such incidents/accidents and advise for future prevention.
* Staying details at different places/hotels.
* How the teachers rate the experience?
* How the students rate the experience?
* Date of submission of the excursion report.
* Advise of the tour in charge to make the excursion a learning experience/a joy trip, in future.
* A meeting of the **Excursion Committee** will be held within a week to discuss and ratify the submitted report.

**Genesis of Excursion Committee**

* Nominated member of SMC (convener of EC)
* Head of the Institution.
* Teacher in charge nominated by SMC.
* Teacher trained for first aid and emergency situations.
* Or a team comprising those nominated by SMC.

**23.15 LIBRARY COMMITTEE**

The library committee consists of a group of persons who are empowered to do certain jobs relating to library and its administration. The committee members are assigned the duty to purchase books on certain recommended topics considered important to increase the knowledge of the students on the subject concerned. The committee members use to work closely and efficiently with the librarian.

**Necessity of the library committee**

* The librarian requires the library committee to interpret the needs of the library to the library committee.
* Working as an active member of the library committee a librarian can prove himself as an efficient library administrator.
* The library committee assesses the library requirements, and purchases the books, magazines, periodicals to fulfill the requirements of students and teachers.
* Library committee keeps the librarian alert**.**
* The library committee should ensure that the library building is properly decorated, structured, and functional and has necessary arrangement for efficient management.
* Library committee ensures that the furniture is adequate, standard and comfortable without any dislocation or wastage of space.
* Library committee will fix the need and number of staff and their regulations and development.
* Efforts should be made by the library committee to frame a set of library rules those will be flexible to suit the needs of students.
* To solve the issues and problems raised by the students and the staff members in regard of the library.
* To visit the library regularly and discuss about further development in the library.
* Only those people should be included in the library committee who are interested in the library.

**Members of the library committee**

* Principal
* V.P.
* Librarian.
* Students’ representative.
* Counselor, if any.

Or

* The members nominated by SMC.

**SECTION 24**

**MISCELLANEOUS**

**24.1 INTRODUCTION OF FOREIGN A LANGUAGE**

**24.2 FRENCH**

**24.3 GERMAN**

**24.4 ARABIC**

**24.1 INTRODUCTION OF A FOREIGN LANGUAGE**

**Foreign languages provide a competitive edge in career choices:**

* The benefit of learning a foreign language is that one is able to communicate in a **second language. Foreign language study** enhances listening skills and memory.
* He/she participates more effectively and responsibly in a multi-cultural world if he/she knows another language.
* Foreign language study creates more positive attitudes and less prejudice towards people who are different.
* Analytical skills improve when students study a foreign language.
* Business skills plus foreign language skills make an employee more valuable in the market place.
* Dealing with another culture enables people to gain a more profound understanding of their own culture.
* Creativity is increased with the study of foreign languages.
* Graduates often cite foreign language courses as some of the most valuable courses in college because of communication skills developed in the process.
* International process is made easier and more pleasant through knowing a foreign language.
* Skills like problem solving, dealing with abstract concepts are increased when you study a foreign language.
* Foreign language study enhances one’s opportunities in govt., business, medicine, law, technology, military, industry, marketing etc.
* A second language improves your skills and grades in math and English.
* Foreign language study enhances listening skills and memory.
* One participates more effectively and responsibly in a multi-cultured world if one knows another language.
* Your marketable skills in the global economy are improved if you master another language.
* Foreign language study offers a sense of the past, culturally and linguistically.
* The study of a foreign language improves the knowledge of one’s own language.
* The study of foreign language teaches and encourages the respect for other people. It fosters an understanding of interrelation of language and human nature.
* Foreign language expends one’s view of the world, liberalize one’s experiences, and make him more flexible and tolerant.
* Foreign language expends one’s world view and limit the barrier between people, barriers cause distrust and fear.
* Foreign language study leads to an appreciation of culture diversity.
* One is at a distant advantage in the global market if one is as bilingual as possible.
* Foreign language opens the doors to art, music, dance, fashion, cuisine, film, philosophy, science etc.ete.
* Foreign language study is simply a part of very basic liberal education. To educate is to lead out, to lead out of confinement and narrowness and darkness.
* With the study of foreign language, English vocabulary skills increase.

**24.2 FRENCH**

**Why learn French?**

* French is the second most spoken language after English.
* Native language of around 200 million people.
* Spoken in France, Switzerland, Luxembourg, Canada, South East Asia, North Africa and much of central Africa, and Caribbean.
* It’s a key language of European Union’s 25 Nations, the world’s largest economic entity with a population of 350 million
* Working language in United Nations, UNESCO, NAATO, International Red Cross, International courts,
* Proficiency in French is a prerequisite for anyone planning on a career in International Organizations.
* It is a base language for learning other languages such as, Spanish, Italian, Portuguese, Roman etc.
* French is a language of business. More than one million jobs in US require French.
* French is a language of technology and medicine
* French fashion designers, artists, writers, musicians and film-makers have had a wide influence in United States and the rest of the world.
* Learning French grants access to new horizons.
* French is a language of influential, religious, and intellectual movements.
* France is the no.1 tourist destination and attracts more than 70 million visitors a year.
* French is an asset for anyone interested in working in International Organizations.

**24.3 GERMAN**

**Some good reasons to learn German;**

**German is easy to acquire.**

* German and English share the same Germanic root. Consequently, there are many thousands of words which are closely related known as “cognates”. e.g. the English Chin is *Kinn* in German. Water becomes *Wasser* and Father turns into *Vater.* Not so hard.

**German is the language of inventors and innovators**

* Over one hundred Noble Prizes have gone to brilliant Germans for accomplishments in physics, medicine, chemistry, literature, and so many other areas. Many of the recipients from other nations received their training at German universities.
* In the English speaking world, German is the most taught language

**German is an important language in academia**

* German is very important in the academic community. In fact it ranks second as the most commonly used scientific language.
* German book-market is the third largest in the world, right after the Chinese and English publishing industries.
* Percentage of these books translated into other languages in fairly limited, only knowledge of German language will give you access to them.

**German is the gateway to a world-class higher education**

* German universities have an excellent international reputation. It is a popular destination for students from abroad with more than a quarter million foreigners are being enrolled in German schools.
* German system for higher education boasts a number of universities with a very low or non-existent tuition fee.

**Germany is an economic powerhouse**

* Germany is the biggest economy within the European Union and the fourth largest worldwide.
* With knowledge of German language, there exist chances of professional relationship.

**German companies are global market leaders**

* Germany is home to a large number of economic global players. Siemens, Volkswagen, Adidas, and Lufthansa are globally recognized brands and corporations.
* Berlin is turning into a hub for innovative startups. It is being referred as the ‘silicon valley’ of Europe. As a consequence, knowing German has the potential to greatly enhance your career opportunities.

**German is the most widely spoken native language in Europe**

* English, French and German are the three official working languages of the European Union.
* German is the second most spoken language of Continent Europe.
* In the English-speaking world, German is the most taught language.

**German has a big online presence**

* German websites make up a huge part of the internet.
* Germany’s ***.de*** is the most popular top level domain out there.
* In terms of absolute numbers ***.de*** takes second place to ***.com*** which is way ahead of everything else.

**Germans are everywhere**

* German citizens are some of the world’s most voracious travelers.
* Those who are in tourist industry can tap into this market with German-speaking guides and staff.

**German culture is part of the world heritage**

* Learning German gives you the opportunity to appreciate the master pieces of some of the great artists in their original form.
* It lets you tap into parts of the world’s cultural heritage in a direct and unfiltered manner

**24.4 ARABIC**

“Arabic is not just a language”, for we people it is crucial to understand our culture, values, beliefs and identity. It is required for understanding of where we come from.

* Arabic, therefore, makes for an important language to develop due to a wide use of it.
* Arabic is the official language of 27 countries.
* It is understood and spoken in 58 countries.
* There are 400 million Arabic speakers across the world.
* It is also one of the languages of the United Nations.
* A study of Arabic opens up endless possibilities and opportunities for those who embark upon it.
* A rich and sophisticated language, it is both challenging and rewarding to learn.
* Knowledge of Arabic is instrumental to gaining a real understanding of the people, societies and politics of the Arab world.
* It becomes easy to access a range of employment opportunities in the region’s finance, media and commercial sectors.
* As the social, political and commercial importance increases, demand to learn Arabic is set to grow.
* Learning Arabic opens a lot of doors for the learner.
* A good understanding of Arabic can lead to a job in diplomatic service or security forces, media and communications, finance and banking, the oil and gas sectors.
* Arabic is in great demand and there is a shortage of well qualified speakers.
* You gain vital language skills when you learn Arabic.
* French and Spanish, being easier to learn in comparison to learning Arabic, there is more competition as there are more learners and speakers in these languages. But, if you learn Arabic, you are sure that there would be a great demand for your language skills, as less is the supply.
* You have an edge over competition even if you are in west. The demand for people fluent in Arabic is quite high and only a few people from the west attempt to learn Arabic
* The secret services in U.S. needs people who are fluent speakers of Arabic.
* There are many sectors including translation and interpretation that need Arabic speakers.
* Other fields that need Arabic speakers include intelligence and Foreign Service, banking and finance, education and journalism.
* Many opportunities are available in Arab Nations for those engaged in business.
* You will be able to learn ISLAM better if you are able to read the ‘QURAN’ and understands its teachings.
* So, for Muslims who are interested in learning and understanding ISLAM, learning of Arabic will be so helpful.
* Moreover, the Arabic language is a part of ISLAM, and knowing Arabic is an obligation. ‘QURAN’ and ‘SUNNAH’ cannot be understood without knowing Arabic.

**SECTION 25**

**REQUIRED SOFTWARE**

**25.1 ENTERPRISE RESOURCE PLANNING (ERP)**

**25.1 ENTERPRISE RESOURCE PLANNING (ERP)**

**Software required for management**

* It is the most important software for smooth management of school. Every single activity that has been described in detail (will be available on line 24X7 through cloud technology, if intended so), is for a better management. Many agencies provide the readymade software. This ready-made software can also be modified as per the requirement.
* Students Profile, with complete data.
* Parents’ Profile.
* Teachers’ Profile.
* Students’ Performance and data management.
* Counseling records.
* Reception Management.
* Fee Management.
* Inventory Management.
* Library management with bar code features and use of bar-code reader.
* CCE based Exam Management system and Report-card generation.
* Attendance Management with e- board for daily presence, daily class-wise total attendance in the School with SMS facility to the parents at the time of entry and exit from the School respectively.
* Home-work management.
* Prep-book (lesson plan and coordination notebook).
* Record Maintenance of all activities and functions beside academics, sports and co-curricular activities.
* Health maintenance and health record.
* Recoding of comments of every student given at the time of PTM.
* SIS on line (Students Information System) Home work and other necessary information.

It is web-based application software designed to introduce a conducive and structured information exchange environment for Integrating students, parents and administration.

This software system and many of its improved versions enables to supervise student related activities such as keeping records of tests or examinations conducted, attendance, appraisal on performance including details of marks scored, particulars of every day school attendance and all other institution related activities. In short a complete students’ record system is provided. Such a software is designed with diverse application potentials ranging from simple management of students’ records at school to management of all student related functions as well as administrative functions of a university or a chain of educational establishments.

**Pay roll and staff profile**

* It is the total of the compensation an institution pays to its employees. In the accounting world, it is also a term used for calculating and processing paybacks.
* They include employee salaries, employer’s payment for health insurance or similar benefits. Pay roll taxes paid by the employer, bonus, commissions and similar expenses.
* It is a process that ensures the correct payments of different kinds to the employees and correctly deducting miscellaneous items.
* Pay roll software helps in storing the employee information separately.
* It helps to be accurate at the points of dispute, be it leaves, absences, expanses, adjustments. Collective labour benefits and other wage-related items.
* Payroll software keeps calculations mistake-free.
* There are a lot of benefits of this software which include, errorless disbursal of employees’ salaries, calculate leaves, attendances, LWPs, , avoid financial leakages, provide automatic updates on tax laws, always comply and follow latest govt. rules for payroll calculations, make accurate PF/ESI deductions, save time, money and efforts.
* It is required to maintain complete profile, the data and other information about students, their parents and the teachers. Examination data and relevant details. Comparative study of students’ academic and other performances, any other specific information regarding individual student. Data about teachers. Health maintenance status of students, teaching and non-teaching staff, etc.

1. **student information management**

* Maintains students’ life cycle right from their admission till placement of every individual student.
* Data storage and Management.
* Complete academic tour.
* Co-curricular activities.
* Students’ report and projection report.

1. **Attendance Management**

* Student-wise summary
* Habitual late comers.
* Last leave taken.
* Absent in a month and in a year.
* Data lecture-wise.
* Monthly report
* Subject-wise data.
* Complete academic attendance.
* Top regular and top irregular students.

1. **ID card Management**

* Generation with printing
* Can be integrated with Bio-metric system.

1. **Timetable Management**

* Master timetable
* Students’ timetable.
* Teachers’ timetable.
* Class-wise timetable
* Sports timetable.
* Co-curricular activities timetable.
* Vacant period timetable.
* Exam timetable.
* Academic calendar.SMS integration.

1. **Fees Management**
2. **Course Management**

* Syllabus Management according to Institutes working days.
* Different syllabus segments for class tests.
* Syllabus planning for short periods, e.g. a day or a week or a month.
* E-learning resource centre for students
* Notes, files, documents and videos etc can be shared.
* Automated work load generation on daily basis.
* 24x7 access
* Systematic planning and execution.

1. **Exam Management**

* Class test
* Group/subject test.
* Internal assessment via preliminary/terminal exam.
* Assessment of activities and interpersonal skills. Weightage based assessment.
* Final assessment for progress card.
* Notifying parents about results (SMS, e-mail and letter).

1. **Result processing**

* Incorporating ordinance for result.
* Upload/enter subject marks.
* With-held cases management.
* Ranker analysis (class/subject).
* Managing unfair means cases.
* Reassessment Management.
* Mark-sheet Bulletined Printing
* On-line provisional marks sheet
* Certificate Management.

1. **Employees Management**

* Recruitment and selection
* Unique ID system for staff members.
* Service and other human-resource inventory.
* Attendance and leave record.
* Activities and task Management.
* Event and holidays Management.
* Academic timetable.
* ID card Management.
* Personal schedule and its Management.
* Address Book.
* Statistical report and performance assessment.
* Performance appraisal.
* Retirement and disposal activities.
* Department-wise login.

1. **Leave Management.**

* Leave structure preparation.
* Defined leave application format.
* Track record of leaves taken and its maintenance.
* Attendance report generation.

1. **Parents communication**

* Summary of students’ grade
* Assessments
* Project submission.
* Involvement in co-curricular activities.
* Involvement in sports activities. Current academic progress.

1. **Any other specific requirement**

**SECTION 26**

**ADVANCED TECHNOLOGY**

**26.1 ROBOTICS**

**26.2 ARTIFICIAL INTELLIGENCE**

**26.1 ROBOTICS**

The branch of engineering-technology that involves the conception, design, manufacture and operation of robots. Most of the machines that we use today are a part of the Robotic technology that has encompassed our entire society and our lives.

**History of robotics in Education**

* The first educational robotics program called LOGO was introduced by Seymore Papert in 1980.
* LOGO is actually a programming language, he developed it to control robot “turtles”—to move them forward and backward, a specified distance, turn right or left a specified degree, drop a pen and draw.
* One of the next iteration of robotics education was LOGOs collaboration with Lego. It was first controlled through personal computers and later in the form of fully programmable bricks.
* This became what we know today as ***Lego Mindstorms.***
* Lego has continued to provide educational programs with its products for grades K-12 (from kindergartens to 12th class) with a variety of robotic capabilities.
* In addition to Lego, many companies now provide robotic building kits that educators can use to build systems thinking learn engineering and practice STEM concepts, following the theories of constructions.
* Options are out there for the smallest of budgets, as well as large-scale budgets. Worldwide, non-profit organizations have inspired the formation of robotics clubs, as well as international robotics competitions.

**What is “Robotics” in broad sense?**

* Robotics is related to the science of electronics, engineering, mechanics and software development.
* Robotics is a branch of technology that deals with design, construction, operation, structural disposition manufacture and application of Robots.
* An earliest design of a humanoid Robot was given by Leonardo Da Vinci.
* The concept of robotics was originally introduced in the middle ages for entertainment.
* Robotics has changed the structure of the society.
* With the advancement of science, robots are programmed to perform human functions.
* Robotics has crept into our daily lives.
* From calculators to the laptops, and large mechanical appliances like washing machines and cars, these robotic machines have helped to cut down the labour cost, thereby enhancing the end user product.

**Career options in Robotics**

* With the rising demand, a career in robotics has steadily gained pace among the creative and talented students.
* Revolution is created in the field of Robotics when imagination is coupled up with technology.
* Robotics is an essential component in any modern manufacturing environment.
* As factories increase their use of robots, the number of robotics related jobs will grow.
* Most of the machines that we use today are a part of robotic technology that has encompassed our entire society and our lives.
* Robotics has changed the structure of the society by providing safer work conditions, be it a production plant or extracting data from CD drives to cooking food in microwave, robotics has certainly made human life easier.
* As technology progresses, so too does the scope of what is considered robotics.
* 90% of robots could be found assembling car and other vehicles in automobile factories.
* With a wide spectrum of applications, there is an immense scope for a specialization in this ever expanding field.
* Robotic arms and legs will help disabled people.
* Robotics is a multi disciplinary stream or a career choice that helps students to acquire knowledge on each subject.

**Essentials of Robotics**

* Every branch of engineering plays a vital role when you get into robotics.
* Mechanical engineering
* Electrical engineering
* Computer engineering
* Electronics
* You need to be good at mechanical, electrical engineering and also be a good programmer and material scientist.
* Robotics allows multiple points of access to science and technology for students.
* In a vast expending and lucrative career options in robotics, researchers continue to improve on design, technology, machinery and overall benefits to end user.

**Learning of Robotics at school level**

* Robotics is a production-based learning module.
* While learning how science, technology, engineering and mathematics work and interact together, creativity is increased.
* So, teaching robotics in schools gives students the opportunity to address the growing demand of teaching STEM subjects.
* In today’s technology-driven world, it is more important than ever before to prepare students for the future.
* Teaching robots to young students throughout their schooling can increase their ability to be creative and innovative thinkers and more productive members of the society.
* By teaching our students the basics of robotics, we can open the whole new world to them and exciting opportunities that they would not have access otherwise.

**Requirement of funds**

* Introducing robotics into the curriculum is a bit costly affair for schools which are not in a position to spare funds for the purpose, but grants may be sought to fund such useful endeavors.
* There are some more affordable kits that are available to suit the school budget.

**K-12 Robotics Kits and other Programming Applications**

* Lego Mindstorms has a programmable graphic user interface that enables programming, but can be modified to use common languages instead, like ‘Java’ or ‘C’.
* In addition to Lego Mindstorms and ‘WeDo’, some of their other products, for early learners are also available.

**Robotic Providers**

* Wonder Workshops ‘Dash and Dot’ robots, are a big hit with elementary-aged learners. Wonder Workshop also offers a number of kid’s programming applications, such as ‘Blockly’, which has been effective in introducing programming in classrooms at the elementary level.
* ‘Blockly’ and ‘Scratch jr’ both are kid-friendly.
* There are so many other ‘programmable’ units available for use at different stages of curriculum, such as ‘Code.org’, ‘mama.codes’ ‘Sphero’.
* “Vex Robotics” are the popular robotics provider.
* There are so many other robotic providers in America which have been going strong for more than the quarter century. We can also have a beginning, if we desire so.

**Reasons to teach robotics in schools**

* An introduction to basic programming.
* Teaching of robotics increases creativity.
* To prepare them for future
* Teaching children how to turn frustration into innovation.
* Promoting inclusivity in order to avoid marginalization.

**An introduction to basic programming**

* Teaching programming computer is an excellent skill to begin with.
* But, the abstract subject of programming can be a challenging feat for young students. .
* Robotics is simpler to understand and more tangible introduction to programming.
* When students program physical robots, it’s easier to them to see what goes wrong as they learn what robots can and cannot do.
* They learn the skills needed to create precise and accurate instructions and fun while learning valuable lessons.
* Teaching robotics in schools gives students the opportunity to address the growing demand of teaching STEM subjects while learning how science, technology, engineering and math work together and interact.

**2. Increase Creativity**

* Robotics is a production-based learning module.
* Students have the opportunity to create something tangible and make it perform the action that they program it to do.
* Not a lot of fields combine creativity with engineering and technology—robotics does.
* When students are given the opportunity to create something interactive that they think is cool, their engagement level increases and they retain more information.
* We might be surprised to see at the things kids can create when given the right information and tools.

**3. Prepare them for future**

* To make students more likely to get a job in future and earn more money in their life-time.
* It is no secret that the jobs in the STEM field are the fastest growing careers, and are projected to grow further many folds in the next decade.
* Industries such as the **“drone industry”** have grown dramatically and rapidly in the last couple of years.
* It has been reported that 15,000 drones are being sold in the USA every month.
* Growing industries are going to need people, who can come up with new and innovative ideas, and equipped with the knowledge to designed and create the technology.
* When students are introduced to robotics in their school years, they can discover any interests and talents that they may have in this job market.
* Without the knowledge or access to the robotics education, there is no way for students to build interest in these fields.
* There are lots of potential creators and inventors in schools, especially public schools, who, if given a chance and resources may realize their potential.

**4. Teaching children how to turn frustration into innovation**

* Learning how to build and program a robot can be a complex and difficult process. Many students will struggle with the concept at first and often get frustrated.
* Robotics in schools can help these students turn their frustration into creativity and innovation.
* This is a valuable life lesson that teaches our students perseverance and determination when faced with challenges.
* Students learning robotics are able to channel their frustration into trying harder and aiming higher.
* All their hard work makes them feel sweeter, when they look at that finished product.
* Teaching robotics to students is to teach them how to persist and solve problems.
* It also helps them increase their maturity levels and prepare them for real world situations.

**5. Promoting inclusivity**

* Robotics is a field that is easily accessible to a wide range of students with varying talents and skills.
* Robotics is also a field that has the ability to empower the young girls in the classroom.
* STEM focused fields are traditionally male dominated, leaving young girls to question their ability to program or build computers.
* Because the tech world is not one that focuses on or is created for the girls, by engaging them with robotics and technology in the classroom we can begin to change that.
* When girls realize their ability to build robots and program, they are empowered to have successful futures and create innovative technology.

***By the time our students graduate in a few years or so, over half of the available jobs will be in STEM field and the large chunk of the rest will require employees to have some STEM knowledge. Robotics allows multiple points of access to Science, Technology, Engineering and Mathematics for students.***

**26.2 ARTIFICIAL INTELLIGENCE** **(AI)**

**Intelligence** refers to certain mental powers. There is no general agreement on which mental powers are intelligent or part of intelligence.

* A part of intelligence allows people to solve problems.
* These problems may or may not be easy to solve.
* These may involve abstract thoughts.
* For some, intelligence is a property or characteristics of mind.
* For others it is simply the working of brain, especially the cerebral cortex.
* There is no agreement about which has more influence on intelligence, genetics or environment.
* Scientists believe that intelligence can be measured or tested.
* A type of intelligence test would be solving many problems in a very short time.
* Most of the problems have to do with seeing things, or telling what a rotated shape would look like.
* Some are also related with mathematics; for example what number would come next in the arrow.
* Other tests have to do with words or the understanding of language.
* After giving such a test to a person, a number would be calculated to give an approximation of the Intelligence Quotient (IQ).
* Intelligence Quotient is the mental age of a person divided by his physical age.

**What is artificial intelligence (AI)?**

* It is sometimes called **Machine Intelligence.**
* It is the ability of the machine to imitate intelligent human/animal behavior, think, learn and perform tasks normally, such as visual perception, speech recognition and decision making skills. Such capabilities include; Computers playing chess. Car operation, speech recognition as in smart phones, military simulations, decision making skills etc.

**Summarization of Artificial Intelligence:**

An Intelligent entity created by humans, capable of performing tasks intelligently without being explicitly instructed, capable of thinking and acting rationally and humanely.

**History**

* The beginning of modern AI has been traced back to the time where classical philosophers attempted to describe human thinking as a symbolic system.
* Between 1940s and 50s, a handful of scientists from various fields discussed the possibility of creating an artificial brain.
* This lead to the rise of the field of AI research which was founded as an academic discipline in 1956—at a conference at Dartmouth, New Hampshire.
* The word **Artificial intelligence** was coined by John McCarthy**,** who is **n**ow considered as father of Artificial Intelligence.

***Its research can be divided into three different systems;***

1. **Analytical:** it has the only characteristics consistent with cognitive intelligence generating cognitive representation of the world and using learning based on the past experience to inform future decisions.
2. **Human-inspired:** it has elements from cognitive as well as emotional intelligence, understanding in addition to cognitive elements, but also human emotions considering them in their decision making.
3. **Humanized artificial Intelligence:** it shows the characteristics of all types of competence (that is cognitive, emotional and social intelligence), able to be self-conscious and self-aware in interactions with others.

**Artificial Intelligence Winters**

* Despite the well-funded global efforts over several decades, scientist found it extremely difficult to create intelligence in machines.
* Between 1970s and 1990s, scientist had to deal with an acute shortage of funding for AI research.
* These years are known as **AI winters.**

**Renewed thrust**

* However by the late 1990, American corporations once again were interested in AI. Furthermore the Japanese govt. too came up with plans to develop fifth generation computer for the advancement of AI.
* Finally in 1997 IBM’s Deep Blue became the first computer to beat the world chess champion Garry Kasparov, largely due to improvements in computer hardware AI and related technology and its continuous march.
* Corporations and governments too began the successful use of its methods in other domains.
* During the last 15 years many companies world over have managed to leveraged AI technology to a huge commercial advantage.
* The technology has managed to pay a role in every sector.
* AI technology is also used successfully in the stock market too.
* The inclusion of AI as an elective subject necessitated the need to ponder over the subject early and seriously. It has been decided that the subject will be introduced from class 9th onwards as a skill subject.
* Objective behind this exercise is to build strong background of AI in students and develop a mindset to think like a researcher.
* AI involves many different fields like computer science, mathematics, linguistics, psychology, neuroscience and philosophy.
* Researchers hope to create a “general artificial intelligence” which can solve many problems instead of focusing on just one.
* Researchers are also trying to create, creative and emotional AI which can possibly emphasize or create art.

**Drawbacks of AI in education**

* It does not teach social skills and human connections, hence cannot replace human teachers.
* It always requires the expensive internet connectivity, unaffordable for poor students.
* Available software for AI is expensive.
* AI machines are susceptible of errors peculiar to computer system such as crashing, virus attack and upgrade issues.

**Conclusion**

* Of course AI is not a substitute to teachers; however plenty of its useful benefits are there in education technology.
* AI will surely make the teacher’s job easy and more efficient. It will be helpful for teachers and parents alike.

**Some of the most important disciplines of AI are**

* **Perception—**understanding images, audio etc.
* **Reasoning—**answering questions from data.
* **Planning—**inferring the required steps to reach a goal.
* **Motion—**moving a robot in an environment.

**Main branches of AI**

* **Natural language processing (NPL)**
* Understanding human language.
* These areas overlap the real world projects and sometimes use many branches at a time e.g. an online bot might use Natural Language Processing (NPL) and sentiment analysis to understand a quarry and reasoning to offer a satisfactory reply.
* **Bot** is software that can respond back to user’s input, relying upon the input key words. All such scenarios are possible when there is some AI in a software system that can prompt relevant business units when an event occurs. No human intervention is required.
* **Machine Learning—ML**
* It is a method of data analysis, automating analytical model building.
* It is a branch of AI based on the idea of systems learning from data, identifying patterns and making decisions with very little human interception.
* **Deep Learning—DL**
* Deep learning is part of a broader family of machine learning methods based on artificial neural networks with representation learning.
* This learning can be divided into three categories, **supervised, semi-supervised, and un-supervised.**
* **Robotics**
* It is the study of robot technology.
* It makes use of the disciplines like dynamic system modeling and analysis, mathematics, physics, biology, mechanical engineering, computer science and engineering and automation (sensor, control and actuators) technology.
* **Expert System**
* In AI, an expert system is a computer system which emulates the decision making ability of a human expert.
* Expert systems are designed to solve complex problems by reasoning through bodies of knowledge, rather than through conventional procedural code.
* **Fuzzy Logic**
* It is an approach to computing based on ‘degrees of truth rather than usual true or false.
* Boolean logic on which the modern computer is based.
* **There are two other branches of AI**

1. **Narrow AI**

* It is a branch of computer science to create intelligent machines and smart software, along with parallel processing, computer graphics, algorithms, complexity theory, networking and programming languages.
* It has become an essential part of IT industry.
* The core problems of nAI include *programming computers for knowledge representation and reasoning, problem solving, perception, learning, planning, action etc.*
* The core parts of nAI are *knowledge engineering, Machine Learning, Machine Perception, Robotics.*
* It is to become an essential part of any industry.

1. **Broad AI**

* The broad AI is a science and technology to create intelligent cyber-physical systems, as computing systems, smart machines, intelligent software and algorithms
* The core problems of bAI include programming computers for, *general intelligence, knowledge representation and reasoning, problem solving, perception, learning, planning, action etc.*
* The core parts of bAI are, *computer science and software engineering, ontological engineering, Machine Learning, Machine Perception, NPL, cybernetics, Automation and Robotics, internet of everything etc.*
* Integrating all the key AI tools and approaches, the bAI involves the relevant concepts, ideas, theories and methods from all the sciences and technologies.

**AI in our classrooms**

* There is an acute shortage of teachers at all levels, be it the primary, secondary, senior secondary, college or university levels in Indian academic institutions.
* It implies that the dearth has a potential for employment of the subject teachers.
* Bringing AI to the classrooms might just be the solution that we have been looking for.

**Why AI is way forward**

* Right from e-commerce to healthcare, to education, in each and every sector, intervention of AI has increased many folds.
* Many companies are now investing in developing their own version of AI and Machine learning.
* So, what exactly is AI and machine learning and why it is called the next big thing?
* Each and every decision that we make is data driven.
* The best example of the same is the online recommendations that we receive while surfing retail websites such as Amazon or Flipkart.
* It is the Machine learning technology that recommends the products based on our previous purchase.
* Now, imagine using similar technology to track the performance of an individual student based on his/her previous grades, participation, and performances.
* Won’t it help the student to enhance his/her performance?
* Therefore AI has been taken seriously to fix loopholes in the education sector across the globe.

**Streamlining the education system**

* The best examples of AI that we know are “Cortana” by windows, “Siri” by apple and “Alexa” by Amazon.
* These are voice recognition systems that can imitate human intelligence.
* These systems are not only helping us to gain knowledge but also enhance our decision making ability.
* This technology is also known as machine learning which has been used in certain areas to track vital issues pertaining to education.

**Assistance to teachers**

* Teachers have to handle multiple responsibilities such as evaluation, grading, paper setting, crating mark-sheets and tracking the performance of every student. If these tasks are made easy for them, then they would focus more on course development, teaching quality and skill development.
* AI system can assist teachers on all these tasks making these tasks not only automated but also intelligent. With AI system in place, it will be easier for teachers to focus students rather than mundane administrative task.

**Accessible and inclusive education**

* India has over 600 million young people who deserve a good education, skills and jobs.
* Various tutoring programs, learning applications with skill-based curriculum are being developed across the globe.
* These AI enabled systems will bring globe classroom at our finger tips.
* It will not only empower students but also teachers in upgrading themselves with current trends.
* Such systems could be a boon for rural education.
* Students living in most remote parts of India would be able to learn the way it is learned in an urban setting.

**Proctored online assessment**

* Remote proctoring is the new technology that can help to simplify the exam invigilation process.
* Students can appear in exams from any location classroom/home.
* System is able to invigilate such exam remotely using remote proctoring.
* It uses a web camera attached to the computer system to authorize remote students.
* Many education institutes, corporate, universities have started using this technology to simplify the examination process with the AI of Remote Proctoring.

**Answer sheet evaluation**

* Physical sheet examination is a tough and time consuming process in educational institutions.
* Many institutions are moving towards *onscreen evaluation system* as it is intelligent and auto-calculates the score.
* It also ensures that the examiner has truly verified all pages of the answer sheets.
* It can help to automate result processing.

**CBSE class 9th AI syllabus 2019-2020.**

* The CBSE is introducing AI as an optional 6th subject at class 9th from the session 2019-2020 onwards.
* To enhance multi disciplinary approach in teaching-learning and also to sensitize the new generation, it was decided that schools may start AI ‘inspire module’ of 12 hours at class 8th itself.
* As per norms, a skilled subject, at secondary level, may be offered as additional sixth subject along with the existing five compulsory subjects.
* CBSE has collaborated with several organizations such as intel, IBM, Microsoft.
* 1000 teachers nominated by CBSE underwent a 3-day project-based training for practical, hand on knowledge of Microsoft 365 tools such as OneNote, Flipgrid, Teams, Outlook and Microsoft and Paint3D Microsoft.
* If a student fails in any one of the three elective subjects (science, math and social science) then it will be replaced by the skill subject (offered as 6th subject) and the result of class 10th will be computed based on best five subjects.
* However, if a student desires to reappear in the failed subject, he/she may appear along with compartment examination.
* Similarly at senior secondary level, the board has advised to schools to offer at least one or more skill-based subject as elective subject out of the 42 subjects.
* The board will provide the necessary support and guidance towards training and capacity building of teachers and other aspects for the successful implementation of skill-subjects from time to time.

**Role of AI in education**

* ***Artificial Intelligence can automate basic activities in education***
* Like grading. It is now possible for teachers to automate grading for nearly all kinds of multiple choices and fill-in-the-blank testing and automated grading of students’ writing may not be far behind.
* ***Educational software can be adapted to student need.***
* From KG to graduation level one of the key ways AI will impact education is through the application of greater levels of individualized learning.
* Some of this is already happening through growing adaptive learning programs, games and software.
* These systems respond to the need of the student, putting greater emphasis on certain topics, repeating things that students have not mastered, and generally students to work at their own pace.
* ***Students could get additional support from AI tutors.***
* Some tutoring programs based on AI already exist and students can go through basic mathematics, and other subjects.
* These programs can teach students fundamentals, but so far are not ideal for helping students learn high-order thinking and creativity, something that real world teaches are still require to facilitate.
* With rapid pace of technological advancement, advance tutoring system may not be a pipe dream.
* ***AI-driven programs can give students and educators helpful feedback***
* AI can, not only help teachers and students to craft courses that are customized to their needs, but it can also provide feedback to both about the success of the course as a whole.
* ***It is altering how we find and interact with information***
* We rarely notice AI systems that affect the information we see and find on a daily basis.
* Google adapts results to users based on location, Amazon makes recommendations based on previous purchases, Siri adapts to our needs and commands, and nearly all web ads are geared towards our interests and shopping preferences.
* These kinds of intelligent systems play a big role in how we interact with information in our professional and personal lives, and could just change how we find and use information in schools and other academic institutions.
* ***It can point out places where courses need to improve.***
* Teachers may not always be aware of gaps in their lectures and educational materials that can leave students confused about certain concepts. AI offers a way to solve that problem.
* Courser, a massive open online course provider, is already putting this into practice.
* When a large number of students are found to submit the wrong answer to a homework assignment, the system alerts the teacher and gives future students a customized massage that offers hints to the correct answer.
* This type of system helps to fill in the gap in explanation that can occur in courses, and help to ensure that all students are building the same conceptual foundation.
* Rather than waiting to hear back from the teacher/professor, students get immediate feedback that helps them understand a concept and remember how to do it correctly next time around.
* ***It could change the role of the teachers.***
* There will always be a role for teachers in education, but what that role is and what it entails may change due to new technology in the form of intelligent computing systems.
* AI can take over tasks like grading, can help students improve learning, and may even be a substitute for real world tutoring.
* Yet AI could be adapted to many other aspects of teaching as well.
* AI systems could be programmed to provide expertise, serving as a place for students to ask questions and find information or could even potentially take the place of teachers for very basic course materials.
* However, AI will shift the role of the teacher to that of facilitator.
* Teacher will supplement AI lessons, assist students who are struggling, and provide human interaction and hands-on experiences for students.
* In many ways technology is already driving some of these changes in the classroom, especially in schools those are online or embrace the flipped classroom model.
* ***AI can make trial-and-error learning less intimidating.***
* Trial and error is a critical part of learning, but for many students, the idea of failing or even not knowing the answer is embracing.
* Some simply don’t like being put on the spot in front of their peers or authority figure like a teacher.
* An intelligent computer system, designed to help students to learn, is a much daunting way to deal with trial and error.
* AI could offer students a way to experiment and learn in a relatively judgment-free environment, especially when AI tutors can offer solutions for improvement.
* In fact AI is the perfect format for supporting this kind of learning, as AI systems themselves often learn by trial-and-error method.
* ***Data powered by AI can change how schools find, teach and support students.***
* Smart data gathering, powered by intelligent computer systems, is already making changes to how colleges interact with prospective and current students.
* From helping students choose the best courses, intelligent computer systems are helping make every part of the college experience more closely tailored to students and their goals.
* ***AI may change where students learn, who teaches them and how they acquire basic skills.***
* AI has the potential to radically change just about everything we use to take for granted about education.
* Using AI systems, software and support, students can learn from anywhere in the world at any time.
* Educational programs powered by AI are already helping students to learn basic skills.
* As these programs grow and as developers learn more, they will likely offer students a much wider range of services.
* The result? Education could look a whole lot different a few decades from now.

**Employability and AI**

* The substitution of human labour by AI and robots is a keenly debated topic.
* It is claimed that a substantial share of jobs is at risk.
* Some other people think the advanced technology will lead to product innovations and hence to an unimaginable new occupations and the new jobs.
* Over all, it is believed that a positive impact on business and negative impact on employment.
* Firms with highly skilled work-force are optimistic than the firms with low skilled employees.
* Computers and robots are expected to create new products and services and that these product innovations will result in unimaginable new occupations.
* AI is driving great advances in medicine and health care with better disease prevention, higher accuracy diagnosis and more effective treatment and cures.
* A two-year study suggests that by 2030 intelligent agents and robots could replace as much 30% of the world’s current human labour.
* Despite the fears and concerns, every technological shift has ended up creating more jobs than were destroyed.
* Fears and concerns regarding AI and automation are understandable but ultimately unwarranted.
* Technological change may eliminate specific jobs, but it has always created more in the process.

**Types of AI careers**

* A career in AI can be realized within a variety of settings including private companies, public organizations, education, the Arts, healthcare facilities, government agencies, military etc, etc.
* Software analysts and developers.
* Computer scientists.
* Algorithm specialists.
* Mechanical engineers and maintenance technicians.
* Manufacturing and electrical engineers.
* Surgical technicians working with robotic tools.
* Medical health professionals working with artificial limbs, prosthetics, hearing aids and vision restoration devices.
* Military and aviation electricians working with flight simulators, drones and armaments.
* Graphic art designers, digital musicians, entertainment producers.
* Textile manufacturers and architects.
* Post secondary professors at technical and trade schools, vocational centres and universities.

**Currently AI is used in the following fields/things**

* Virtual assistant or chatbots.

*Alexa, Siri, and Google Assistance are the major examples of the virtual assistance services while automated bots answering the questions of customers are the examples of AI based chatbos working with best performance.*

* Agriculture and farming. In agriculture sectors autonomous tractors and drone monitoring are used to enhance the productivity and crop yield of farm lands.
* Robots and automated machines are also used in these fields to monitor the health condition of crop and harvesting.
* Autonomous vehicles or self-driving cars are the other examples of AI, fully integrated into such system to make the machine work automatically while understanding the nearby surroundings and real life scenario of the environment.
* Autonomous flying.
* Retail, shopping and fashion.
* Security and surveillance..
* Sports analytics and activities.
* Live stock and inventory management.
* Self driving cars and autonomous vehicles.
* Healthcare and medical imaging analysis.

AI is playing a vital role in Healthcare sector in empowering the machines to diagnosis, analyze and predict various types of the diseases, monitor the patients’ health conditions and help scientists to explore the new drug discoveries and medicine development helping people to get well soon and avoid the health problems in their life.

* Warehousing and logistic supply chain.
* AI is now getting integrated into multiple fields, and further there is too much scope to penetrate new fields and industries to improve their efficiency and productivity.
* Everything depends upon the availability of training data of related field to train the algorithms and develop the right AI model which can work flawlessly in respective fields.

***AI will take some tasks off the teachers’ hands, allowing them to focus elsewhere. With AI grading students, developing a personalized curriculum, identifying gaps, creating smart content and making education more accessible, the teachers will become coaches or facilitators.***

**27. EMPLOYABILITY AND THE SKILL QUOTIENT**

What one needs is a will to succeed, a perennial source of energy and unrelenting dynamism.

**It is important to be skilled, but what is equally important is to be employable.**

* One of the key requirements is a global mind set, which is about thinking big, thinking on a scale beyond what we are used to, thinking worldwide. When one is working in a global marketplace, a global mindset is indispensable. This can be achieved by developing capabilities to scan the world from broad perspective, an esthetic openness towards divergent ideas and experiences.
* Greater tolerance of other people and culture. It is important to build the capacity to rethink boundaries, to consider diversity an asset and to view uncertainty as an invigorating and natural part of the business, rather than being threatened by it.

A talent mixed with expertise in areas spanning from technology, domain (industry), business-practices usually is required by an agency for its need based employment.

The right combination of consistent good academic scores, sound knowledge of subject fundamentals, good communication and interpersonal skills can pave the way for a rewarding career.

It is important to develop behavioral skills, communication and presentation skills, dynamics, and business etiquettes, cross cultural adaptability and so on. Continuous learning, flexibility and a “can do” attitude are clear plus points in today’s environment.

**Positive attitude**

Employers love to employ those UGs/ PGS who may not have acquired niche skills, but has a positive attitude towards learning.

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**The End of new index ascent of pedagogy 20X30**

**TRANSITION FROM “LEARNING TO READ”,**

**THEN “READING TO LEARN”**

**The most crucial year in a child’s education may be the age of 8 years or third grade. According to a study, which focuses on improving the well being of younger students, found this age to be the developmental phase, when children’s transition from “*learning to read”* to “*reading to learn”* takes place.**

**The research also established that third standard students who lack proficiency in reading are four times as likely to become high school dropouts.**

**“If, we fail to encourage reading at that age, there is a risk for them of having a life-long issue of catching-up in life”.**

**“Edutainment”—media designed to educate through entertainment—is the best way to make screen time “relevant and meaningful”.**

**SECTION 26**

**ADVANCED TECHNOLOGY**

**26.1 ROBOTICS**

**26.2 ARTIFICIAL INTELLIGENCE**

**26.1 ROBOTICS**

The branch of engineering-technology that involves the conception, design, manufacture and operation of robots. Most of the machines that we use today are a part of the Robotic technology that has encompassed our entire society and our lives.

**History of robotics in Education**

* The first educational robotics program called LOGO was introduced by Seymore Papert in 1980.
* LOGO is actually a programming language, he developed it to control robot “turtles”—to move them forward and backward, a specified distance, turn right or left a specified degree, drop a pen and draw.
* One of the next iteration of robotics education was LOGOs collaboration with Lego. It was first controlled through personal computers and later in the form of fully programmable bricks.
* This became what we know today as ***Lego Mindstorms.***
* Lego has continued to provide educational programs with its products for grades K-12 (from kindergartens to 12th class) with a variety of robotic capabilities.
* In addition to Lego, many companies now provide robotic building kits that educators can use to build systems thinking learn engineering and practice STEM concepts, following the theories of constructions.
* Options are out there for the smallest of budgets, as well as large-scale budgets. Worldwide, non-profit organizations have inspired the formation of robotics clubs, as well as international robotics competitions.

**What is “Robotics” in broad sense?**

* Robotics is related to the science of electronics, engineering, mechanics and software development.
* Robotics is a branch of technology that deals with design, construction, operation, structural disposition manufacture and application of Robots.
* An earliest design of a humanoid Robot was given by Leonardo Da Vinci.
* The concept of robotics was originally introduced in the middle ages for entertainment.
* Robotics has changed the structure of the society.
* With the advancement of science, robots are programmed to perform human functions.
* Robotics has crept into our daily lives.
* From calculators to the laptops, and large mechanical appliances like washing machines and cars, these robotic machines have helped to cut down the labour cost, thereby enhancing the end user product.

**Career options in Robotics**

* With the rising demand, a career in robotics has steadily gained pace among the creative and talented students.
* Revolution is created in the field of Robotics when imagination is coupled up with technology.
* Robotics is an essential component in any modern manufacturing environment.
* As factories increase their use of robots, the number of robotics related jobs will grow.
* Most of the machines that we use today are a part of robotic technology that has encompassed our entire society and our lives.
* Robotics has changed the structure of the society by providing safer work conditions, be it a production plant or extracting data from CD drives to cooking food in microwave, robotics has certainly made human life easier.
* As technology progresses, so too does the scope of what is considered robotics.
* 90% of robots could be found assembling car and other vehicles in automobile factories.
* With a wide spectrum of applications, there is an immense scope for a specialization in this ever expanding field.
* Robotic arms and legs will help disabled people.
* Robotics is a multi disciplinary stream or a career choice that helps students to acquire knowledge on each subject.

**Essentials of Robotics**

* Every branch of engineering plays a vital role when you get into robotics.
* Mechanical engineering
* Electrical engineering
* Computer engineering
* Electronics
* You need to be good at mechanical, electrical engineering and also be a good programmer and material scientist.
* Robotics allows multiple points of access to science and technology for students.
* In a vast expending and lucrative career options in robotics, researchers continue to improve on design, technology, machinery and overall benefits to end user.

**Learning of Robotics at school level**

* Robotics is a production-based learning module.
* While learning how science, technology, engineering and mathematics work and interact together, creativity is increased.
* So, teaching robotics in schools gives students the opportunity to address the growing demand of teaching STEM subjects.
* In today’s technology-driven world, it is more important than ever before to prepare students for the future.
* Teaching robots to young students throughout their schooling can increase their ability to be creative and innovative thinkers and more productive members of the society.
* By teaching our students the basics of robotics, we can open the whole new world to them and exciting opportunities that they would not have access otherwise.

**Requirement of funds**

* Introducing robotics into the curriculum is a bit costly affair for schools which are not in a position to spare funds for the purpose, but grants may be sought to fund such useful endeavors.
* There are some more affordable kits that are available to suit the school budget.

**K-12 Robotics Kits and other Programming Applications**

* Lego Mindstorms has a programmable graphic user interface that enables programming, but can be modified to use common languages instead, like ‘Java’ or ‘C’.
* In addition to Lego Mindstorms and ‘WeDo’, some of their other products, for early learners are also available.

**Robotic Providers**

* Wonder Workshops ‘Dash and Dot’ robots, are a big hit with elementary-aged learners. Wonder Workshop also offers a number of kid’s programming applications, such as ‘Blockly’, which has been effective in introducing programming in classrooms at the elementary level.
* ‘Blockly’ and ‘Scratch jr’ both are kid-friendly.
* There are so many other ‘programmable’ units available for use at different stages of curriculum, such as ‘Code.org’, ‘mama.codes’ ‘Sphero’.
* “Vex Robotics” are the popular robotics provider.
* There are so many other robotic providers in America which have been going strong for more than the quarter century. We can also have a beginning, if we desire so.

**Reasons to teach robotics in schools**

* An introduction to basic programming.
* Teaching of robotics increases creativity.
* To prepare them for future
* Teaching children how to turn frustration into innovation.
* Promoting inclusivity in order to avoid marginalization.

**An introduction to basic programming**

* Teaching programming computer is an excellent skill to begin with.
* But, the abstract subject of programming can be a challenging feat for young students. .
* Robotics is simpler to understand and more tangible introduction to programming.
* When students program physical robots, it’s easier to them to see what goes wrong as they learn what robots can and cannot do.
* They learn the skills needed to create precise and accurate instructions and fun while learning valuable lessons.
* Teaching robotics in schools gives students the opportunity to address the growing demand of teaching STEM subjects while learning how science, technology, engineering and math work together and interact.

**2. Increase Creativity**

* Robotics is a production-based learning module.
* Students have the opportunity to create something tangible and make it perform the action that they program it to do.
* Not a lot of fields combine creativity with engineering and technology—robotics does.
* When students are given the opportunity to create something interactive that they think is cool, their engagement level increases and they retain more information.
* We might be surprised to see at the things kids can create when given the right information and tools.

**3. Prepare them for future**

* To make students more likely to get a job in future and earn more money in their life-time.
* It is no secret that the jobs in the STEM field are the fastest growing careers, and are projected to grow further many folds in the next decade.
* Industries such as the **“drone industry”** have grown dramatically and rapidly in the last couple of years.
* It has been reported that 15,000 drones are being sold in the USA every month.
* Growing industries are going to need people, who can come up with new and innovative ideas, and equipped with the knowledge to designed and create the technology.
* When students are introduced to robotics in their school years, they can discover any interests and talents that they may have in this job market.
* Without the knowledge or access to the robotics education, there is no way for students to build interest in these fields.
* There are lots of potential creators and inventors in schools, especially public schools, who, if given a chance and resources may realize their potential.

**4. Teaching children how to turn frustration into innovation**

* Learning how to build and program a robot can be a complex and difficult process. Many students will struggle with the concept at first and often get frustrated.
* Robotics in schools can help these students turn their frustration into creativity and innovation.
* This is a valuable life lesson that teaches our students perseverance and determination when faced with challenges.
* Students learning robotics are able to channel their frustration into trying harder and aiming higher.
* All their hard work makes them feel sweeter, when they look at that finished product.
* Teaching robotics to students is to teach them how to persist and solve problems.
* It also helps them increase their maturity levels and prepare them for real world situations.

**5. Promoting inclusivity**

* Robotics is a field that is easily accessible to a wide range of students with varying talents and skills.
* Robotics is also a field that has the ability to empower the young girls in the classroom.
* STEM focused fields are traditionally male dominated, leaving young girls to question their ability to program or build computers.
* Because the tech world is not one that focuses on or is created for the girls, by engaging them with robotics and technology in the classroom we can begin to change that.
* When girls realize their ability to build robots and program, they are empowered to have successful futures and create innovative technology.

***By the time our students graduate in a few years or so, over half of the available jobs will be in STEM field and the large chunk of the rest will require employees to have some STEM knowledge. Robotics allows multiple points of access to Science, Technology, Engineering and Mathematics for students.***

**26.2 ARTIFICIAL INTELLIGENCE** **(AI)**

**Intelligence** refers to certain mental powers. There is no general agreement on which mental powers are intelligent or part of intelligence.

* A part of intelligence allows people to solve problems.
* These problems may or may not be easy to solve.
* These may involve abstract thoughts.
* For some, intelligence is a property or characteristics of mind.
* For others it is simply the working of brain, especially the cerebral cortex.
* There is no agreement about which has more influence on intelligence, genetics or environment.
* Scientists believe that intelligence can be measured or tested.
* A type of intelligence test would be solving many problems in a very short time.
* Most of the problems have to do with seeing things, or telling what a rotated shape would look like.
* Some are also related with mathematics; for example what number would come next in the arrow.
* Other tests have to do with words or the understanding of language.
* After giving such a test to a person, a number would be calculated to give an approximation of the Intelligence Quotient (IQ).
* Intelligence Quotient is the mental age of a person divided by his physical age.

**What is artificial intelligence (AI)?**

* It is sometimes called **Machine Intelligence.**
* It is the ability of the machine to imitate intelligent human/animal behavior, think, learn and perform tasks normally, such as visual perception, speech recognition and decision making skills. Such capabilities include; Computers playing chess. Car operation, speech recognition as in smart phones, military simulations, decision making skills etc.

**Summarization of Artificial Intelligence:**

An Intelligent entity created by humans, capable of performing tasks intelligently without being explicitly instructed, capable of thinking and acting rationally and humanely.

**History**

* The beginning of modern AI has been traced back to the time where classical philosophers attempted to describe human thinking as a symbolic system.
* Between 1940s and 50s, a handful of scientists from various fields discussed the possibility of creating an artificial brain.
* This lead to the rise of the field of AI research which was founded as an academic discipline in 1956—at a conference at Dartmouth, New Hampshire.
* The word **Artificial intelligence** was coined by John McCarthy**,** who is **n**ow considered as father of Artificial Intelligence.

***Its research can be divided into three different systems;***

1. **Analytical:** it has the only characteristics consistent with cognitive intelligence generating cognitive representation of the world and using learning based on the past experience to inform future decisions.
2. **Human-inspired:** it has elements from cognitive as well as emotional intelligence, understanding in addition to cognitive elements, but also human emotions considering them in their decision making.
3. **Humanized artificial Intelligence:** it shows the characteristics of all types of competence (that is cognitive, emotional and social intelligence), able to be self-conscious and self-aware in interactions with others.

**Artificial Intelligence Winters**

* Despite the well-funded global efforts over several decades, scientist found it extremely difficult to create intelligence in machines.
* Between 1970s and 1990s, scientist had to deal with an acute shortage of funding for AI research.
* These years are known as **AI winters.**

**Renewed thrust**

* However by the late 1990, American corporations once again were interested in AI. Furthermore the Japanese govt. too came up with plans to develop fifth generation computer for the advancement of AI.
* Finally in 1997 IBM’s Deep Blue became the first computer to beat the world chess champion Garry Kasparov, largely due to improvements in computer hardware AI and related technology and its continuous march.
* Corporations and governments too began the successful use of its methods in other domains.
* During the last 15 years many companies world over have managed to leveraged AI technology to a huge commercial advantage.
* The technology has managed to pay a role in every sector.
* AI technology is also used successfully in the stock market too.
* The inclusion of AI as an elective subject necessitated the need to ponder over the subject early and seriously. It has been decided that the subject will be introduced from class 9th onwards as a skill subject.
* Objective behind this exercise is to build strong background of AI in students and develop a mindset to think like a researcher.
* AI involves many different fields like computer science, mathematics, linguistics, psychology, neuroscience and philosophy.
* Researchers hope to create a “general artificial intelligence” which can solve many problems instead of focusing on just one.
* Researchers are also trying to create, creative and emotional AI which can possibly emphasize or create art.

**Drawbacks of AI in education**

* It does not teach social skills and human connections, hence cannot replace human teachers.
* It always requires the expensive internet connectivity, unaffordable for poor students.
* Available software for AI is expensive.
* AI machines are susceptible of errors peculiar to computer system such as crashing, virus attack and upgrade issues.

**Conclusion**

* Of course AI is not a substitute to teachers; however plenty of its useful benefits are there in education technology.
* AI will surely make the teacher’s job easy and more efficient. It will be helpful for teachers and parents alike.

**Some of the most important disciplines of AI are**

* **Perception—**understanding images, audio etc.
* **Reasoning—**answering questions from data.
* **Planning—**inferring the required steps to reach a goal.
* **Motion—**moving a robot in an environment.

**Main branches of AI**

* **Natural language processing (NPL)**
* Understanding human language.
* These areas overlap the real world projects and sometimes use many branches at a time e.g. an online bot might use Natural Language Processing (NPL) and sentiment analysis to understand a quarry and reasoning to offer a satisfactory reply.
* **Bot** is software that can respond back to user’s input, relying upon the input key words. All such scenarios are possible when there is some AI in a software system that can prompt relevant business units when an event occurs. No human intervention is required.
* **Machine Learning—ML**
* It is a method of data analysis, automating analytical model building.
* It is a branch of AI based on the idea of systems learning from data, identifying patterns and making decisions with very little human interception.
* **Deep Learning—DL**
* Deep learning is part of a broader family of machine learning methods based on artificial neural networks with representation learning.
* This learning can be divided into three categories, **supervised, semi-supervised, and un-supervised.**

**Robotics**

* It is the study of robot technology.
* It makes use of the disciplines like dynamic system modeling and analysis, mathematics, physics, biology, mechanical engineering, computer science and engineering and automation (sensor, control and actuators) technology.
* **Expert System**
* In AI, an expert system is a computer system which emulates the decision making ability of a human expert.
* Expert systems are designed to solve complex problems by reasoning through bodies of knowledge, rather than through conventional procedural code.
* **Fuzzy Logic**
* It is an approach to computing based on ‘degrees of truth rather than usual true or false.
* Boolean logic on which the modern computer is based.
* **There are two other branches of AI**

1. **Narrow AI**

* It is a branch of computer science to create intelligent machines and smart software, along with parallel processing, computer graphics, algorithms, complexity theory, networking and programming languages.
* It has become an essential part of IT industry.
* The core problems of nAI include *programming computers for knowledge representation and reasoning, problem solving, perception, learning, planning, action etc.*
* The core parts of nAI are *knowledge engineering, Machine Learning, Machine Perception, Robotics.*
* It is to become an essential part of any industry.

1. **Broad AI**

* The broad AI is a science and technology to create intelligent cyber-physical systems, as computing systems, smart machines, intelligent software and algorithms
* The core problems of bAI include programming computers for, *general intelligence, knowledge representation and reasoning, problem solving, perception, learning, planning, action etc.*
* The core parts of bAI are, *computer science and software engineering, ontological engineering, Machine Learning, Machine Perception, NPL, cybernetics, Automation and Robotics, internet of everything etc.*
* Integrating all the key AI tools and approaches, the bAI involves the relevant concepts, ideas, theories and methods from all the sciences and technologies.

**AI in our classrooms**

* There is an acute shortage of teachers at all levels, be it the primary, secondary, senior secondary, college or university levels in Indian academic institutions.
* It implies that the dearth has a potential for employment of the subject teachers.
* Bringing AI to the classrooms might just be the solution that we have been looking for.

**Why AI is way forward**

* Right from e-commerce to healthcare, to education, in each and every sector, intervention of AI has increased many folds.
* Many companies are now investing in developing their own version of AI and Machine learning.
* So, what exactly is AI and machine learning and why it is called the next big thing?
* Each and every decision that we make is data driven.
* The best example of the same is the online recommendations that we receive while surfing retail websites such as Amazon or Flipkart.
* It is the Machine learning technology that recommends the products based on our previous purchase.
* Now, imagine using similar technology to track the performance of an individual student based on his/her previous grades, participation, and performances.
* Won’t it help the student to enhance his/her performance?
* Therefore AI has been taken seriously to fix loopholes in the education sector across the globe.

**Streamlining the education system**

* The best examples of AI that we know are “Cortana” by windows, “Siri” by apple and “Alexa” by Amazon.
* These are voice recognition systems that can imitate human intelligence.
* These systems are not only helping us to gain knowledge but also enhance our decision making ability.
* This technology is also known as machine learning which has been used in certain areas to track vital issues pertaining to education.

**Assistance to teachers**

* Teachers have to handle multiple responsibilities such as evaluation, grading, paper setting, crating mark-sheets and tracking the performance of every student. If these tasks are made easy for them, then they would focus more on course development, teaching quality and skill development.
* AI system can assist teachers on all these tasks making these tasks not only automated but also intelligent. With AI system in place, it will be easier for teachers to focus students rather than mundane administrative task.

**Accessible and inclusive education**

* India has over 600 million young people who deserve a good education, skills and jobs.
* Various tutoring programs, learning applications with skill-based curriculum are being developed across the globe.
* These AI enabled systems will bring globe classroom at our finger tips.
* It will not only empower students but also teachers in upgrading themselves with current trends.
* Such systems could be a boon for rural education.
* Students living in most remote parts of India would be able to learn the way it is learned in an urban setting.

**Proctored online assessment**

* Remote proctoring is the new technology that can help to simplify the exam invigilation process.
* Students can appear in exams from any location classroom/home.
* System is able to invigilate such exam remotely using remote proctoring.
* It uses a web camera attached to the computer system to authorize remote students.
* Many education institutes, corporate, universities have started using this technology to simplify the examination process with the AI of Remote Proctoring.

**Answer sheet evaluation**

* Physical sheet examination is a tough and time consuming process in educational institutions.
* Many institutions are moving towards *onscreen evaluation system* as it is intelligent and auto-calculates the score.
* It also ensures that the examiner has truly verified all pages of the answer sheets.
* It can help to automate result processing.

**CBSE class 9th AI syllabus 2019-2020.**

* The CBSE is introducing AI as an optional 6th subject at class 9th from the session 2019-2020 onwards.
* To enhance multi disciplinary approach in teaching-learning and also to sensitize the new generation, it was decided that schools may start AI ‘inspire module’ of 12 hours at class 8th itself.
* As per norms, a skilled subject, at secondary level, may be offered as additional sixth subject along with the existing five compulsory subjects.
* CBSE has collaborated with several organizations such as intel, IBM, Microsoft.
* 1000 teachers nominated by CBSE underwent a 3-day project-based training for practical, hand on knowledge of Microsoft 365 tools such as OneNote, Flipgrid, Teams, Outlook and Microsoft and Paint3D Microsoft.
* If a student fails in any one of the three elective subjects (science, math and social science) then it will be replaced by the skill subject (offered as 6th subject) and the result of class 10th will be computed based on best five subjects.
* However, if a student desires to reappear in the failed subject, he/she may appear along with compartment examination.
* Similarly at senior secondary level, the board has advised to schools to offer at least one or more skill-based subject as elective subject out of the 42 subjects.
* The board will provide the necessary support and guidance towards training and capacity building of teachers and other aspects for the successful implementation of skill-subjects from time to time.

**Role of AI in education**

* ***Artificial Intelligence can automate basic activities in education***
* Like grading. It is now possible for teachers to automate grading for nearly all kinds of multiple choices and fill-in-the-blank testing and automated grading of students’ writing may not be far behind.
* ***Educational software can be adapted to student need.***
* From KG to graduation level one of the key ways AI will impact education is through the application of greater levels of individualized learning.
* Some of this is already happening through growing adaptive learning programs, games and software.
* These systems respond to the need of the student, putting greater emphasis on certain topics, repeating things that students have not mastered, and generally students to work at their own pace.
* ***Students could get additional support from AI tutors.***
* Some tutoring programs based on AI already exist and students can go through basic mathematics, and other subjects.
* These programs can teach students fundamentals, but so far are not ideal for helping students learn high-order thinking and creativity, something that real world teaches are still require to facilitate.
* With rapid pace of technological advancement, advance tutoring system may not be a pipe dream.
* ***AI-driven programs can give students and educators helpful feedback***
* AI can, not only help teachers and students to craft courses that are customized to their needs, but it can also provide feedback to both about the success of the course as a whole.
* ***It is altering how we find and interact with information***
* We rarely notice AI systems that affect the information we see and find on a daily basis.
* Google adapts results to users based on location, Amazon makes recommendations based on previous purchases, Siri adapts to our needs and commands, and nearly all web ads are geared towards our interests and shopping preferences.
* These kinds of intelligent systems play a big role in how we interact with information in our professional and personal lives, and could just change how we find and use information in schools and other academic institutions.
* ***It can point out places where courses need to improve.***
* Teachers may not always be aware of gaps in their lectures and educational materials that can leave students confused about certain concepts. AI offers a way to solve that problem.
* Courser, a massive open online course provider, is already putting this into practice.
* When a large number of students are found to submit the wrong answer to a homework assignment, the system alerts the teacher and gives future students a customized massage that offers hints to the correct answer.
* This type of system helps to fill in the gap in explanation that can occur in courses, and help to ensure that all students are building the same conceptual foundation.
* Rather than waiting to hear back from the teacher/professor, students get immediate feedback that helps them understand a concept and remember how to do it correctly next time around.
* ***It could change the role of the teachers.***
* There will always be a role for teachers in education, but what that role is and what it entails may change due to new technology in the form of intelligent computing systems.
* AI can take over tasks like grading, can help students improve learning, and may even be a substitute for real world tutoring.
* Yet AI could be adapted to many other aspects of teaching as well.
* AI systems could be programmed to provide expertise, serving as a place for students to ask questions and find information or could even potentially take the place of teachers for very basic course materials.
* However, AI will shift the role of the teacher to that of facilitator.
* Teacher will supplement AI lessons, assist students who are struggling, and provide human interaction and hands-on experiences for students.
* In many ways technology is already driving some of these changes in the classroom, especially in schools those are online or embrace the flipped classroom model.
* ***AI can make trial-and-error learning less intimidating.***
* Trial and error is a critical part of learning, but for many students, the idea of failing or even not knowing the answer is embracing.
* Some simply don’t like being put on the spot in front of their peers or authority figure like a teacher.
* An intelligent computer system, designed to help students to learn, is a much daunting way to deal with trial and error.
* AI could offer students a way to experiment and learn in a relatively judgment-free environment, especially when AI tutors can offer solutions for improvement.
* In fact AI is the perfect format for supporting this kind of learning, as AI systems themselves often learn by trial-and-error method.
* ***Data powered by AI can change how schools find, teach and support students.***
* Smart data gathering, powered by intelligent computer systems, is already making changes to how colleges interact with prospective and current students.
* From helping students choose the best courses, intelligent computer systems are helping make every part of the college experience more closely tailored to students and their goals.
* ***AI may change where students learn, who teaches them and how they acquire basic skills.***
* AI has the potential to radically change just about everything we use to take for granted about education.
* Using AI systems, software and support, students can learn from anywhere in the world at any time.
* Educational programs powered by AI are already helping students to learn basic skills.
* As these programs grow and as developers learn more, they will likely offer students a much wider range of services.
* The result? Education could look a whole lot different a few decades from now.

**Employability and AI**

* The substitution of human labour by AI and robots is a keenly debated topic.
* It is claimed that a substantial share of jobs is at risk.
* Some other people think the advanced technology will lead to product innovations and hence to an unimaginable new occupations and the new jobs.
* Over all, it is believed that a positive impact on business and negative impact on employment.
* Firms with highly skilled work-force are optimistic than the firms with low skilled employees.
* Computers and robots are expected to create new products and services and that these product innovations will result in unimaginable new occupations.
* AI is driving great advances in medicine and health care with better disease prevention, higher accuracy diagnosis and more effective treatment and cures.
* A two-year study suggests that by 2030 intelligent agents and robots could replace as much 30% of the world’s current human labour.
* Despite the fears and concerns, every technological shift has ended up creating more jobs than were destroyed.
* Fears and concerns regarding AI and automation are understandable but ultimately unwarranted.
* Technological change may eliminate specific jobs, but it has always created more in the process.

**Types of AI careers**

* A career in AI can be realized within a variety of settings including private companies, public organizations, education, the Arts, healthcare facilities, government agencies, military etc, etc.
* Software analysts and developers.
* Computer scientists.
* Algorithm specialists.
* Mechanical engineers and maintenance technicians.
* Manufacturing and electrical engineers.
* Surgical technicians working with robotic tools.
* Medical health professionals working with artificial limbs, prosthetics, hearing aids and vision restoration devices.
* Military and aviation electricians working with flight simulators, drones and armaments.
* Graphic art designers, digital musicians, entertainment producers.
* Textile manufacturers and architects.
* Post secondary professors at technical and trade schools, vocational centres and universities.

**Currently AI is used in the following fields/things**

* Virtual assistant or chatbots.

*Alexa, Siri, and Google Assistance are the major examples of the virtual assistance services while automated bots answering the questions of customers are the examples of AI based chatbos working with best performance.*

* Agriculture and farming. In agriculture sectors autonomous tractors and drone monitoring are used to enhance the productivity and crop yield of farm lands.
* Robots and automated machines are also used in these fields to monitor the health condition of crop and harvesting.
* Autonomous vehicles or self-driving cars are the other examples of AI, fully integrated into such system to make the machine work automatically while understanding the nearby surroundings and real life scenario of the environment.
* Autonomous flying.
* Retail, shopping and fashion.
* Security and surveillance..
* Sports analytics and activities.
* Live stock and inventory management.
* Self driving cars and autonomous vehicles.
* Healthcare and medical imaging analysis.

AI is playing a vital role in Healthcare sector in empowering the machines to diagnosis, analyze and predict various types of the diseases, monitor the patients’ health conditions and help scientists to explore the new drug discoveries and medicine development helping people to get well soon and avoid the health problems in their life.

* Warehousing and logistic supply chain.
* AI is now getting integrated into multiple fields, and further there is too much scope to penetrate new fields and industries to improve their efficiency and productivity.
* Everything depends upon the availability of training data of related field to train the algorithms and develop the right AI model which can work flawlessly in respective fields.

***AI will take some tasks off the teachers’ hands, allowing them to focus elsewhere. With AI grading students, developing a personalized curriculum, identifying gaps, creating smart content and making education more accessible, the teachers will become coaches or facilitators.***

**27. EMPLOYABILITY AND THE SKILL QUOTIENT**

What one needs is a will to succeed, a perennial source of energy and unrelenting dynamism.

**It is important to be skilled, but what is equally important is to be employable.**

* One of the key requirements is a global mind set, which is about thinking big, thinking on a scale beyond what we are used to, thinking worldwide. When one is working in a global marketplace, a global mindset is indispensable. This can be achieved by developing capabilities to scan the world from broad perspective, an esthetic openness towards divergent ideas and experiences.
* Greater tolerance of other people and culture. It is important to build the capacity to rethink boundaries, to consider diversity an asset and to view uncertainty as an invigorating and natural part of the business, rather than being threatened by it.

A talent mixed with expertise in areas spanning from technology, domain (industry), business-practices usually is required by an agency for its need based employment.

The right combination of consistent good academic scores, sound knowledge of subject fundamentals, good communication and interpersonal skills can pave the way for a rewarding career.

It is important to develop behavioral skills, communication and presentation skills, dynamics, and business etiquettes, cross cultural adaptability and so on. Continuous learning, flexibility and a “can do” attitude are clear plus points in today’s environment.

**Positive attitude**

Employers love to employ those UGs/ PGS who may not have acquired niche skills, but has a positive attitude towards learning.

**TIME**

**Time waits for no one**

**Time stops for no one**

**Your excuses will not slow down the time**

**Your indecisions will not delay the time**

**Your complaining will not install the time**

**Your requests will not turn back the time**

**So, don’t waste your time in anger, requests, worries and hate**

**Because, time will not turn back and cry along with you**

**It’s time to let go off the ‘past’**

**Start planning for the future at present**

**Your only time is now**

**So, make sure you spend your time with the right purpose**

**With the right deeds**

**With the right emotions**

**With the right thoughts**

**And with the right people**

**Time flies! That’s a fact**

**But, you can always spread your wings and soar with the time**

**And navigate life the best you can**

**Remember! You are passing through a way**

**that you will never pass again**

**Make it count—Time**

**Do what it does.**