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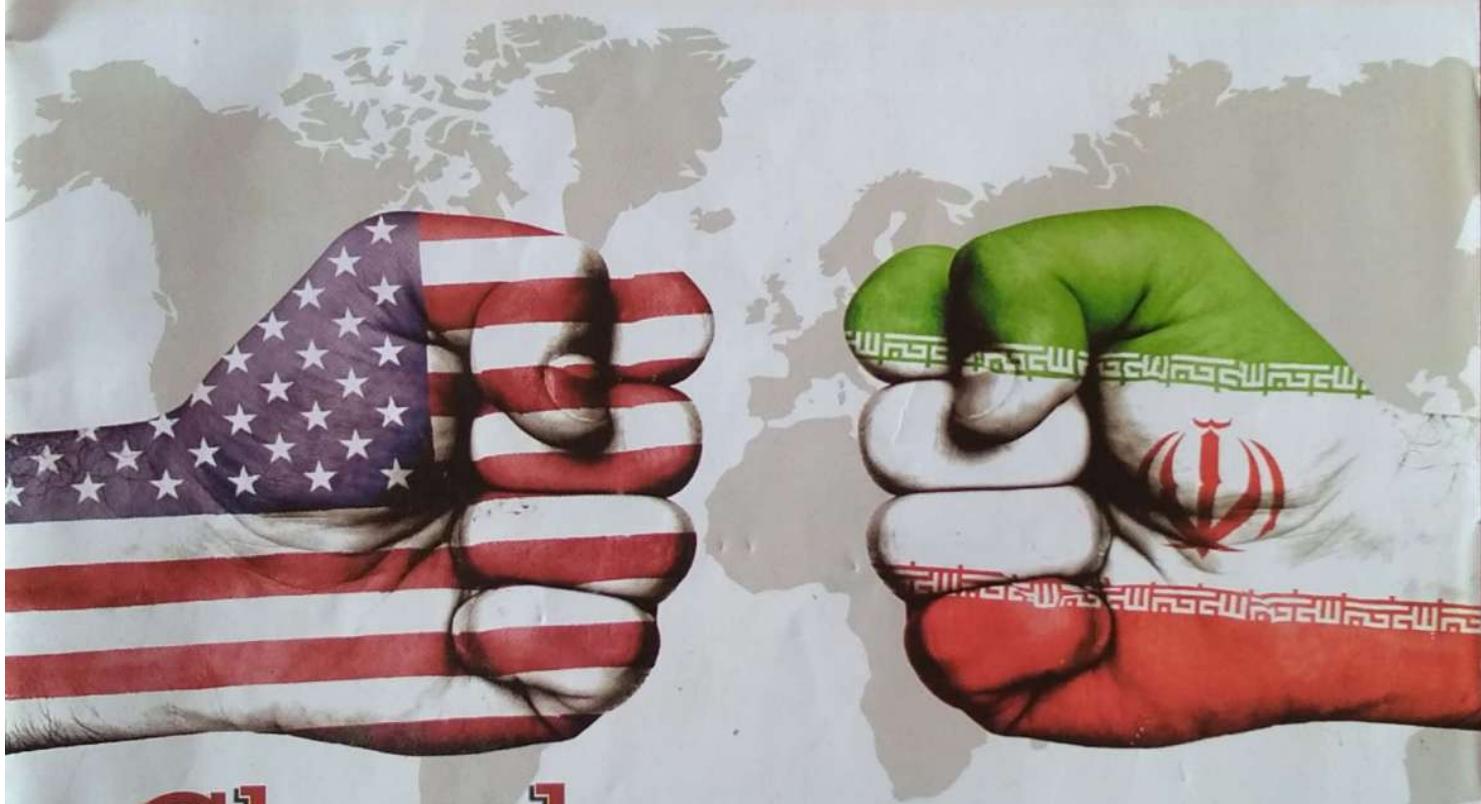


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# BANKING SERVICES CHRONICLE

*a complete magazine for*

**BANKS,SSC,CSAT,MBA,NDA&CDSEXAMS**



## Clouds of War

Previous Paper  
**RRB Officers (PT)**

Practice Set  
**RRB Officers (PT)**

Practice Set  
**SBI PO (Main)**

Practice Set  
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**Live  
Classes**

(See page 66-67)

## EX-CEA SAYS GDP GROWTH OVERESTIMATED

# Credibility of Govt statistics is under the scanner

■ Uday Kumar ■

Arvind Subramanian, the Chief Economic Adviser (CEA) from Oct 2014 to Jun 2018, author of four Economic Surveys and presently at Harvard University and the Peterson Institute for International Economics, has dropped a cluster bomb. In a research paper titled 'India's GDP Misestimation: Likelihood, Magnitudes, Mechanisms, and Implications', Subramanian states that there has been a significant overestimation of growth between 2012-13 and 2017-18. While official estimates peg the annual average GDP growth during this period at 6.9 per cent, he suggests that actual growth might have been about 4.5 per cent.

Subramanian uses 17 quantitative indicators that tend to be well correlated to GDP growth. Some of these are electricity consumption, two- and three-wheeler sales, commercial vehicles and tractor sales, the index of industrial production, petroleum consumption, output of cement and steel, real credit and real exports and imports of goods and services. He then correlates each of these to real GDP growth across two distinct periods: 2001-02 to 2011-12, and 2012-13 to 2017-18. Having done so, he finds a discrepancy in correlation between the two periods. Simply put, the correlations of these 17 indicators to GDP growth in the second period are much weaker than in the first. There are perplexing sign changes as well. He finds that while 16 of the 17 indicators are positively correlated with GDP growth in the first period (2001-02 to 2011-12)—as one would expect—11 of these 17 are negatively correlated with GDP growth in the second (2012-13 to 2017-18).

Like most govt statistics, doubts have been raised on the GDP growth rates from the Central Statistics Office (CSO) following the new series of GDP estimates released by the National

Democratic Alliance (NDA) govt in 2015. So far, the govt's response has been an outright denial of any problem with the new methodology of GDP estimation. In the absence of raw data, it is hard for private researchers to raise questions on the credibility of official statistics. The recently released report of the National Sample Survey Office (NSSO) on unorganised enterprises has confirmed the doubts on suitability of MCA-21 data for estimating GDP. MCA-21 is a key database that forms the basis of GDP estimation in the new series. But as the NSSO report showed, there are a number of non-existent entities, along with misclassified enterprises, which raise suspicions on their reliability.

But even before the NSSO report was released, doubts were raised on the new series of GDP estimates, which often showed trends at variance with other independent sources of data.

To be fair, Subramanian did raise doubts on the credibility of the new series in economic surveys, and point it out as a puzzle. Nonetheless, critics may have a point, as far as the timing of the report goes, and over his silence on some of these during the crucial period when the economy was going through a severe crisis. The implications of the growth overestimation are not just an academic matter. The data is a crucial input to a better understanding of the health of the economy and the consequent policy response to it.

In any case, the question is not just limited to the use of GDP data and the inference drawn from it on the health of the economy. GDP data is only one among the many databases that are good and strong proxies for the health of the economy. The fact that demonetisation led to some deceleration in the overall economy, driven by the informal sector, does not require any proof from the national

accounts. Similar is the fact that the economy has been going through a period of jobless growth. So is the case of the worst phase of the agrarian crisis. The fact that all of these were a result of severe demand deflation, particularly in the rural economy, did not require time series data on GDP. Most of these were being argued by independent researchers using the same 17 data series.

It is not the complicity of Subramanian on the GDP estimates despite overwhelming evidence which is worrying, but his inability to see the crisis in the economy that was all over the media. The long-run impact of the first one is only a part of the larger issue of a better understanding of what ails the Indian economy. The recent data on national accounts has only confirmed what has been known for some time: that the crisis of low demand is far from over. This was very much evident in the case of employment statistics. The employment data has finally been released, but not without attacks from the highest govt officials on the credibility of the data itself. The fact that the committee tasked to review the report has allowed the report to be released without any changes is testament to the strength of the statistical system, and also confirms the role of the govt in fiddling with important statistical data.

The same is true of the GDP data. Otherwise, why the undue interference of the NITI Aayog in recalculation and publication of the back series of GDP estimates when the official series was published by the National Statistical Commission? The challenge for the statistical system is not just to produce credible and robust national accounts estimates, but also to insulate itself from the political system.

Uday Kumar is a  
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Border Security Force

# Current Topics

## RBI's new circular on bad loans

The Reserve Bank of India's (RBI) new circular for resolution of stressed assets is propelled by provisioning requirements and gives more freedom to bankers in taking decisions. Two months after the Supreme Court struck down its Feb 12 circular, the RBI on Jun 7 came out with a revised framework for resolving stressed assets wherein lenders have been given a 30-day period on whether to label an account as a non-performing asset (NPA).

The new norms provide a framework for early recognition, reporting and time-bound resolution of stressed assets. The only thing is that now banks have more delegation power and there will be board-level resolution policy. And the discretion on whether anyone would like to take the case to insolvency and bankruptcy proceedings or settle it outside that is now with the banks. The latest

directions from the RBI retain the basic spirit of the Feb 12 circular as these mandate higher provisioning, bankruptcy options as well as do not allow any other resolution methods outside the new norms.

The Supreme Court struck down the Feb 12 circular for resolving bad loans under which a company could be labelled as an NPA if it missed repayment even by a day, and banks were to find a resolution within 180 days or else the case had to be sent to bankruptcy courts. The new circular has also relaxed several other provisions, including norms related to consent of lenders, and offers more freedom to lenders in implementing the asset resolution plan.

According to these new norms, lenders should review accounts within 30 days of default and initiate a resolution plan under the new "prudential framework for resolution of

stressed assets" before the default. The central bank also changed its earlier norm of 100 per cent mandatory approval from creditors for a resolution plan and has allowed approval of 75 per cent of creditors. The RBI circular would be applicable to all borrowers with exposure of ₹2,000 cr and above to banks and financial institutions with immediate effect.

The previous circular had directed banks and lenders to refer any defaulting loan account of over ₹2,000 cr to the bankruptcy court under the Insolvency and Bankruptcy Code (IBC) if it is not resolved within 180 days of default. Though the judgment was a setback for the central bank, several defaulting power projects got a temporary reprieve. Several companies from the power and shipping sectors had challenged the Feb 12 circular, arguing that the time given by the RBI was not enough.

## Jun 6 monetary policy

On Jun 6, in its second bi-monthly monetary policy statement of 2019-20, RBI reduced the policy repo rate under the liquidity adjustment facility (LAF) by 25 basis points (0.25 per cent) to 5.75 per cent from 6.0 per cent with immediate effect.

Consequently, the reverse repo rate stands adjusted to 5.50 per cent, and the marginal standing facility (MSF) rate and the Bank Rate to 6.0 per cent. Repo rate has slipped to the lowest level since Jul 2010. This is the lowest in nine years.

The Monetary Policy Committee (MPC) unanimously voted 6-0 for a rate cut, the second since its inception in Oct 2016. It also decided to change the stance of monetary policy from neutral to accommodative. This means it sees scope to accommodate growth concerns by supporting efforts to boost demand and reinvigorate private investment.

To promote digital transactions, the RBI has decided to abolish charges levied by the central bank for

transactions processed in the RTGS and NEFT systems. The RBI will set up a committee to review the charges for usage of ATMs. Draft guidelines for on-tap licensing of small finance banks will be issued soon. To broaden and deepen the financial markets, a forex trading platform for retail participants will be set up to make more transactions more transparent. Of course, the rate cut comes after official data last month showed that the country's GDP grew 5.8 per cent in the quarter ended Mar 31.

Will interest rate cut spur growth? If so, why is growth declining in advanced countries which have ultra-low interest rate? Actually, the ultra-low interest rate is one of the reasons for the global financial crisis of 2007-08 and the rising debt of those countries. Even the RBI had reduced the repo rate by 25 basis points each in its Feb and April policy reviews. But it did not spur growth. Rather growth has declined.

It is not only private but also public

investment that should be given importance to enhance growth. The major concern today is the lack of purchasing power of people which is exacerbated by lack of jobs; and health and education have become too costlier.

The Indian economy is still grappling to get extricated from the quagmire of downturn, the slowdown triggered by the draconian demonetisation and the hasty implementation of the Goods and Services Tax (GST). Only fiscal stimulus and job creation can spur growth, not interest cut.

It is not growth but inflationary expectation that is the main fulcrum in deciding the interest rate. If inflationary expectation is high, interest rate needs to be hiked. If inflationary expectation is low, interest rate may be reduced to spur growth. But now, the inflationary expectation is not low as the central bank has raised its consumer inflation estimate to 3-3.1 per cent from 2.9-3 per cent in first six months of current fiscal.

## Audit firms face bad times in India

Is India suffering an epidemic of audit failures? The Big 4 – PWC, EY, Deloitte and KPMG – are each facing investigation or regulatory sanctions. It's been 10 years since the Satyam Computer Ltd fraud but the IL&FS Ltd investigations suggest auditors haven't learnt any lessons in the past decade. Resignations, deficiencies, failures – they all point to a crisis of credibility facing Indian auditors.

To a large extent, certain things have to be looked at by the auditor to find out some information which may not be found out today. Auditor's reports must throw some indication about what is likely to happen. The way it has been handled over the years needs to be taken care of. The standard of Auditing 570 has been revised.

Now the consequences are inevitable. Global accounting giants operating in India in association with local firms may have to make greater disclosures. The disclosures could relate to the flow of funds between the

foreign and the local firm and details of existing structures. The rules to be framed in this respect will be enforced by the National Financial Reporting Authority, a new regulator recently set up for accounting and auditing firms.

The big four global consulting and accounting firms are present in India through their network firms. SR Batliboi is EY's network firm performing the audit function in India; Deloitte Haskins and Sells is part of Deloitte's network; BSR and Co is part of KPMG's network and PriceWaterhouse is part of PwC's network.

In Feb, the Supreme Court had asked the govt to look into the matter through a three-member expert committee, after receiving petitions from Indian auditors challenging the way these global firms operate in the Indian audit space through their network firms affiliated with the Institute of Chartered Accountants of India (ICAI). The committee is expected to submit its report to the govt soon.

The govt will submit it to the Supreme Court and follow the court's instructions. The court had noted that there is "compliance by multinational audit firms only in form and not in substance; by having got registered partnership firms with the Indian partners, the real beneficiaries of transacting the business of chartered accountancy remain the companies of the foreign entities. The partnership firms are merely a face to defy the law."

The court had also red-flagged global auditing firms investing in chartered-accountancy firms in violation of existing foreign direct investment (FDI) policy by using a circuitous route of interest-free loans to partners. ICAI is also of the view that these firms should adhere to advertisement guidelines, not share fees with the global company, comply with FDI rules and even local firms be allowed to operate in the home countries of these global firms as part of the 'reciprocity agreements'.

## US withdraws GSP benefits from India

The US terminated the privileges that India enjoys under the Generalised System of Preference (GSP), starting 5 Jun 2019. The GSP, implemented since 1974, is the largest and oldest US trade preference scheme and it allows duty-free imports for thousands of products from designated beneficiary countries.

The move followed after criticism by the Trump administration that India was preventing equitable and reasonable access to its market. The Trump administration has made a series of demands such as softening of price caps on medical equipment, removal of certifications for dairy product exports, and changes to the e-commerce policy.

The GSP scheme was adopted by the US under the provisions of Resolution 21 of the Second United Nations Conference on Trade and Development (UNCTAD). It allows the developed countries to adopt a "generalised, non-reciprocal, non-discriminatory system of preferences in favour of the developing countries,

including special measures in favour of the least developed nations." This special and preferential treatment to developing countries is an exception to the Most Favoured Nation (MFN). India was the largest beneficiary of the programme in 2017 with USD 5.7 bn in exports to the US that were given duty-free entry into the US.

USA is one of the top trading partners of India, amounting to about 16 per cent of total Indian exports. It is clear that the impact of GSP withdrawal on Indian exports to the USA will be significant and felt across many sectors.

In retaliation to the withdrawal, New Delhi has decided to impose retaliatory tariffs on 29 US products. India should instead try to negotiate to restore the GSP benefits, although given the fact that it is a unilateral benefit that has been extended to India, India may have to offer resolution on some of the concerns raised by the US.

The meeting between Prime Minister Narendra Modi and President

Trump at the upcoming G20 meeting will give both sides the opportunity to sit down and talk and work out how best not to escalate the present tensions in bilateral trade relations. Further, the govt needs to extend support to the sectors that will be most affected by the withdrawal.

As a long-term measure, it would make sense for India to follow a path that does not make it overtly reliant on such schemes from a developed country but instead to use any such benefits to improve the competitiveness of its products.

The GSP has, since its inception, been used as a tool by the US to effect economic and policy changes in the beneficiary countries. In 1992, the GSP scheme was used by the US to exert pressure on India to extend patent protection to chemical and pharmaceutical products. Even in the current situation, the Indian govt has pointed out that the GSP benefits cannot be used by the US to advance its trade interests.

## Modi's new Cabinet

The composition of the new Cabinet shows that Prime Minister Narendra Modi has ensured a regional balance, with a focus on states where BJP did well in the Lok Sabha polls. Uttar Pradesh (UP), the most populous state, is represented by eight ministers apart from Modi himself, from east, west, Bundelkhand and Awadh regions. BJP won 62 seats in UP, and the Cabinet reflects that. From western UP, the party gave berths to four MPs.

Three states — Maharashtra, Haryana and Jharkhand — are scheduled to go to polls later this year. Together the three states have got 11 ministerial berths. From Maharashtra, there are seven faces. While five are from BJP, one each is from the Shiv Sena and the Republican Party of India (RPI). From Jharkhand, the party chose former chief minister Arjun Munda for representation in the Cabinet. From Haryana, three out of 10 party MPs have got ministerial berths. BJP's focus in Haryana is on non-Jat voters.

Rajasthan, Gujarat, Himachal, Delhi and Uttarakhand recorded 100 per cent results for the BJP, with the party winning all the seats in these states. Rajasthan and Gujarat have been given three ministerial positions each while Uttarakhand, Delhi and Himachal have got one each. In Bihar, NDA won 39 out of 40 seats. There are six ministers from the state, including Lok Janshakti Party's (LJP) Ram Vilas Paswan.

From southern India, BJP has given ministerial positions to six leaders. In Karnataka, where BJP did exceedingly well, the party has given positions to four leaders. One position has gone to Kerala and Telangana each. From West Bengal, Babul Supriyo and Debasree Chaudhary have been inducted as ministers of state. From Odisha, Dharmendra Pradhan and Pratap Sarangi have been included.

In Narendra Modi's Council of Ministers, 23 States and Union Territories are represented in the council. Compared to the previous

council, there may be fewer graduates but there are now much richer ministers. The median wealth of the Modi-led council is ₹5.6cr, significantly higher than in 2014 (₹2.5cr), and much higher than that of the 2019 election winners (₹4cr). Pratap Chandra Sarangi, the BJP Minister of State for Animal Husbandry and Micro Small and Medium enterprises, now famous for his austerity (he declared wealth of ₹13.4 lakh), is an exception. Ministers such as Harsimrat Kaur Badal (who has a net worth of ₹1.2bn) are the norm.

Only six out of 58 ministers are women and of these, only three hold cabinet posts. However, in terms of representation from the most marginalised caste groups, this council is one of the most diverse in history. Even though it decreased slightly from 2014, taken together, the share of ministers belonging to either Scheduled Castes or Scheduled Tribes is the second highest since 1952.

## Draft National Education Policy

The Draft National Education Policy 2019 is finally out after four years. The Kasturirangan Committee has come up with a progressive and ground-breaking document supported by relevant research. Drawing from early important policy documents, the draft policy has touched upon every aspect of education from school to university level, apart from vocational, adult and professional education.

The draft policy has made a paradigm shift. It has suggested a complete overhaul of all sectors of education. Starting from school education, for the first time an official document is accepting the severe learning crisis in school education. The document recommends that children of the age of 3–18 will be covered in school education instead of current 6–14 years of age, which in turn will need amendment in the Right to Education. This recommendation is in line with research findings that almost 90 per cent of brain development of a child takes place before the age of six.

The policy believes that part of the learning crisis in schools is because of late admission of the children in school. To overcome this challenge, the policy recommends huge expansion and strengthening of facilities for early childcare and education. The concept of school complexes, which has been taken from the Education Commission of 1964–66, will be reintroduced for effective management and governance of schools and, at the same time, to end the isolation of a large number of schools which are located at far off places with low enrolment.

Accreditation, which was till date only used for higher-education institutes, will be introduced in school education in a pre-devised format to help build quality schools across the country. For higher education again, a lot of innovative and novel ideas have been strongly recommended. The policy envisions that by 2035 Gross Enrolment Ratio at higher education should be 50 per cent, as compared to the current 25 per cent. This of course

is a daunting task. The concept of affiliating universities will be a thing of the past and in the future. All higher-education institutions will become autonomous and self-governing entities.

The draft policy has come down heavily on sub-standard teacher education colleges, of which 90 per cent are private colleges who have been selling degrees on a price and has recommended their immediate shutdown. A bold and innovative step for both school and higher education has been taken that no promotions or entitlement will be given on the basis of seniority. Rather, merit will be the criterion. The policy for the first time has underscored the need for symbiosis between professional and liberal education in India.

For the implementation of the document, the recommendations are that the govt needs to spend 20 per cent from the current 10 per cent of total public investment to really expand and revitalise public education system.

## SCO Summit in Bishkek

Although the shadow of Pakistan followed him to the Bishkek summit of the Shanghai Cooperation Organisation (SCO), Prime Minister (PM) Narendra Modi had bigger fish to fry at the forum — that is constructing Eurasia. The SCO brings together two of the world's great powers (China and Russia) and four central Asian nations (Kazakhstan, Kyrgyzstan, Tajikistan and Uzbekistan) with India and Pakistan. It was launched by China and Russia nearly two decades ago.

With India trying to boycott Pakistan internationally, Pakistan Prime Minister Imran Khan wrote a letter to his Indian counterpart offering dialogue at the sidelines of the summit. The question everyone had was: will both the countries have a dialogue? Both the leaders did exchange pleasantries, but Modi made it clear that he was in no mood to revive talks without any major steps from Pakistan on shutting down its terror factories.

China made it clear before the summit that Pakistan should not be targeted on terrorism at the SCO. Right from the beginning, when India became a member of the organisation, there have been speculations that India became a member only because Russia wanted to balance China's growing dominance. The effort was negated by China by bringing Pakistan in.

The changing dynamics of the "Alliance of the East" have caught the attention of many experts. Once known to be a Chinese-dominated organisation, today SCO is coming in alignment with Russia and other Central Asian countries. India's entry strikes a balance in the evolving Asian architecture. The four Central Asian nations add to the power of Eurasia. With India and Pakistan, both trying to add the South Asian factor, the dynamics of the SCO are still unknown.

The SCO has become an important venue for the member states to have a dialogue. But, it is unclear if this

grouping will continue to be referred to as China's achievement or pave the way for the new Eurasian order. With three powerful countries — Russia, China and India — under one umbrella, SCO did manage to send a powerful message to the US on Donald Trump's new aligning policies. The three countries will also meet on the sidelines of the G-20 summit in Japan later.

On the regional front, PM's bilateral engagement with the host nation Kyrgyzstan underlined the new political commitment to realise the full potential of India's relations with the Central Asian republics. The Bishkek summit also revealed India's deepening challenges with Afghanistan and Pakistan. While India continues to emphasise an "Afghan-owned and Afghan-led" peace process, Kabul has become increasingly marginal as major powers negotiate with the Taliban. On a positive note, the forum strongly endorsed India's concerns on cross-border terrorism.

## Azim Premji retires

Although he is one of the richest persons on the planet, 73-year-old Azim Premji is a self-proclaimed 'scrooge'. He's rather detached from the billions he has accumulated during his 53-year stint at Wipro Ltd. Come July, Premji will bid adieu to his illustrious corporate career to pursue full-time philanthropy, towards which he has already pledged an eye-popping \$2 bn or two-thirds of his wealth.

Premji's entrepreneurial streak and business acumen were discovered at a tender age of 21, when he took over the family business following the untimely demise of his father in 1966. He was probably unprepared for the task, but that opportunity eventually saw him evolving into an accidental but highly successful businessman, and Wipro, from a mere \$2 mn entity into an \$11 bn business.

While he nurtured the company (then making vegetable oil) with all he had, what turned around its fortunes was Premji's bet on information technology. In 1980, just when the

world was embarking on computerisation, Wipro caught the IT bug early by foraying into the production of personal computers. Gradually, Wipro expanded into IT services and a decade later emerged as the country's first entity to receive an ISO certification.

Yet, Premji neither ignored nor gave up on its traditional consumer business. In fact, it continued to excel here, with some of its brands like Santoor soaps and Wipro baby care products raking in handsome revenue. This prompted the unstoppable Premji to further diversify Wipro into other businesses like energy, launching compact fluorescent lamps, and medical devices in partnership with GE Healthcare. But, the journey was not without its ups and downs. Just when the going was getting good for the IT business, with the TCS-Infosys-Wipro-Satyam quartet jostling for contracts to crack into the \$1 bn revenue club, Premji had to weather a storm of senior-level exits. Several key

executives like K Natarajan, A Soota, R Ravanan and Subroto Bagchi quit the company, either to start new ventures (like Mindtree) or to join competitors.

The biggest blow came from the exit of Vivek Paul, creating a leadership vacuum and compelling Premji to get into the driver's seat as Wipro's CEO. But, the IT czar managed to steady the ship and has built a robust second-rung management to handle tough times. Premji's son, Rishad Premji, will now take over the mantle as executive chairman for five years, while CEO Abidali Z Neemuchwala will double up as its MD.

The transition may have been in the making for nearly a decade, but the timing will be challenging for the new captain at the helm. Recently, HCL Technologies dethroned Wipro as the third largest Indian IT services firm, while the gap between its other formidable peers TCS and Infosys is widening rapidly. Wipro is not only growing slower than others but has also given bleak growth projections.

## Girish Karnad dies

Girish Karnad, who has died aged 81, was India's foremost playwright as well as a successful film director and popular actor, appearing in arthouse films as well as hit Bollywood movies such as *Ek Tha Tiger*. But it is for his plays that he will be remembered.

Karnad knew that to express his vision to a wider audience he had to move into cinema. His screenwriting and acting debut, *Samskara* (1970), based on his friend UR Ananthamurthy's novel about the limitations of caste, won the first Golden Lotus award, the national prize for Kannada cinema. His directorial debut (with the theatre director BV Karanth), the award-winning *Vamsha Vriksha* (1971), took his fascination with tradition versus modernity deeper by following the trials of an educated family for 20 years.

Many of the films Karnad made in his 35-year career as a director won national awards. Among them are *Kaadu* (1973); *Tabbaliyu Neenade*

*Magane* (titled *Godhuli* in Hindi, 1977); *Utsav* (1984), in which a courtesan's relationship with a poor Brahmin man causes chaos; and *Kanooru Heggadithi* (1999), on the limited position of women in rural India. On television he appeared in the first series of *Malgudi Days* (1987) and in the children's science fiction series *Indradhamush* (1989).

Born in Matheran, east of Mumbai, Girish was the third of four children of middle-class parents Raghunath Karnad, a doctor, and Krishnabhai, a nurse. When Girish was 14, the family moved to Dharwad in Karnataka where he became fascinated by the ancient traditions of Yakshagana theatre. He graduated in maths and statistics from Karnataka University and then went to Oxford University as a Rhodes scholar for an MA in philosophy, politics and economics. He was elected president of the Oxford Union in 1962.

After his return to India in 1963 and the success of his first plays, he was

offered a job at the Oxford University Press in Madras, where he met Saraswathy Ganapathy, a doctor and director of healthcare projects. They married soon after. As well as his creative work, Karnad served as director of the Film and Television Institute of India (1974-75), and chair of Sangeet Natak Akademi (1988-93). From 2000 to 2003, he was director of the Nehru Centre, the cultural wing of the high commission of India in London. In 2002 his play *Bali – the Sacrifice* was staged at the Leicester Haymarket theatre.

A secularist who condemned the rise of nationalism in India, he took advantage of his position to campaign for the rights of the LGBT community, women, Dalits and religious minorities. His final work, *Rakshasa-Tangadi*, was published last year, and he is due to appear in four films this year. He was awarded the Padma Shri in 1974 and the Padma Bhushan in 1992. In 1998, he received the Jnanpith.

## The Dhoni insignia row

India wicketkeeper MS Dhoni sported an army badge on his wicket-keeping gloves to show his respect for the Indian Army. But his gesture later sparked a controversy as the International Cricket Council (ICC) objected to the symbol on the former India captain's gloves. The ICC later turned down Board of Control for Cricket in India's (BCCI) request to allow Dhoni to wear an army crest on his wicket-keeping gloves.

However, there is nothing aggressive or hostile in the intent over wearing a talisman, and it is no different from what players wear around their necks, and often kiss for luck when they begin to bat or bowl.

Clearly, the ICC has not figured out that Dhoni is an officer in the Territorial Army with the rank of Colonel and his right to wear the insignia given to him is within his rights. Moreover, if the ICC can parade its symbol around, how can there be any law stopping Dhoni from wearing the "Balidaan Badge" on his gloves as a tribute to the fighting

men and women in our land?

To capitulate now and give in to the ICC not only rubs egg on the face of the all-so-powerful BCCI, but is also a huge insult to our armed forces, in general, and the paramilitary, in particular.

The ICC is hiding under the rules which say: "equipment and clothing regulations do not permit the display of messages that relate to political, religious or racial activities or causes during an international match".

The insignia has no overt military message. There is no wordage, nothing that anyone can be offended by unless they wish to create trouble only for the sake of creating trouble. It's not a religious symbol or in any other way inflammatory to earn an objection. Sports stars often wear sport logos for commercial considerations or sponsorships. Sometimes they appear with a black arm band as a mark of condolence or protest against something or some event. It is just a subtle statement. And this one is a

patriotic sentiment too.

One also recalls that in a recent series, the entire Indian team had worn combat colour caps, *a la* army fatigues style. Similarly, wearing of the Balidaan symbol of para commandos too is a positive expression of patriotism.

However, the ICC's statement was: "The regulations for ICC events do not permit any individual message or logo to be displayed on any items of clothing or equipment. In addition to this, the logo also breaches the regulations in relation to what is permitted on wicketkeeper gloves."

If any sporting authority allows people to wear their nationalism literally on their sleeve, it won't be able to stop any kind of symbolising from any country. It is the prerogative of the sporting authority to only allow commercial sponsor logos. If Dhoni feels such a deep need to profess his abiding love for the army, he could just dedicate India's tournament win to them in his speech when the time comes.



## Match Point

- The deputy governor of the RBI who resigned recently – **Viral Acharya**
- The autobiography of Baba Ramdev which has been co-authored with Uday Mahurkar – **My Life, My Mission**
- The Indian author who has been named the director of London's Nehru Centre – **Amish Tripathi**
- The new tool launched by World Health Organization to reduce the spread of antimicrobial resistance – **AWaRe**
- India's representative in the council of International Civil Aviation Organisation (ICAO) – **Shefali Juneja**
- The Indian runner who won gold medal in women's 1500m at Folksam Grand Prix 2019 held in Sollentuna, Sweden – **PU Chitra**
- The city where the plenary session of the Financial Action Task Force was held recently to discuss the blacklisting of Pakistan – **Orlando, US**
- The Gulf country which has come up with a programme to charge \$213,000 for permanent residency in a step to boost economy – **Saudi Arabia**
- The private sector bank in which Hindujas will pump another ₹2,700cr through a warrant to hike stake – **IndusInd Bank**
- The state which has come out with a unique flood hazard atlas on the basis of historic flood inundation captured through satellite imagery – **Odisha**
- The operation launched by the Indian Navy in the Persian Gulf and the Gulf of Oman to safeguard Indian flagged vessels – **Sankalp**
- NASA's Astrobee robot which flew under its own power in space for the first time recently – **Bumble**
- The state where the world's largest lift irrigation scheme Kaleshwaram project was inaugurated recently – **Telangana**
- The city where India has opened its first specialised hydrotherapy treatment for elephants – **Mathura**
- The item which received the Geographical Indication (GI) tag recently – **Kolhapuri chappals**
- Winner of the FIH Series Finals played in Hiroshima recently – **India**
- The firm which has agreed to acquire 50.8% stake in Apollo Munich health insurance –  **HDFC Ltd**
- The institute which has emerged as the top global institute in the QS World University Ranking 2020 – **Massachusetts Institute of Technology**
- Winner of men's Asian Snooker Championship held in Doha – **Pankaj Advani**
- The country to which India has extended USD 15mn assistance for organising the African Union (AU) summit – **Niger**
- The bank on which RBI has imposed a ₹1cr penalty for non-compliance with directions on KYC/AML norms – **HDFC Bank**
- The new head of UN Environment Programme (UNEP) – **Inger Andersen**
- The new speaker of Lok Sabha – **Om Birla**
- The new Director General of Inter-Services Intelligence (ISI) of Pakistan – **Faiz Hamid**
- The person appointed as the new executive director (ED) at the RBI recently – **Rabi N Mishra**
- The venue for the World Food India

(WFI) 2019 to be held in Nov 2019 –  
**New Delhi**

- The joint operation conducted by the armies of India and Myanmar recently – **Operation Sunrise 2**
- Winner of the men's title in the 33rd Federation Cup basketball tournament – **Punjab Police**
- The name of the cryptocurrency to be launched by Facebook in 2020 – **Libra**
- The head of the RBI committee which has suggested hiking the ceiling of collateral-free loans for MSME units to ₹20 lakh – **UK Sinha**
- India's growth forecast for the current fiscal (FY20) as per Fitch – **6.6 per cent**
- The bank whose board of directors recently decided to bring the bank under the J&K RTI Act, 2009 and the CVC guidelines – **J&K Bank**
- India's most attractive employer brand according to the Randstad Employer Brand Research (REBR) 2019 – **Amazon India**
- The former President of Egypt who passed away recently – **Mohammed Morsi**
- The venue of G20 ministerial meeting on Trade and Digital Economy – **Tsukuba, Japan**
- The state which has announced to set up a Skill University at Darrang district – **Assam**
- The gulf country which will start phasing out the use of plastic products from Jul 2019 – **Bahrain**
- The host country of the Miss World 2019 event – **Thailand**
- The agency which has approved a project worth ₹1,650 cr to develop infrastructure in seven district headquarter towns of Tripura – **Asian Development Bank**
- Winner of the FIH Men's Series finals at the Kalinga Stadium in Bhubaneswar recently – **India**
- The head of the RBI Committee on Currency Movement set up to review the entire gamut of security of treasure in transit – **DK Mohanty**
- Winner of the Miss India 2019 title – **Suman Rao**

No work is perfect. Advice and suggestions for the improvement of BSC books will be gratefully received. Please join facebook [kundan39noba@yahoo.com (**K KUNDAN K KUNDAN**)] and feel free to ask your queries and to send your valuable feedback.

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- The president of the Brazilian Development Bank (BNDES) who resigned recently – **Joaquim Levy**
- India's trade deficit in May 2019 – **\$15.4 bn**
- Winner of the BBC World Service Global Champion Award – **Akshaya Patra**
- The year by which NASA's Spitzer space telescope will be switched off permanently – **2020**
- India's present High Commissioner to Bangladesh who inspected the ongoing construction of the Feni Bridge (Maitree Setu) in Chattogram recently – **Riva Ganguli**
- The host city of the Intersessional meeting of Kimberley Process (KP) – **Mumbai**
- The amount the RBI infused into the financial system through bond purchases under Open Market Operation (OMO) on Jun 20 – **₹12,500 cr**
- India's ranking among 163 countries on the Global Peace Index 2019 topped by Iceland – **141st**
- The new reduced rate of contribution under the ESI (Employees' State Insurance) Act – **4 per cent**
- The consumer price index (CPI) - based retail inflation for Apr – **2.99%**
- The former Puducherry Chief Minister who passed away recently – **RV Janakiraman**
- The Wholesale Price Index (WPI)-based Inflation in the month of May – **-2.45%**
- The new name of the International Association of Athletics Federations (IAAF) – **World Athletics**
- The state govt which has launched 'Pink Sarathi' vehicles to attend the complaints of women passengers travelling in city buses – **Karnataka**
- The Indian historian who has been elected as a member of the American Philosophical Society (APS) – **Romila Thapar**
- The noted actor and playwright who passed away recently – **Girish Karnad**
- China's new envoy to India – **Sun Weidong**
- The winner of the Jnanpith award for the year 2018 – **Amitav Ghosh**
- The world's most valuable brand in the 2019 100 Top BrandZ report – **Amazon**
- The person reappointed as the secretary to the Vice President of India recently – **IV Subba Rao**
- The country which has announced that single-use plastics will be banned in the country from 2021 – **Canada**
- The cyclonic storm which hit Gujarat recently – **Vayu**
- The city where PM Narendra Modi attended the Shanghai Cooperation Organisation (SCO) Summit recently – **Bishkek, Kyrgyzstan**
- The country with which India has signed \$800-mn Line of Credit Agreement to assist it in achieving sustainable social and economic development – **Maldives**
- Winner of the men's singles title of the 2019 French Open – **Rafael Nadal**  
– Winner of women's singles – **Ashleigh Barty**
- The country which launched its space rocket Long March 11 from a ship in Yellow Sea recently – **China**
- The chairman and managing director of J&K Bank who was removed recently – **Parvez Ahmed**
- India's foreign exchange reserves in the week ending May 31 – **USD 421.867 bn**
- The Union Cabinet Secretary who was given further three months' extension recently – **Pradeep Kumar Sinha**
- The country which conferred "Order of the Distinguished Rule of Nishan Izzuddeen" upon PM Narendra Modi recently – **Maldives**
- The new entity formed after the merger of National Sample Survey Office and Central Statistics Office – **National Statistical Office**
- The bank on which the RBI slapped a penalty of ₹2 cr for the failure to adhere to the regulator's diktat on promoter shareholding – **Kotak Mahindra Bank**
- The head of the RBI Committee set up to review the ATM interchange fee structure – **VG Kannan**
- The new repo rate after the monetary policy committee of the RBI reduced the rate in the second bi-monthly monetary policy review of 2019-20 – **5.75 per cent**
- The Purchasing Managers' Index (PMI) for services in May 2019 – **50.2**
- The country where President Martin Vizcarra won a confidence vote in the Congress recently – **Peru**
- The state whose Medical & Health Department has been selected by the WHO for its award in the field of tobacco control – **Rajasthan**
- India's ranking on Sustainable Development Goals Gender Index 2019 – **95th**
- India's growth rate for 2019-20 as per the World Bank – **7.5 per cent**
- The host state of the 10th National Science Film Festival of India in 2020 – **Tripura**
- The youngest (25 years and 11 months) Member of Parliament (MP) in 17th Lok Sabha – **Chandrani Murmu (Odisha)**
- The new chairman of Axis Bank – **Rakesh Makhiya**
- The new Chief of Naval Staff – **Karambir Singh**

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# Economy

## Aviation

### **World's most punctual airline**

**S**riLankan Airlines, the flag carrier of the island nation, has been named the 'World's Most Punctual Airline' for the second consecutive time with over 90 per cent of its flights in May being "on time". In May, it achieved a punctuality rating of 90.75 per cent. Global flight tracker Flightstats analysed data of 41 carriers from Europe, North America, Asia, the Middle East, and South America, including most of the world's largest and most prestigious airlines, before drawing its conclusions.

## Automobiles

### **First BS-VI Certification**

As far as two-wheeler manufacturers are concerned, Hero MotoCorp has become the first company to get BS VI certification for its **Hero Splendor iSmart**. Hero has received the type approval certificate from **International Centre for Automotive Technology (ICAT)** after the Splendor iSmart was successfully tested for BS-VI compliance. The BS-VI regime will kick off from Apr 1, 2020.

## Banking

### **RBI cuts repo rate**

On the basis of an assessment of the current and evolving macroeconomic situation, the Monetary Policy Committee (MPC) at its meeting on 6 Jun cut the repo rate by 25 basis points for a third consecutive time and also shifted its stance to accommodative from neutral amidst concerns about slowing growth.

#### **Highlights**

- The policy repo rate, the interest rate at which the central bank provides liquidity to banks to overcome short-term liquidity mismatches, under the liquidity adjustment facility (LAF) has been cut to 5.75 per cent from 6 per cent.

- The reverse repo rate under the LAF stands adjusted to 5.50 per cent.
- The Marginal Standing Facility (MSF) rate and the Bank Rate stand at 6.0 per cent.
- The RBI has cut the GDP growth forecast for 2019-20 from 7.2 per cent in the Apr policy to 7.0 per cent – in the range of 6.4-6.7 per cent for first half of the fiscal and 7.2-7.5 per cent for the second half – with risks evenly balanced.
- The MPC also revised the retail inflation forecast to 3.0-3.1 per cent for the first half of the fiscal 2019-20 and to 3.4-3.7 per cent for the second half.
- The committee has kept cash reserve ratio (CRR) unchanged at 4 per cent.
- The statutory liquidity ratio (SLR) stands at 19 per cent.

### **Gross NPA ratio dips**

There has been a significant improvement in asset quality of scheduled commercial banks (SCBs) during 2018-19 as gross NPA ratio declined to 9.3 per cent as on Mar 2019 against the peak of 11.5 per cent recorded in Mar 2018. At the same time, there has been an improvement in provision coverage ratio (PCR) of SCBs to 60.9 per cent at end-Mar 2019 from 48.3 per cent at end-Mar 2018 and 44 per cent at end-Mar 2015 as informed by the Reserve Bank of India (RBI) Governor Shaktikanta Das. The RBI set up a Central Repository of Information on Large Credits (CRILC) in 2014 which was followed by an Asset Quality Review (AQR) in 2015. As a result, the recognition of non-performing assets improved, leading to a sharp rise in the gross NPA ratio from 4.3 per cent at end-Mar 2015 to 7.5 per cent at end-Mar 2016. It further reached the peak of 11.5 per cent in Mar 2018.

### **Last orders bell for Libor**

Britain's Financial Conduct Authority (FCA) has ordered banks and markets to stop using the London Interbank Offered Rate or Libor as a

basis for pricing contracts. Banks across the world have been fined about \$9 bn for trying to manipulate Libor that prices mortgages, credit cards and other loans worth over \$300tn across the world. The Bank of England has come with a new mechanism called "Sterling Overnight Interbank Average Rate (Sonia)" which is compiled by the BoE and based on actual transactions. It will be harder to manipulate Sonia compared to Libor, which is based on quotes supplied by banks. FCA Chief Executive Andrew Bailey said the deadline for Sonia is ambitious and aggressive but necessary, given that Libor remains fundamentally "fragile" and it should not be allowed to "limp on" year after year.

### **Bank fraud touches ₹71,500cr**

Over 6,800 cases of bank fraud involving an unprecedented ₹71,500cr have been reported in 2018-19, the Reserve Bank of India has said. A total of 5,916 such cases were reported by banks in 2017-18 involving ₹41,167.03cr. In the last 11 fiscal years, a total of 53,334 cases of fraud were reported by banks involving a massive amount of ₹2.05 lakh cr. During 2008-09, a total of 4,372 cases were reported involving an amount of ₹1,860.09cr. In 2009-10, ₹1,998.94cr worth fraud was reported in 4,669 cases. The data assumes significance as banks are grappling with high-profile fraud cases involving absconding billionaire Nirav Modi and liquor baron Vijay Mallya, among others.

### **WB, India sign loan pact**

The World Bank will provide USD 287mn to improve health care in Tamil Nadu. The Central Govt, the State Govt and the World Bank signed a loan agreement for the Tamil Nadu Health System Reform Programme recently. The Programme aims to improve the quality of health care, reduce the burden of non-communicable diseases (NCDs), and fill equity gaps in reproductive and child health services in the state of Tamil Nadu. *Tamil Nadu ranks third among all Indian states in the NITI Aayog Health Index*, which is reflected in vastly improved health outcomes.

### **RBI directs banks on ATMs**

In order to upgrade the security of cash vending machines, the Reserve Bank of India (RBI) has directed all the banks to grout the walls, ceilings and floors of their ATMs with plaster/mortar by Sep-end this year. The fresh instructions, which are aimed at mitigating risks in ATM operations and enhancing security, have

exempted high secured premises such as airports. In Oct 2016, the central bank had set up **Committee on Currency Movement (CCM)** to review the entire range of security of treasure in transit. If the banks fail to comply the instructions and miss deadline then they would attract regulatory action, including levy of penalty.

#### **IOB's 'Bank on Wheels'**

Indian Overseas Bank (IOB), on 27 May, announced that it has launched 'Bank on Wheels' facility in 14 of its lead districts in **Tamil Nadu** and **Kerala**, besides Vijayawada. The mobile van facility will enable the public, especially senior citizens, to conveniently get doorstep banking facility available at identified locations of the lead districts. A dedicated banking correspondent will accompany the vehicle with a micro ATM inside the van to take care of services such as account opening, enrolment of customers in Social Security Scheme, passbook printing, and other financial inclusion activities.

#### **RBI extends RTGS timings**

To facilitate high-value fund transfers, the Reserve Bank of India (RBI) has announced an extension of timings for customer transactions through **Real Time Gross Settlement (RTGS)** by one-and-a-half hours from 4:30 PM to **06 PM**. The new timing is effective from 1 Jun. *The RTGS is an online fund transfer system, supported by the RBI, which enables money transaction on a real-time basis.* The minimum amount for the transaction under this system is ₹2 lakh. There is no upper limit on the value of funds that can be transferred via the RTGS system.

#### **PNB sets recovery target**

Punjab National Bank intends to recover ₹20,000cr of bad loans in the current financial year (2019-20) through one-time settlements and resolutions under the **Insolvency and Bankruptcy Code (IBC)**. The state-owned bank's target is 25% higher than recoveries of ₹16,000cr in the previous financial year. The bank is stepping up on loan recoveries as losses continue due to higher provisioning as recoveries from the IBC have been slow

and old bad loans have aged, requiring more to be set aside against them. The bank posted a loss of ₹4,750cr in the quarter ended Mar as provisions for non-performing assets remained elevated at ₹9,154cr. PNB made a net loss of ₹13,417cr a year ago after the ₹14,000cr Nirav Modi scam.

#### **Fed leaves rate unchanged**

The US central bank **Federal Reserve** left its key interest rate unchanged on 19 Jun but signalled that it's prepared to start cutting rates if needed to protect the US economy from trade conflicts and other threats.

The Fed kept its benchmark rate — which influences many consumer and business loans — in a range of 2.25% to 2.5%, where it's been since Dec. **Jerome Powell** is the Chair of the Board of Governors of the Federal Reserve System. The position is known colloquially as "Chair of the Fed" or "Fed Chair".

#### **IndusInd, BFIL merger**

IndusInd Bank on 19 Jun said 4 Jul, 2019 will be the effective date of the merger with **Bharat Financial Inclusion Ltd (BFIL)**. **MR Rao**, current CEO of BFIL, will become the CEO of **IndusInd Financial Inclusion Ltd (IFIL)**. Commenting on the effectiveness of the scheme, **Romesh Sobti**, MD & CEO, IndusInd Bank said: "IndusInd Bank embarked on its transformational rural strategy over three years ago with the Scheme of Arrangement with BFIL being the anchor point."

#### **Fine on South Indian Bank**

The RBI on 19 Jun said it had imposed a fine of ₹10 lakh on South Indian Bank for violating norms regarding bank guarantees. The penalty follows references from a govt department and a private party alleging non-payment of invoked bank guarantees by the lender. The penalty has been imposed through an order dated Jun 13. The RBI added the action was based on deficiencies in regulatory compliance and was not intended to pronounce upon the validity of any transaction or agreement entered into by the bank with its customers.

#### **EMI insurance**

India's largest and fastest-growing consumer lending technology company, **ZestMoney**, has announced a partnership with **Digit Insurance** to offer EMI insurance to the company's 5mn customers.

The partnership integrates the digital capability of ZestMoney to provide EMI for everyone and insurance by Digit to relieve its customers of debt in case of unforeseen circumstances. This policy will cover EMI cost in the event of hospitalisation, death or permanent disability. The insurance product is specifically designed for ZestMoney's customers and can be availed while applying for a loan on the digital platform.

#### **Exim Bank posts profit**

The Export Import Bank of India (**Exim Bank**) reported a turnaround performance, posting a net profit of ₹82cr in FY19, against a net loss of ₹2,924 cr in the year-ago period. While the bank's funded loan portfolio saw a de-growth of ₹13,915cr to ₹93,617cr during the financial year, non-funded portfolio, including project-related and financial guarantees, increased by ₹856cr to ₹14,096cr. The bank, which is a Govt of India-owned export finance institution, attributed the de-growth in loan portfolio to reorientation in its business, reducing refinance significantly to banks, and stepping up focus on direct finance to exporters, overseas importers, and sovereigns.

#### **Banks can use Aadhaar**

Banks can use Aadhaar for **Know Your Customer (KYC)** verification with the customer's consent, the Reserve Bank has said as it updated its list of documents eligible for identification of individuals. The RBI specifies KYC norms to be followed by banks and other entities regulated by it for various customer services, including opening of bank accounts. In Feb, the Union Cabinet had approved promulgation of an ordinance to allow voluntary use of the 12-digit unique number as identity proof for opening bank account and procuring mobile phone connection.

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### **ADB to provide loan**

Multilateral funding agency **Asian Development Bank (ADB)** has signed an agreement to provide USD 750 mn equivalent in Indian rupee long-term financing to **electrify railway tracks in India**. It is the largest single non-sovereign loan ever committed by ADB to **Indian Railway Finance Corporation (IRFC)** to fund the railways track electrification project as part of a broad modernisation programme that will help India's railway sector transition to electric power and away from dependence on fossil fuels. Concurrently, with the loan agreement signing, risk participation agreements were signed with private risk participants for the project.

### **RBI releases draft framework**

The Reserve Bank of India (RBI) has released the much-awaited draft guidelines on liquidity risk management framework for **non-banking financial companies (NBFCs)** and **core investment companies (CICs)**. In its draft guidelines, RBI has proposed to introduce a **Liquidity Coverage Ratio (LCR)**, which is the proportion of high liquid assets set aside to meet short-term obligations for all NBFCs with an asset size of more than ₹5000cr. Starting Apr 2020, NBFCs will have to maintain a minimum of 60% of LCR as high liquid assets, which will be increased in a calibrated manner to 100% by Apr 2024. The regulator has also proposed to revise the **Asset Liability Mismatch (ALM)** of NBFCs to ensure that the difference between inflows and outflows during the first 7 days is not more than 10% of the total outflows.

### **Fine on HDFC Bank**

The Reserve Bank of India (RBI) has imposed a ₹1cr penalty on private sector lender HDFC Bank for non-compliance with directions on Know Your Customer/ Anti-Money Laundering norms and on reporting of frauds. The penalty has been imposed in exercise of powers vested in RBI under the provisions of **Section 47A(1)(c)** read with **Section 46(4)(i)** of the **Banking Regulation Act, 1949**, taking into account failure of the bank to adhere to the aforesaid directions issued by RBI.

### **Financial Literacy Week**

Financial Literacy Week 2019 was observed from Jun 3-7 on the theme of "Farmers" and how they benefit by being a part of the formal banking system.

Financial Literacy Week is an initiative of RBI to promote awareness on key topics every year through a focused campaign. Growth in agriculture is necessary for the overall economic growth and finance is an essential enabler for the same. RBI is actively involved in formulating policies that enhance the flow of credit to the farming community.

### **No NEFT, RTGS charges**

The RBI has removed charges for payments via NEFT and RTGS and asked banks to pass on the benefits to customers. This means that payments via NEFT and RTGS would either become free or charges or be drastically reduced. The Reserve Bank levies minimum charges on banks for transactions routed through its **Real Time Gross Settlement System (RTGS)** meant for large-value instantaneous fund transfers and the **National Electronic Funds Transfer (NEFT)** System for other fund transfers. Banks, in turn, levy charges on their customers. In order to provide an impetus to digital funds movement, it has been decided to do away with the charges levied by the Reserve Bank for transactions processed in the RTGS and NEFT systems.

## **Capital Market**

### **SEBI, IRDAI set up sandbox**

After the Reserve Bank of India released a draft framework for setting up a **regulatory sandbox (RS)** for fintech players in the counter, the market and insurance regulators have also launched similar initiatives. *RS is an infrastructure that helps fintech players live-test their products or solutions, before getting the necessary regulatory approvals for a mass launch.* It saves start-ups time and cost. Fintech in India is at the cusp of a revolution and regulators are aware of the fact. The market regulator SEBI and insurance regulator IRDAI have announced initiatives to encourage tech start-ups, especially fintech, by making data and systems available to them through the RS.

### **Ministry, SEBI sign MoU**

Bolstering efforts to curb white-collar frauds, the corporate affairs ministry and markets watchdog SEBI will start automatic sharing of data between them. The move also comes against the backdrop of concerns over corporate governance practices amid instances of misdoings and financial irregularities. The ministry and

SEBI entered into a formal memorandum of understanding (MoU) for data exchange. The pact will facilitate the sharing of data and information between SEBI and the ministry on an automatic and regular basis.

### **SEBI allows futures**

Capital markets regulator SEBI has permitted stock exchanges with commodity derivative segment to introduce futures on indices. SEBI in a circular said, the stock exchanges, willing to start trading in futures on commodity indices, are required to take prior approval for launching such contracts. The regulator has directed the stock exchanges to submit proposal with contract specifications and risk management framework for approval before launching any futures contract on an index. The SEBI directives are in line with recommendations of Commodity Derivatives Advisory Committee.

## **Committees**

### **Kannan committee**

The Reserve Bank of India (RBI) has set up a six-member committee, headed by **VG Kannan**, Chief Executive, Indian Banks' Association, to review the **ATM interchange fee structure**, with a view to giving a fillip to ATM deployment in unbanked areas. The committee will review the existing structures and patterns of costs, charges and interchange fees for ATM transactions. It will also review the overall patterns of usage of ATMs by cardholders and assess the impact, if any, on charges and interchange fees. The committee will assess the entire gamut of costs in respect of the ATM ecosystem and make recommendations on the optimal charge/ interchange fee structure and pattern.

### **Nilekani panel suggestions**

To encourage digital payments, the **Nandan Nilekani committee** has suggested a host of measures, including elimination of charges, round-the-clock RTGS and NEFT facility, and duty-free import of point-of-sales machines. The committee, which was appointed by the RBI, had submitted its suggestions on promoting digital payments to Governor Shaktikanta Das last month. Among other things, the panel has suggested that there should be no convenience fee on payments made to govt agencies by customers and recommended that payment systems use machine-driven, online dispute resolution systems to handle complaints.

**Doubling collateral-free loans**

An expert committee of the Reserve Bank of India (RBI) on Micro, Small and Medium Enterprises (MSMEs) has suggested doubling collateral-free loans for these units. This should be applicable to Micro Units Development and Refinance Agency (Mudra) and Self-Help Groups (SHGs), too, the committee said. The committee, headed by former SEBI Chairman UK Sinha, submitted its report to RBI Governor Shaktikanta Das. The committee has suggested hiking the ceiling of collateral-free loans for MSME units to ₹20 lakh from ₹10 lakh now.

**Jalan panel defers report**

A Reserve Bank of India (RBI) committee considering guidelines for transfer of the central bank's surplus funds to the govt delayed submitting its report, after lack of consensus. The six-member committee, led by former RBI governor Bimal Jalan, will meet once more before submitting its report by Jun-end. The committee was appointed in Dec 2018

to review the Economic Capital Framework (ECF) for the Reserve Bank after the Finance Ministry advised the central bank to transfer surplus funds to the govt. The RBI has over ₹9.6 lakh cr surplus capital.

**Amitabh Kant's task force**

A task force on project management led by Niti Aayog chief executive Amitabh Kant has pitched for a dedicated policy framework for public-private partnerships and public sector projects to improve efficiency. It has proposed the formation of a high-level committee to draft the policy framework, oversee its implementation as well as review and monitor existing public-sector projects. Guidelines under the 'National Project/Programme Management Policy Framework' should be made part of all future contracts.

**The govt sets up panel**

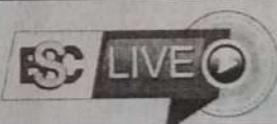
The govt has set up an expert panel to consider allowing private firms to sell subsidised cooking gas — a long-standing

demand for companies like Reliance Industries because state firms dominate the market by luring customers with a lot of subsidies. Reliance Industries, which runs the world's biggest refinery at Jamnagar, is a big producer of LPG and has been lobbying the govt for years to permit private players to distribute subsidised cylinders.

**RBI forms two panels**

The Reserve Bank of India has appointed two separate six-member panels to create a more transparent framework for the sale of bad corporate assets and securitisation of housing loans in a bid to make these processes more open and structural. The panel on secondary market for corporate loans, headed by Canara Bank Chairman TN Manoharan, has been asked to gauge the possibility of setting up a loan transaction platform for the sale of stressed assets and creation of a loan contract registry to standardise information. RBI's panel for housing loan securitisation, headed by Bains and Co.

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## Newswatch

advisor Harsh Vardhan, has been mandated to review the current market operations and recommend policy interventions.

### Sashakt Committee

The Sashakt Committee has recommended that the existing **Inter-Creditor Agreement (ICA)** to incorporate the revised voting threshold and other changes for decision making stipulated by the Reserve Bank of India. This will enable expeditious implementation of the new framework on stressed assets. "The new framework is pragmatic and a step in the right direction. It takes care of all stakeholders' interests," said Sunil Mehta, chairman of Sashakt Committee. Mehta noted that this would ensure that a consensus building amongst lenders will be carried forward promptly to its logical conclusion and within timelines as specified. On June 7, RBI had issued revised guidelines for resolution of stressed assets. Under the new framework, it is a mandatory requirement for lenders to enter into an ICA during the review of the borrower account within 30 days from date of first default to any lender.

## Corporate

### Snapdeal launches Miniso

Online marketplace Snapdeal has launched over 150 products of **Japanese low-cost brand Miniso** on its platform. The products will be spread across categories like beauty, baby care, home furnishing, stationery, mobile accessories, and decor. Popular products include towels, brushes, concealers, power banks, and storage boxes. Miniso products have been priced in the ₹190 to ₹790 range on Snapdeal. With the new partnership with the Japanese retailer, Snapdeal has expanded the selection of value-priced international brands available on its portal.

### Amazon most attractive

E-commerce giant Amazon India is the country's most attractive employer brand, according to the findings of the **Randstad Employer Brand Research (REBR) 2019**. The company, which has more than 50,000 direct and indirect employees in India, has steadily been expanding operations over the past five years. Microsoft India emerged as the runner-up, followed by Sony India. Others in the top 10 are Mercedes-Benz (4th), IBM (5th), Larsen & Toubro (6th), Nestle

(7th), Infosys (8th), Samsung (9th) and Dell (10th).

## Energy

### JV for pipeline

State-owned oil marketing companies Hindustan Petroleum Corporation Limited, Indian Oil Corporation and Bharat Petroleum Corporation Ltd have inked a pact to form a joint venture company for the **country's largest LPG pipeline project** from Kandla in Gujarat to Gorakhpur in Uttar Pradesh. The 2,757km-long LPG pipeline, which is expected to provide reliability in the supply chain of LPG, would cover an overall distance of 1,063km in Gujarat, 611km in Madhya Pradesh, and 1,083km in Uttar Pradesh. Indian Oil would own 50 per cent equity holding in the joint venture company, while BPCL and HPCL would have 25 per cent each.

## FDI

### FDI inflows record decline

The foreign direct investment (FDI) in India declined for the first time in the last six years in 2018-19, falling by 1 per cent to \$44.37bn as overseas fund inflows subsided in telecom, pharma and other sectors, official data showed.

According to the latest data of the **Department for Promotion of Industry and Internal Trade (DPIIT)**, FDI in 2017-18 was a record \$44.85bn. Last time it was in 2012-13 when foreign inflows had registered a contraction of 36 per cent to \$22.42bn compared to \$35.12bn in 2011-12. Singapore has replaced Mauritius as the top source of foreign investment into India in the last fiscal, accounting for \$16.22bn inflows. India has received \$8bn FDI from Mauritius.

## GDP

### Fitch cuts growth forecast

Fitch lowered India's growth forecast to 6.6 per cent for the current fiscal from 6.8 per cent projected earlier, as manufacturing and agriculture sectors showed signs of slowing down over the past year. In its latest **Global Economic Outlook**, the global rating agency retained its GDP growth forecast for the next fiscal (2020-21) at 7.1 per cent and 7.0 per cent for 2021-22.

### GDP to slow down

DBS Bank has revised India's GDP

growth for fiscal year 2020 downwards to **6.8 per cent** year-on-year (YoY) from 7 per cent projected earlier, citing headwinds for exports amidst challenging trade outlook. A negative output gap will keep demand-side inflationary risks in check, with core inflation catching down with headline consumer price inflation (core at 4.2 per cent in May versus 6 per cent average in Oct-Dec 2018).

### Economy to grow at 7.5%

India's economic growth will regain strength and approach 7.5% by 2020, buoyed by rural consumption and subdued inflation, the **Organisation for Economic Co-operation and Development (OECD)** said in its **Economic Outlook**. This growth will come from higher domestic demand due to improved financial conditions, fiscal and quasi-fiscal stimulus, including new income support measures for rural farmers, and recent structural reforms.

### WB retains growth forecast

The World Bank has retained its forecast of India's growth rate at 7.5% for the current financial year. In its **Global Economic Prospects** report, the World Bank also said growth rate was expected to remain the same for the next two fiscals. According to the report, private consumption and investment will benefit from strengthening credit growth amid more accommodative monetary policy, with inflation having fallen below the Reserve Bank of India's target.

## Indices

### Services sector growth slows

The manufacturing sector's performance failed to enthuse the service sector after the Purchasing Managers' Index (PMI) for services in May dropped to 50.2 as against 51 in Apr. This is the weakest expansion in a year. If the index is on or above 50, it implies that there is an expansion, while a score that is below 50 denotes contraction.

### Govt to upgrade CPI, IIP

The govt is looking to bring out a new series for two key macroeconomic indicators — the **Index of Industrial Production (IIP)** and the **Consumer Price Index (CPI)** — in 2020, almost two years ahead of schedule. Both IIP and CPI are released on the 12th of every month. The new series of the IIP will have a base year of 2017-18, while for the CPI, it will be 2019.

### **Manufacturing shows growth**

Indicating a recovery in the industrial sector, the **Purchasing Managers' Index (PMI)** for manufacturing sector expanded in May and rose to 52.7 as against 51.8 in Apr. This shows strongest improvement in the health of the manufacturing sector during last three months. This index is prepared on the basis of a survey which is conducted among purchasing executives in over 400 companies.

### **CII launches new Index**

The **Confederation of Indian Industry (CII)** has launched a **Fiscal Performance Index (FPI)** to assess State and Central budgets. The Index incorporates qualitative assessments of revenue expenditure, capital expenditure, revenues, fiscal prudence and the level of public debt to arrive at a more holistic picture of fiscal performance than the fiscal deficit-to-GDP ratio according to the CII. As an example, the index will consider expenditure on infrastructure, education, healthcare and other social sectors beneficial for economic growth compared to other revenue expenditure. It will also consider tax revenues a more sustainable source of revenues for the govt as compared to one-time income sources.

### **Insurance**

#### **HDFC buys Apollo Munich**

HDFC Ltd, India's largest mortgage financier, has agreed to acquire the entire **50.8%** stake of Apollo Hospitals Group in a health insurance joint venture with German reinsurer **Munich Re Group** as part of its strategy to tap this potential growth market. HDFC will pay ₹1,336cr to Apollo Hospitals for the deal. It will pay an additional ₹10.84cr to employees of Apollo Munich Health Insurance Co. Ltd to purchase their 0.4% stake in the company. HDFC currently runs HDFC Ergo General Insurance Co., a joint venture with Ergo International AG.

### **Power**

#### **Power from waste**

Continuing its efforts to establish an environment-friendly network, the **Delhi Metro** has become the first ever project in the country to receive power generated from a waste-to-energy plant. The Delhi Metro Rail Corporation

(DMRC) said it had started receiving 2MW power from a 12MW capacity waste-to-energy plant set up in Ghazipur. The waste-to-energy plant set up by East Delhi Waste Processing Company Limited (EDWPCL) is based on a Public Private Partnership (PPP) involving the Delhi govt and East Delhi Municipal Corporation (EDMC), besides the EDWPCL.

### **PSUs**

#### **ONGC topples IOC**

ONGC, India's top oil and gas producer, has toppled Indian Oil Corp (IOC) to regain crown of being the country's most profitable public sector company.

According to earnings statements of the listed companies, Oil and Natural Gas Corp (ONGC) reported a 34 per cent jump in its 2018-19 fiscal net profit to 26,716cr rupees. In comparison, IOC registered a net profit of 17,274cr rupees for the fiscal year ended Mar 31, 2019. ONGC, in the

previous two financial years, had lost the most profitable PSU tag to IOC. IOC had also lost the title of being India's largest company by turnover tag to Mukesh Ambani-led Reliance Industries in FY19.

### **Taxation**

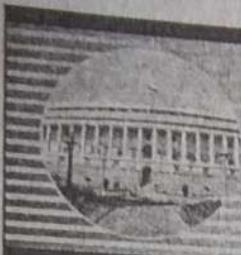
#### **GST crosses ₹1 lakh cr**

India's goods and services tax (GST) revenue collections crossed ₹1 lakh cr for the third straight month in May to ₹1,00,289 cr, despite slowdown in industrial activities.

However, GST mop-up in May was lower than the all-time high of ₹1.13 lakh cr in the month of Apr, highest ever since the indirect tax regime was rolled out on Jul 1, 2017. GST collections rose by 6.67 per cent over the revenue of ₹94,016cr reported in May 2018. The revenue in May 2019 was 2.21 per cent higher than the monthly average of GST revenue in financial year 2018-19 (₹98,114 cr), according to a data released by the Ministry of Finance.

### **Important Days**

- **01 Jun:** Global Day of Parents
- **03 Jun:** World Milk Day
- **04 Jun:** World Bicycle Day
- **05 Jun:** International Day of Innocent Children Victims of Aggression
- **05 Jun:** World Environment Day
- **05 Jun:** International Day for the Fight Against Illegal, Unreported and Unregulated Fishing
- **06 Jun:** Russian Language Day
- **07 Jun:** World Food Safety Day
- **08 Jun:** World Oceans Day
- **12 Jun:** World Day Against Child Labour
- **13 Jun:** International Albinism Awareness Day
- **14 Jun:** World Blood Donor Day
- **15 Jun:** World Elder Abuse Awareness Day
- **16 Jun:** International Day of Family Remittances
- **17 Jun:** World Day to Combat Desertification and Drought
- **18 Jun:** Sustainable Gastronomy Day
- **19 Jun:** International Day for the Elimination of Sexual Violence in Conflict
- **20 Jun:** World Refugee Day
- **21 Jun:** International Day of Yoga
- **23 Jun:** United Nations Public Service Day
- **23 Jun:** International Widows' Day
- **23 Jun:** Day of the Seafarer
- **25 Jun:** International Day against Drug Abuse and Illicit Trafficking
- **25 Jun:** United Nations International Day in Support of Victims of Torture
- **27 Jun:** Micro-, Small-and Medium-sized Enterprises Day
- **29 Jun:** International Day of the Tropics
- **30 Jun:** International Asteroid Day
- **30 Jun:** International Day of Parliamentarism



# Nation

## Centre

### **First session of Lok Sabha**

The first session of the newly elected Lok Sabha began with administering of oath to the Members. The Speaker Dr Virendra Kumar administered the oath to the members. In the first session, the newly elected MPs took their oaths, the Speaker of the 17th Lok Sabha was elected, and the President addressed a joint sitting of Parliament. The first session of the 17th Lok Sabha began on **Jun 17** and will be sitting till **Jul 26**. During this period a full Budget will be presented by the Modi govt on **Jul 5**. PM Narendra Modi is the first BJP leader who has been elected for a second time after completion of his five-year tenure, a feat so far achieved only by three Congress leaders—Jawaharlal Nehru, Indira Gandhi and Manmohan Singh.

### **Drinking water to all by 2024**

The Centre has set a target of providing clean drinking water to all by 2024, Jal Shakti Minister **Gajendra Singh Shekhawat** announced. The govt is formulating a plan to provide clean drinking water to nearly 14cr households. Prime Minister Narendra Modi, during his poll campaign, had promised to integrate all ministries that look after water-related issues into one ministry. In states like Uttar Pradesh, Bihar, West Bengal, Chhattisgarh, Jharkhand and Odisha, the coverage of clean drinking water is less than five per cent.

### **Foodgrain production**

As per Third Advance Estimates for 2018-19, total foodgrain production in the country is estimated at **283.37 mn tonnes (mt)**, which is higher by 17.62mt than the previous five years' (2013-14 to 2017-18) average production of foodgrain. Total production of Rice during 2018-19 is estimated at record 115.63mt. Production of Wheat, is estimated at record 101.20mt. Production of Nutri/Coarse Cereals estimated at 43.33mt is marginally higher by 0.24mt than the average production.

Total Pulses production during 2018-19 is estimated at 23.22mt, which is higher by 2.96mt than the Five years' average production of 20.26mt.

### **New Central Ministers**

As advised by Prime Minister Narendra Modi, President Ram Nath Kovind on 31 May issued the full list of allocation of portfolios of the Union Council of Ministers.

- **Prime Minister Narendra Modi:** Ministry of Personnel, Public Grievances and Pensions; Department of Atomic Energy; Department of Space; all important policy issues, and all other portfolios not allocated to any minister
- **Raj Nath Singh:** Minister of Defence
- **Amit Shah:** Minister of Home Affairs
- **Nitin Jairam Gadkari:** Minister of Road Transport and Highways; and Minister of Micro, Small and Medium Enterprises
- **DV Sadananda Gowda:** Minister of Chemicals and Fertilizers
- **Nirmala Sitharaman:** Minister of Finance; and Minister of Corporate Affairs
- **Ramvilas Paswan:** Minister of Consumer Affairs, Food and Public Distribution
- **Narendra Singh Tomar:** Minister of Agriculture and Farmers' Welfare; Minister of Rural Development; and Minister of Panchayati Raj
- **Ravi Shankar Prasad:** Minister of Law and Justice; Minister of Communications; and Minister of Electronics and Information Technology
- **Harsimrat Kaur Badal:** Minister of Food Processing Industries
- **Thaawar Chand Gehlot:** Minister of Social Justice and Empowerment
- **Dr Subrahmanyam Jaishankar:** Minister of External Affairs
- **Ramesh Pokhriyal 'Nishank':** Minister of Human Resource Development
- **Arjun Munda:** Minister of Tribal Affairs
- **Smriti Zubin Irani:** Minister of Women and Child Development; and Minister of Textiles
- **Dr. Harsh Vardhan:** Minister of Health and Family Welfare; Minister of Science and Technology; and Minister of Earth Sciences
- **Prakash Javadekar:** Minister of Environment, Forest and Climate Change; and Minister of Information and Broadcasting
- **Piyush Goyal:** Minister of Railways; and Minister of Commerce and Industry
- **Dharmendra Pradhan:** Minister of Petroleum and Natural Gas; and Minister of Steel
- **Mukhtar Abbas Naqvi:** Minister of Minority Affairs
- **Pralhad Joshi:** Minister of Parliamentary Affairs; Minister of Coal; and Minister of Mines
- **Dr. Mahendra Nath Pandey:** Minister of Skill Development and Entrepreneurship
- **Arvind Ganpat Sawant:** Minister of Heavy Industries and Public Enterprise
- **Giriraj Singh:** Minister of Animal Husbandry, Dairy and Fisheries
- **Gajendra Singh Shekhawat:** Minister of Jal Shakti  
*(Full list of Ministers of State (Independent Charge))*
- **Santosh Kumar Gangwar:** Minister of State (Independent Charge) of the Ministry of Labour and Employment
- **Rao Inderjit Singh:** Minister of State (Independent Charge) of the Ministry of Statistics and Programme Implementation; and Minister of State (Independent Charge) of the Ministry of Planning
- **Shripad Yesso Naik:** Minister of State (Independent Charge) of the Ministry of Ayurveda, Yoga and Naturopathy, Unani, Siddha and Homoeopathy (AYUSH); and Minister of State in the Ministry of Defence
- **Dr Jitendra Singh:** Minister of State (Independent Charge) of the Ministry of Development of North Eastern Region; Minister of State in the Prime Minister's Office; Minister of State in the Ministry of Personnel, Public Grievances and Pensions; Minister of

- State in the Department of Atomic Energy; and Minister of State in the Department of Space
- Kiren Rijiju:** Minister of State (Independent Charge) of the Ministry of Youth Affairs and Sports; and Minister of State in the Ministry of Minority Affairs
- Prahlad Singh Patel:** Minister of State (Independent Charge) of the Ministry of Culture; and Minister of State (Independent Charge) of the Ministry of Tourism
- Raj Kumar Singh:** Minister of State (Independent Charge) of the Ministry of Power; Minister of State (Independent Charge) of the Ministry of New and Renewable Energy; and Minister of State in the Ministry of Skill Development and Entrepreneurship
- Hardeep Singh Puri:** Minister of State (Independent Charge) of the Ministry of Housing and Urban Affairs; Minister of State (Independent Charge) of the Ministry of Civil Aviation; and Minister of State in the Ministry of Commerce and Industry.
- Mansukh L Mandaviya:** Minister of

- State (Independent Charge) of the Ministry of Shipping; and Minister of State in the Ministry of Chemicals and Fertilizers
- Faggansingh Kulaste:** Minister of State in the Ministry of Steel
- Ashwini Kumar Choubey:** Minister of State in the Ministry of Health and Family Welfare
- Arjun Ram Meghwal:** Minister of State in the Ministry of Parliamentary Affairs; and Minister of State in the Ministry of Heavy Industries and Public Enterprises
- General (Retd) VK Singh:** Minister of State in the Ministry of Road Transport and Highways
- Krishan Pal:** Minister of State in the Ministry of Social Justice and Empowerment
- Danve Raosaheb Dadarao:** Minister of State in the Ministry of Consumer Affairs, Food and Public Distribution
- G Kishan Reddy:** Minister of State in the Ministry of Home Affairs
- Parshottam Rupala:** Minister of State in the Ministry of Agriculture and Farmers' Welfare
- Ramdas Athawale:** Minister of State

- in the Ministry of Social Justice and Empowerment
- Sadhvi Niranjan Jyoti:** Minister of State in the Ministry of Rural Development
- Babul Supriyo:** Minister of State in the Ministry of Environment, Forest and Climate Change
- Sanjeev Kumar Balyan:** Minister of State in the Ministry of Animal Husbandry, Dairying and Fisheries
- Dhotre Sanjay Shamrao:** Minister of State in the Ministry of Human Resource Development; Minister of State in the Ministry of Communications; and Minister of State in the Ministry of Electronics and Information Technology
- Anurag Singh Thakur:** Minister of State in the Ministry of Finance; and Minister of State in the Ministry of Corporate Affairs
- Angadi Suresh Channabasappa:** Minister of State in the Ministry of Railways
- Nityanand Rai:** Minister of State in the Ministry of Home Affairs
- Rattan Lal Kataria:** Minister of State in the Ministry of Jal Shakti; and Minister of State in the Ministry of

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## Newswatch

- Social Justice and Empowerment
- V Muraleedharan:** Minister of State in the Ministry of External Affairs; and Minister of State in the Ministry of Parliamentary Affairs
- Renuka Singh Saruta:** Minister of State in the Ministry of Tribal Affairs
- Som Parkash:** Minister of State in the Ministry of Commerce and Industry
- Rameswar Teli:** Minister of State in the Ministry of Food Processing Industries
- Pratap Chandra Sarangi:** Minister of State in the Ministry of Micro, Small and Medium Enterprises; and Minister of State in the Ministry of Animal Husbandry, Dairying and Fisheries
- Kailash Choudhary:** Minister of State in the Ministry of Agriculture and Farmers' Welfare
- Debasree Chaudhuri:** Minister of State in the Ministry of Women and Child Development

### **Extension of PM-KISAN**

Fulfilling its poll promise, the govt approved a proposal to extend the benefit of ₹6,000 per year under the PM-KISAN scheme to all farmers in the country. The decision was taken in the first Cabinet meeting of the new govt. The ₹75,000 cr **Pradhan Mantri Kisan Samman Nidhi (PM-KISAN)** was announced in the interim budget, under which the govt decided to provide ₹6,000 per year (in three equal instalments) to an estimated 12cr small and marginal farmers holding land up to 2 hectares. Already, 3.11cr small farmers have so far received the first tranche of ₹2,000 each under the PM-Kisan scheme and 2.75 cr peasants have got the second instalment as well, as per the official data.

### **BIMSTEC leaders in India**

India invited the leaders of the Bay of Bengal Initiative for Multi-Sectoral Technical and Economic Co-operation or **BIMSTEC** member states for the swearing-in ceremony of Prime Minister Narendra Modi. This was in line with govt's focus on its Neighbourhood First policy. President of the Kyrgyz Republic, who is the current Chair of the Shanghai Cooperation Organization, and the Prime Minister of Mauritius, who was the Chief Guest at this year's Pravasi Bhartiya Divas, were also invited. Prime Minister Narendra Modi took oath for the second term on 30 May. The BIMSTEC member states are

— Bangladesh, India, Myanmar, Sri Lanka, Thailand, Nepal and Bhutan.

### **PM reconstitutes Niti Aayog**

Prime Minister Narendra Modi reconstituted the federal policy think-tank **National Institution of Transforming India (NITI) Aayog** by introducing key Cabinet ministers as *ex officio* members. Defence Minister Rajnath Singh, Home minister Amit Shah, Finance minister Nirmala Sitharaman and Agriculture minister Narendra Singh Tomar are now *ex officio* members of the think tank that is headed by Prime Minister. The induction of Union ministers as *ex officio* members in the body, which has state chief ministers as members of the governing council, is expected to forge better ties between Central and State Govts in deciding policy choices. Besides, Minister of Road Transport and Highways and Minister of Micro, Small and Medium Enterprises (MSME) Nitin Gadkari, Social Justice and Empowerment minister Thawar Singh Gahlot, Railways and Commerce minister Piyush Goyal and Minister of Statistics and Programme implementation Rao Inderjit Singh are four special invitees. Rajiv Kumar will continue to be the vice-chairperson, along with full-time members Ramesh Chand, VK Saraswat and VK Paul. NITI Aayog was constituted via a resolution of the Union Cabinet on Jan 1, 2015, replacing the erstwhile Planning Commission.

### **PM Kisan Pension Scheme**

Farmers will have to contribute ₹100 per month under the Pradhan Mantri Kisan Pension Yojana that seeks to provide a minimum fixed monthly pension of ₹3,000 on the attainment of 60 years. The Central Govt will also contribute an equal amount to the pension fund to be managed by the **LIC of India**, which will be responsible for the pension payout. The new govt in its first cabinet meeting had approved a separate pension scheme for farmers with an aim to cover 5cr beneficiaries in the first three years, which would cost the exchequer ₹10,774.5cr per annum.

### **New 'Jal Shakti' Ministry**

A new 'Jal Shakti' Ministry, in which the erstwhile ministries of Water Resources and Drinking Water and Sanitation will be merged, has been formed with **Gajendra Singh Shekhawat** at its helm. During the election campaign, Modi had promised to form an integrated ministry dealing with water issues. The ambit of the Ministry

will encompass issues including international and inter-state water disputes, the Namami Gange project, the flagship initiative to clean the Ganges, its tributaries and sub-tributaries and provide clean drinking water. In the first Modi govt, the project to clean the Ganga was moved from the Ministry of Environment and Forests to the Ministry of Water Resources. **Rattan Lal Kataria** will be the Minister of State in the newly formed ministry.

### **Pension for traders**

The newly-inducted Union Cabinet, in its first meeting, approved a mega pension scheme to provide a minimum assured pension of ₹3000 per month to all small shopkeepers and retail traders. The new scheme is part of Prime Minister Narendra Modi's universal social security programme. Under the scheme, all shopkeepers, retail traders and self-employed persons are guaranteed a monthly pension amount of ₹3,000 once they attain the age of 60 years. It aims at benefiting over 3cr traders and shopkeepers. All small shopkeepers and self-employed persons as well as the retail traders with GST turnover below ₹1.5 cr and age of 18-40 years can enrol for this scheme.

### **IIT Bombay in QS Rankings**

Indian Institute of Technology (IIT) Bombay has emerged as the top Indian institute in the QS World University Ranking 2020. Ranked at 152nd position, IIT-Bombay is the first to be featured in the list of global top 200 this year. Other Indian institutes which found a place in the top 200 were IIT-Delhi and Indian Institute of Science (IISc) Bangalore at 182nd and 184th position respectively. **Massachusetts Institute of Technology (MIT)** topped the global list for the eighth year while the second spot was taken by Stanford University. National University of Singapore was the top Asian university in the list at 11th position.

### **Draft education policy**

Amid massive outcry over Hindi being made a compulsory language in all non-Hindi speaking states, the Human Resource Development (HRD) ministry has climbed down and tweaked the draft **National Education Policy** to say that students are free to choose any language they wish to study in. The revised draft policy states, "In keeping with the principle of flexibility, students who wish to change one or more of the three languages they are studying

may do so in Grade 6 or Grade 7, so long as they are able to still demonstrate proficiency in three languages."

### **Eight Cabinet committees**

The govt reconstituted eight cabinet committees, including two new ones, to spur investment and create jobs.

- **Cabinet Committee on Investment and Growth:** Head – Prime Minister; Members – Amit Shah, Nirmala Sitharaman, Nitin Gadkari and Piyush Goyal
- **Cabinet Committee on Employment and Skill Development:** Head – Prime Minister; Members – Nirmala Sitharaman, Piyush Goyal, Amit Shah, Narendra Singh Tomar, Ramesh Pokhriyal 'Nishank', Dharmendra Pradhan, MN Pandey, Hardip Puri and Santosh Gangwar
- **Appointments Committee of the Cabinet:** Head – Prime Minister; Members – Amit Shah and Rajnath Singh
- **Cabinet Committee on Accommodation:** Head – Amit Shah; Members – Nitin Gadkari, Nirmala Sitharaman and Piyush Goyal
- **Cabinet Committee on Economic Affairs:** Head – Prime Minister; Members – Amit Shah, Nitin Gadkari, Nirmala Sitharaman, Piyush Goyal, Rajnath Singh, S Jaishankar, Dharmendra Pradhan, DV Sadananda Gowda, Narendra Singh Tomar, Ravi Shankar Prasad and Harsimrat Kaur Badal
- **Cabinet Committee on Parliamentary Affairs:** Head – Arjun Ram Meghwal; Special Invitee – V Muraleedharan
- **Cabinet Committee on Political Affairs:** Head – Amit Shah; Members – Nirmala Sitharaman, Ramvilas Paswan, Narendra Singh Tomar, Ravi Shankar Prasad, Thawar Chand Gehlot, Prakash Javadekar and Prahlad Joshi
- **Cabinet Committee on Security:** Head – Prime Minister; Members – Rajnath Singh, Amit Shah, S Jaishankar and Nirmala Sitharaman

## **States**

### **R'sthan increases aid**

The Rajasthan govt has increased the financial assistance given to school girls

under the 'Aapki Beti' scheme and *ex gratia* payment to the families of polling personnel who die during election duty. Under the Aapki Beti scheme, girls living Below Poverty Line (BPL) and whose mother or father have died get annual financial assistance in the state. The amount has been increased to ₹2,100 from ₹1,100 for the girls studying in class 1 to 8. For the girls in class 9 to 12, the financial aid has been increased to ₹2,500 from ₹1,500. Similarly, the govt has also increased *ex gratia* payment to the next of kin of an official killed on election duty to ₹20 lakh from ₹15 lakh.

### **MP Cabinet passes resolution**

The Madhya Pradesh Cabinet has passed a resolution to increase reservation quota for Other Backward Classes (OBCs) from existing 14 per cent to 27 per cent. The matter will now be taken up in the monsoon session of the state Assembly. The Cabinet has also increased by three per cent the dearness allowance for employees and pensioners. It will cost the state exchequer ₹1,647 cr and will benefit around seven lakh employees.

### **Tripura to host Film Festival**

In an effort to raise awareness about science and environment through films, the 10th National Science Film Festival of India (NSFFI) will be organised in Tripura in Jan and Feb 2020. The NSFFI debuted in Chennai eight years ago in 2011. It has covered almost all regions of the country since then including Bhubaneswar, Kolkata, Bangalore, Lucknow, Mumbai, Guwahati and Mohali. This is the second time the show will be held in a North-Eastern city. The film festival would include films produced by UNICEF, UNESCO and filmmakers from different countries. It will also include entries from Tripura and other states.

### **Assam to set up Skill Univ**

Assam govt will set up a Skill University at the cost of 850cr rupees in Darrang district. The Mission Director of Assam Skill Development Mission, AP Tiwari, said that the proposed institution would be known as Skill City. This will perhaps be the first skill university of the country with a capacity of 10 thousand seats. The admission test for the first batch of the North East Skill Centre will be held on 30 Jun. 80 per cent seats will be reserved for Assam and rest 20 per cent for other North Eastern states.

### **Allowance in Rajasthan**

Unemployed youth having graduation or equivalent degree will be given unemployment allowance up to ₹3,500 by the Rajasthan govt. They will get the benefit of the Chief Minister Yuva Sambal Yojana from Feb 2019. The state govt has implemented the scheme from Feb this year after rechristening the earlier Akshat Yojana. To be eligible for the scheme, applicants should be natives of Rajasthan. Under the scheme, male applicants will get ₹3,000 per month whereas women and the differently-abled will get ₹3,500 per month.

### **Cabinet approves Prez rule**

The Union Cabinet has approved the extension of President's rule in Jammu and Kashmir (J&K) for another six months, beginning from Jul 3. J&K has been under President's rule since Dec 19, 2018. Earlier, it was placed under Governor's Rule after the BJP pulled out of the coalition govt with PDP in Jun last year. Assembly elections in J&K will be held later this year, with the Election Commission confirming that the schedule will be announced after the Amarnath Yatra ends in Aug. The 46-day annual pilgrimage, beginning on Jul 1, takes up a lot of the state administration's time and requires heavy security deployment.

### **Saudi lifts ban on export**

Kerala's fruits and vegetable exporters have heaved a sigh of relief following the lifting of the export ban by Saudi Arabia after the Nipah virus attack in 2018. Saudi Arabia is one of the major export markets of fruits and vegetables from Kerala and the presence of large floating population ensures a good volume of business from there. Currently, mangoes such as Alphonso and Banganapalle are the major items in the export basket, followed by banana and pineapple. Kerala ships around 150 tonnes of fruits and vegetables on a daily basis to various Gulf countries, and of this, the consignment to Saudi alone was 30-40 tonnes.

### **25 states miss deadline**

Over 25 state govt may have to pay environment compensation of ₹1cr each for not submitting their respective action plans on systematic disposal of plastic waste to the Central Pollution Control Board (CPCB) as the Apr 30 deadline set by the National Green Tribunal (NGT) has passed by. The states had to submit action plans by Apr 30 to the CPCB, failing which

## Newswatch

they would have to pay the pollution body a compensation at the rate of ₹1cr per month, as per the National Green Tribunal (NGT) order. There was lack of knowledge among state authorities and a communication gap between State and Central Govt officials, which is the main cause of this delay.

### Assam hikes income limit

Assam govt has waived admission fees for students taking admission up to post graduate level whose parental income is less than 2 lakh rupees per year. Assam Education Minister Siddhartha Bhattacharya said that an order in this direction has been issued. All provincialised govt colleges and five universities are incorporated under the scheme. Stress is being given on introducing several professional subjects for the benefits of the students. The quality of the govt schools has improved following the Gunotsav.

### MP govt to provide aid

The Madhya Pradesh govt has announced to provide 5,000 rupees in minimum compensation to small and marginal farmers in the event of crop loss due to natural calamities. State Revenue and Transport Minister Govind Singh Rajput said, the state govt has made amendments in rules to this effect. The govt had also taken measures like filling up vacant posts of Patwaris to fast-track the redressal of matters pertaining to land.

### Rythu Bandhu Scheme

The Telangana Govt has issued a notification to extend the Rythu Bandhu scheme for 2019-20, while enhancing the amount from ₹4000 to ₹5000. The pet scheme of Telangana CM K Chandrasekar Rao is aimed at providing income support to the agriculturists directly to back their crops. The scheme, which provides initial investment support to agriculture and horticulture crops through a grant of ₹4000 per acre per farmer each season towards purchase of inputs like seeds, fertilisers, pesticides, labour and other field operations, has now enhanced it from ₹4000 to ₹5000 per acre per farmer per season.

## Panel

### Draft National Education Policy

The Committee led by the Chairman Dr. Kasturirangan submitted the Draft National Educational Policy to the Union

Human Resource Development Minister, Ramesh Pokhriyal 'Nishank' and Minister of State for HRD, Sanjay Shamrao Dhotre in New Delhi.

### Highlights

- The Committee has proposed to rename MHRD as Ministry of Education (MoE).
- Extension of Right to Education Act 2009 to cover children of ages 3 to 18.
- A 5+3+3+4 curricular and pedagogical structure based on cognitive and socio-emotional developmental stages of children: Foundational Stage (age 3-8 yrs); 3 years of pre-primary plus Grades 1-2; Preparatory Stage (8-11 years); Grades 3-5; Middle Stage (11-14 years); Grades 6-8; and Secondary Stage (14-18 years); Grades 9-12.
- Re-structuring of Undergraduate programmes (eg BSc, BA, BCom, BVoc) of 3 or 4 years duration and having multiple exit and entry options.
- A new apex body Rashtriya Shiksha Ayog is proposed to enable a holistic and integrated implementation of all educational initiatives.
- The National Research Foundation, an apex body, is proposed for creating a strong research culture and building research capacity across higher education.

## Defence

### DRDO test-fires guided bomb

The Defence Research and Development Organisation (DRDO) has successfully test-fired an indigenously-developed 500kg-class guided bomb from a Sukhoi combat jet at Pokhran in Rajasthan. Defence Ministry said in New

Delhi that the guided bomb achieved the desired range and hit the target with high precision. All the mission objectives have been met during the test-firing of the bomb. It is capable of carrying different warheads.

### India tests hypersonic missile

India conducted a successful first test flight of the indigenously developed Hypersonic Technology Demonstrator Vehicle (HSTDV) from a base off the Odisha coast. The only other countries that possess this technology are the US, Russia and China. The HSTDV is an unmanned scramjet (allowing supersonic combustion) demonstration vehicle that can cruise up to a speed of Mach 6 (or six times the speed of sound) and rise up to an altitude of 32km in 20 seconds. The HSTDV cruise vehicle is mounted on a solid rocket motor, which will take it to a required altitude, and once it attains certain Mach numbers for speed, the cruise vehicle will be ejected out of the launch vehicle.

### New agency for space warfare

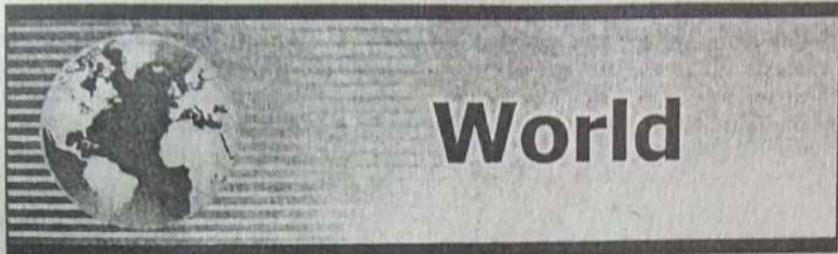
With the aim of enhancing the capabilities of the armed forces to fight wars in space, the govt has approved the setting up of a new agency which will develop sophisticated weapon systems and technologies for the purpose. The govt has cleared the setting up of this new agency called the Defence Space Research Agency (DSRO) which has been entrusted with the task of creating space warfare weapon systems and technologies.

### Diamond jubilee celebrations

The first naval air squadron, INAS 550, known as the Flying Fish, based at the Naval Base in Kochi, celebrated its diamond jubilee on 17 Jun.

## Books and Authors

- Function of Data Sovereignty: The Pursuit of Supremacy – Vinit Goenka
- My Life, My Mission – Baba Ramdev (co-author Uday Mahurkar)
- Gun Island – Amitav Ghosh
- My Seditious Heart – Arundhati Roy
- Voices of Komagata Maru – Suchetana Chattopadhyay
- Upheaval – Jared Diamond
- The Age of Surveillance Capitalism: The Fight for Human Future at the new Frontier of Power – Shoshana Zuboff
- Global Capitalism and the Great Crisis – Ernesto Scerpani
- The Farm – Joanne Ramos
- Sikkim: Dawn of Democracy – GBS Sidhu
- City of Girls – Elizabeth Gilbert
- The Nine Waves: The Extraordinary Story of Indian Cricket – Mihir Bose
- The City and the Sea – Raj Kamal Jha
- Crash – R Gopalakrishnan



### **Fastest-growing economy**

**B**angladesh has emerged as the fastest growing economy among the 45 countries of the Asia-Pacific region, according to Asian Development Bank (ADB). In the financial year 2018-19 Bangladesh attained growth rate of 7.9% which is its fastest rate since 1974. The bank predicted that the growth will be 8% in the next financial year. The ADB country director handed over the report to the Prime Minister of Bangladesh, Sheikh Hasina. The higher public sector investment, stronger consumption demand, revival in exports, improved power supply and higher growth in private sector credit were the key factors of the high growth performance of Bangladesh.

### **Canada to ban plastic**

Canadian Prime Minister Justin Trudeau has announced that single-use plastics will be banned in the country from 2021. He declared it a global challenge to phase out the plastic bags, straws and cutlery clogging the world's oceans. Less than 10 per cent of plastics used in Canada are currently recycled. Each year a million birds and more than 100,000 marine mammals worldwide suffer injury or death by becoming entangled in plastic or ingesting it through the food chain.

### **India to cross China**

India is projected to surpass China as the world's most populous country in the next eight years. As per a United Nations report released recently, India is expected to add nearly 273mn people between 2019 and 2050 and remain the most populated country through the end of the current century. Previous UN projections had estimated that India will surpass China as the world's most populous country as early as 2022.

The 2017 World Population Report, released by the UN two years ago, had estimated that the population of India would surpass that of China's by around 2024. China, with 1.43bn people in 2019, and India, with 1.37bn, have long been the

two most populous countries of the world, comprising 19 and 18 per cent, respectively, of the global total in 2019. They are followed by the United States of America.

### **Competitiveness Rankings**

India has moved up one place to rank 43rd most competitive economy in the world on the back of its robust economic growth, a large labour force and its huge market size, while Singapore has toppled the US to grab the top position. The US has slipped to the third place in the 2019 edition of the IMD World Competitiveness Rankings. Hong Kong SAR has held onto its second place, helped by a benign tax and business policy environment and access to business finance. The IMD World Competitiveness Rankings, established in 1989, incorporate 235 indicators from each of the 63 ranked economies.

### **Nepal celebrates Republic Day**

Nepal celebrated its 12th Republic Day on 29 May. A number of programmes were organised in different parts of the country to mark the occasion. The main function was held at Army Pavilion in Kathmandu, which was attended by the President Bidya Devi Bhandari, Prime Minister KP Sharma Oli, cabinet ministers, senior govt officials, heads and representatives of various diplomatic missions and other dignitaries. On Jeth 15, 2065 of Nepali Calendar (May 28, 2008) the Constituent Assembly of the Himalayan nation declared Nepal a Federal Democratic Republic, abolishing the 240 year-old monarchy.

### **Sri Lanka signs tripartite pact**

Sri Lanka has signed a tripartite agreement with India and Japan for development of eastern terminal of Colombo port. The Memorandum of Cooperation (MoC) was signed in Colombo by Sri Lankan ports minister Sagala Ratnayake, Indian high commissioner to Sri Lanka Tarun Singh Sandhu and a Japanese representative. As per the agreement, Sri Lanka Port Authority

(SLPA) will hold 51 per cent majority stake in the port development while Japan and India will have a combined stake of 49 per cent.

### **Algeria, Argentina malaria-free**

Algeria - the nation where malaria was discovered - is officially free of malaria, the World Health Organization (WHO) has said, making it the third African country to eliminate one of the world's leading killer diseases. With no recorded cases of malaria in three consecutive years, Argentina was also declared malaria-free - the second country in the Americas after Paraguay in 45 years to wipe out the disease, which kills more than 400,000 people a year. Although WHO has declared 38 countries malaria-free since 1955, the fight against malaria has stalled as malaria-carrying mosquitoes have become resistant to drugs and insecticides in bednets that protect people from being bitten while sleeping.

### **India bans JMB**

The Jamaat-ul-Mujahideen Bangladesh (JMB), which was blamed for the terror attack at a cafe in Dhaka in 2016 in which 22 people, including 17 foreigners, were killed, has been declared as a banned terrorist organisation by the govt. In a notification, the home ministry said the outfit had committed and promoted acts of terrorism and had been engaged in radicalisation and recruitment of youths for terrorist activities in India.

### **New US sanctions on Iran**

The US President Donald Trump has imposed hard-hitting new sanctions on Iran, including on the office of the country's Supreme Leader Ali Khamenei. The additional sanctions were in response to the shooting down of a US drone and other things. Ayatollah Ali Khamenei supervises an organisation known as Setad, which confiscated property abandoned after the 1979 revolution and morphed into a business juggernaut with holdings of about \$95bn (£75bn). The US is demanding that Iran end its nuclear programme, curb its missile production and stop support for partner Arab militias. Back in May 2018, the White House reinstated all sanctions removed under a 2015 nuclear deal made with world powers.

## Newswatch

### India's assistance to Niger

India has extended USD 15mn assistance to Niger for organising the African Union (AU) summit scheduled to be held in Niamey on Jul. It will also be the first time that Niger is scheduled to host an AU summit. The assistance in the form of grant was symbolically handed over to Niger's Deputy Foreign Minister Lamido Ousseini Bala Goga Salamatou in the presence of Minister and Special Advisor to the Niger President Mohammed Saidil Moctar, by Ambassador of India to Niger Rajesh Agarwal at a ceremony held on Jun 17 in Niamey.

### India extends aid to Nepal

India has extended a financial aid of 1.6bn Nepalese rupees to Nepal to help 50,000 people in Nuwakot and Gorkha districts rebuild their houses damaged in the devastating earthquake in 2015. India's ambassador to Nepal Manjeev Singh Puri handed over the cheque to Finance Secretary of Nepal Rajan Khanal for the reconstruction work. The ambassador thanked the Nepal govt for the partnership and reiterated that India remained committed to completion of post-earthquake reconstruction projects in the Himalayan nation. India has so far granted Nepal a total of ₹4.5 bn Nepalese rupees under the housing reconstruction projects.

### Global Peace Index 2019

India's rank has slipped five places to 141 among 163 countries on the Global Peace Index 2019, while Iceland remains the most peaceful country and Afghanistan the least peaceful. Australian think tank Institute for Economics & Peace ranks countries according to their level of peacefulness based on three thematic domains — the level of societal safety and security, the extent of ongoing domestic and international conflict and the degree of militarisation. Iceland remains the most peaceful country in the world, a position it has held since 2008. It is joined at the top of the Global Peace Index (GPI) by New Zealand, Austria, Portugal, and Denmark.

### Global gender equality index

India ranked 95th out of 129 countries in a new index that measures global gender equality looking at aspects such as poverty, health, education, literacy, political representation and equality at the workplace. The Sustainable Development Goals Gender Index has been developed by UK-based Equal

Measures 2030, a joint effort of regional and global organisations, including African Women's Development and Communication Network, Asian-Pacific Resource and Research Centre for Women, Bill and Melinda Gates Foundation, and International Women's Health Coalition. The new index includes 51 indicators across 14 of the 17 official Sustainable Development Goals and covers 129 countries across all regions of the world. Denmark was ranked at the first place and Chad at 129th place.

### African bloc suspends Sudan

The African Union (AU) has suspended Sudan until the establishment of civilian rule, intensifying global pressure on its new military leaders to stand down after the worst violence since Omar al-Bashir's fall in Apr. Ethiopia — where the continental bloc is based — planned a mediation effort. Both sides had been in talks over a civilian-led transition to democracy. But their already faltering negotiations collapsed when security forces stormed a sit-in protest camp, killing dozens of people. Meeting in Ethiopia's capital, Addis Ababa, the AU's peace and security council invoked its response to interruptions of constitutional rule by suspending Sudan.

### Rocket launch from sea

China launched a space rocket from sea for the first time. The Asian giant now spends more than Russia and Japan on its civil and military space programmes — unveiling ambitious plans for missions to the moon and beyond in the coming decade. A Long Mar 11 rocket was launched from a ship in the Yellow Sea. The rocket carried two experimental satellites and five commercial ones. Earlier this year, China became the first nation to land a rover on the far side of the moon.

### UN extends sanctions

The UN Security Council has extended an arms embargo and sanctions on South Sudan for a year, despite resistance from African countries, Russia and China. A US-drafted resolution was adopted by a vote of 10 in favour with five abstentions. Resolutions in the 15-member council require a minimum of nine votes for adoption. The measure renews, until May 31, 2020, an arms embargo on South Sudan along with an assets freeze and global travel ban slapped on eight South Sudanese nationals for their role in fuelling the war.

### Operation Sunrise 2

The armies of India and Myanmar carried out a three-week-long coordinated operation from May 16 in their respective border areas, targeting several militant groups operating in Manipur, Nagaland and Assam. The first phase of "Operation Sunrise" was conducted three months ago along the Indo-Myanmar border, during which a number of camps of north-east-based militant groups were busted. Myanmar is one of the strategic neighbours of India and shares a 1,640km border with a number of north-eastern states, including the militancy-hit Nagaland and Manipur.

### B'desh's first iron-ore mine

For the first time in Bangladesh, an iron-ore mine has been discovered at Isabpur village in Dinajpur. The announcement was made by the Geological Survey of Bangladesh following extensive drilling over two months in the area. According to the Geological Survey, a 400-foot-thick iron layer was found 1,750 feet beneath the surface stretched over an area of 6-10 square kilometre. The percentage of iron in the mine was 65, which indicates the high quality of the ore. In most other countries like Canada, China, Brazil, Sweden and Australia the percentage is below 50.

### Bahrain to ban plastic

Bahrain will start phasing out the use of plastic products from Jul 2019. A Ministerial order with respect to the technical regulations for plastic products will come into effect on 21 Jul. The order will regulate and phase out the use of plastic bags. The first phase will focus on single-use plastic bags as well as banning the import of non-biodegradable plastic bags. Later phases will witness a permanent ban on the use of plastic bags at certain malls and supermarkets. Bahrain has joined a number of leading countries in banning the import of plastic waste, following the United Nations' call to mitigate ocean pollution and climate change.

### France to provide fund

Indian Railway Station Development Corporation (IRSDC) has entered into a tripartite agreement with French National Railways (SNCF) and French Development Agency (AFD), under which a grant of up to 7 lakh euros will be provided to boost capacity building for Railway Station Development Programme in India.



## Persons in News

### Appointed

**Anita Bhatia:** She has been appointed the Deputy Executive Director of the United Nations Entity for Gender Equality and the Empowerment of Women (UN-Women) for Resource Management, Sustainability and Partnerships. She has had a distinguished career at the World Bank Group, serving in various senior leadership and management positions, both at the headquarters and in the field.



**Yousef Aldobay:** The Organisation of Islamic Cooperation (OIC) has appointed the Saudi Arabia citizen as its special envoy for Jammu and Kashmir. The appointment was made during the 14th OIC summit held in Saudi Arabia's holy city of Makkah, which was attended by several leaders of Muslim countries.

**Ajit Doval:** The govt reappointed retired Indian Police Service (IPS) officer as National Security Adviser, according him a Cabinet rank. He becomes the first NSA to get Cabinet status in the table of precedence. In his previous stint as an NSA, he had the stature of a Minister of State (MoS).

**Rakesh Makhija:** The Reserve Bank of India (RBI) has approved the appointment of Rakesh Makhija as the Chairman of Axis Bank. He has been appointed as the Non-Executive (Part-time) Chairman of the Bank for a period of 3 years.

**BR Gavai:** Four new Supreme Court judges were administered their oaths of office by Chief Justice Ranjan Gogoi, including him, bringing the strength of the top court to its full complement of 31 for the first time in five years. The other three judges are – Surya Kant, Aniruddha Bose and AS Bopanna.

**Nripendra Misra and PK Mishra:** They were re-appointed as Principal Secretary and Additional Principal Secretary respectively to Prime Minister Narendra Modi with Cabinet minister rank. The Appointments Committee of the Cabinet approved both the appointments with effect from May 31.



**IV Subba Rao:** He will continue as secretary to Vice President M Venkaiah Naidu. His tenure will be co-terminous with the tenure of the Vice President.

**Sharad Kumar:** The Vigilance Commissioner has been named interim CVC until a new incumbent is chosen by Prime Minister Narendra Modi-headed selection panel. Central Vigilance Commissioner (CVC) KV Chowdary and Vigilance Commissioner TM Bhasin completed their tenure at the antigraft body recently.

**RK Chhibber:** Jammu & Kashmir Bank has received RBI's approval for his appointment as its interim CMD of the bank for three months. Chhibber, Executive President of J&K Bank, was appointed following removal of Parvez Ahmed as CMD of the bank by the Jammu & Kashmir administration.



**Shailesh Tinaikar:** The UN Secretary General Antonio Guterres, has appointed Indian Army officer as the new Force Commander of the United Nations Mission in South Sudan (UNMISS). India is the fourth largest contributor of uniformed personnel to the UN peacekeeping missions.

**Birender Singh Dhanoa:** The Air Chief Marshal received the baton of Chairman

of Chiefs of Staff Committee from outgoing Navy Chief Admiral Sunil Lanba, who retired recently. The Chiefs of Staff Committee comprise chiefs of the Army, the Navy and the Air Force and the seniormost member is appointed its chairperson.



**VS Kaumudi:** The Centre has appointed the senior Indian Police Service (IPS) officer as Director General of Bureau of Police Research and Development (BPR&D) by downgrading the post to the level of Additional Director General.

**Thawarchand Gehlot:** The Social Justice Minister has been appointed the leader of the house in Rajya Sabha. He will replace Arun Jaitley, the former finance minister who opted out of the council of ministers due to health reasons.

**Krishnamurthy Subramanian:** The Chief Economic Adviser and former MD and CEO of IDBI Bank, B Sriram, were appointed part-time members of the Insolvency and Bankruptcy Board of India (IBBI) recently. The Insolvency and Bankruptcy Board of India was established on Oct 1, 2016.

**Mrutyunjay Mohapatra:** The renowned scientist and cyclone warning specialist was appointed as the chief of India Meteorological Department (IMD) recently. Mohapatra and his team at the Cyclone Warning Division of the IMD have earned praise for their accurate forecasts on cyclones.



**Inger Andersen:** The Danish economist and environmentalist recently took up her new role as Executive Director of the UN Environment Programme. She was nominated for the post by United Nations Secretary-General António Guterres and approved by the General Assembly in Feb 2019.

**Rabi Mishra:** The Reserve Bank of India (RBI) has promoted as the central bank's executive director (ED), after the position fell vacant on Rosemary Sebastian's retirement. As ED, Mishra would be looking after the newly-created specialised supervisory and regulatory cadre within the RBI.

**Faiz Hamid:** The Lt General of Pakistan

## Newswatch

Army was appointed the new director general of Pakistan's Inter-Services Intelligence, the military-led spy agency. He replaces Lt Gen Asim Munee.



**Karambir Singh:** He took over as the Chief of the Naval Staff succeeding Admiral Sunil Lanba, who is retiring after over four decades of service. Vice Admiral Bimal Verma had challenged the appointment of Singh as the new Navy Chief.

### Died

**Jaspal Inder Singh Kalra:** The celebrated chef and culinary revivalist, popularly known as Jiggs Kalra, passed away recently. Kalra, who held titles like the "Czar of Indian Cuisine" and "Taste maker to the Nation", conferred upon him by eminent writer Khushwant Singh, was best known for his role as a culinary revivalist.

**Mohammed Morsi:** In Egypt, the former president died after collapsing during a session in court. State television reported that he was taken to a Cairo hospital but could not be revived. He was country's first democratically elected president and a member of Egypt's most powerful Islamist group, the now banned Muslim Brotherhood.



**RV Janakiraman:** The former Puducherry Chief Minister and senior Dravida Munnetra Kazhagam leader died recently. Lieutenant Governor Kiran Bedi condoled the death of Janakiraman, while Chief Minister V Narayanasamy and leaders of various political parties paid their last respects to the DMK veteran.

**Girish Karnad:** The noted actor, filmmaker and playwright passed away recently. He was 81. Karnad predominantly worked in South Indian cinema and Bollywood.



He rose to prominence with his coming of age of modern Indian playwriting in Kannada. He was a recipient of the 1998

Jnanpith Award, the highest literary honour conferred in India.

**Rajnath Singh 'Surya':** The former BJP Rajya Sabha MP and senior journalist passed away recently. He became a Rajya Sabha MP in Nov 1996 and retired in Nov 2002.

**Crazy Mohan:** The renowned dialogue writer in Tamil film industry died in Chennai recently. His real name is Mohan Rangachari and he was fondly known as Crazy Mohan because of his hit skit called *Crazy Thieves in Paalavakkam*.

**Veetu Devgan:** The veteran action choreographer and filmmaker passed away recently. He choreographed stunts in over 80 films. He made his directorial debut with 1999 film *Hindustan Ki Kasam*.

### Elected

**Rajiv Mehrishi:** The Comptroller and Auditor General of India has been elected as external auditor of the World Health Organization (WHO) for four years from 2020 to 2023. Mehrishi was elected at the 72nd World Health Assembly in Geneva with a majority.



**Tijjani Muhammad-Bande:** Nigeria's Ambassador to the United Nations has been elected by acclamation as President of the 74th session of the UN General Assembly. The 193-member General Assembly elected him, who had been nominated by Nigeria and endorsed by the African group.

**Kassym-Jomart Tokayev:** Kazakhstan's interim president, chosen successor of veteran ruler Nursultan Nazarbayev who retains sweeping powers, has won a snap presidential election amid protests criticising the vote as rigged.

**Nayib Bucale:** In the Central American country of El Salvador, he has been sworn in as the nation's President. He was sworn in by the Speaker of the National Assembly in downtown San Salvador. Delegations from 83 countries attended the ceremony.



**Prayuth Chan-ocha:** Thailand's new parliament has elected the military govt chief as the country's prime minister, completing a transition from coup leader to head of a civilian govt in a system seen tilted in his favour. He comfortably exceeded the 375-vote threshold in the two houses of parliament.

**Scott Morrison:** He has been sworn in as Australia's Prime Minister, 11 days after retaining the position in the country's general election. He was sworn in by Queen Elizabeth's official representative in Australia, Governor-General Sir Peter Cosgrove, at a ceremony in the capital, Canberra. Deputy Prime Minister Michael McCormack was also sworn in.

**Cyril Ramaphosa:** He took oath as President of South Africa in Pretoria on May 25, 2019. Ramaphosa is seen by many as having the potential to clean up both the govt and the ruling party's reputation. Ramaphosa first took office in 2018 after former President Jacob Zuma was pressured to resign.

**Volodymyr Zelensky:** He was sworn in as the war-torn country's sixth president. Zelensky had some time ago played a corruption-busting president in a popular TV sitcom that shaped his image during the real-life election campaign.



**Om Birla:** He has been unanimously elected as the Speaker of the 17th Lok Sabha. All major political parties, including Congress, DMK, TMC, BJD, YSR Congress, JD (U) and Shiv Sena, supported the motion moved by Prime Minister and Leader of the House.

### Others

**Suman Rao:** The resident of Rajsamand, Rajasthan was crowned Miss India 2019 recently. Last year's winner Anukreethy Vas from Tamil Nadu crowned her successor. Suman also has the title of Miss India Rajasthan 2019 under her belt.

**MA Yusuffali:** The UAE-based businessman and LuLu Group chairman has become the first expat to get the exclusive Permanent Residency 'Golden Card' in the United Arab Emirates (UAE).





## Places in News

**Chattogram:** The High Commissioner of India to Bangladesh Riva Ganguli Das inspected the ongoing construction of the Feni Bridge known as *Maitree Setu* in Chattogram. Being developed as a corridor for trade and commerce between India's North-East and Bangladesh, the bridge will connect Tripura with Chittagong port of Bangladesh. It will provide direct road connectivity between South Tripura and Chittagong, allowing India to use Chittagong as a "port of call" and promoting trade, tourism and people-to-people ties.

**Mumbai:** The intersessional meeting of Kimberley Process (KP) was hosted by India from 17th to 21st Jun, 2019 in Mumbai. Besides meetings of different Working Groups and Committees of the Kimberley Process Certification Scheme (KPCS), two special forums regarding Diamond Terminology and Artisanal Mining – Small Steps to Larger Outcomes, were also held during the Intersessional. Around 300 delegates from the Govt of India and other participating countries, industry and civil society attended the five-day meeting.

**Bishkek:** India Prime Minister Narendra Modi visited the Kyrgyzstan capital to attend the Shanghai Cooperation Organisation (SCO) Summit. Several important issues, including counter-terrorism, extremism and multilateral economic cooperation, were discussed during the meeting. PM also held bilateral meetings with Chinese President Xi Jinping and Russian President Vladimir Putin on the sidelines of the Summit.

**Peru:** A powerful earthquake measuring 8 on the Richter scale, toppled houses, blocked roads and knocked out power in parts of the country recently. The quake hit in a sparsely populated region of Peru's Amazon basin region but was felt over a wide area. Peru's President Martin Vizcarra said that it was the most powerful quake to hit the country in 12 years. The quake struck about 75 kilometres (45

miles) southeast of the town of Lagunas at a depth of at least 110 kilometres. Peru lies on the so-called Ring of Fire, an arc of fault lines that circles the Pacific Basin and is prone to frequent earthquakes and volcanic eruptions.

**Orchha:** The architectural heritage of the town in Madhya Pradesh which depict peculiar style of the Bundela dynasty have been included in UNESCO's tentative list of World Heritage Sites following a proposal sent by the Archaeological Survey of India (ASI) to the UN body. The ASI had sent a proposal to the UNESCO on Apr 15, 2019 to include the Sites in its list. According to the rules, to be a part of UNESCO's World Heritage sites, the heritage or any historical site first has to be on the tentative list. After it makes to the tentative list, another proposal is sent to the UNESCO.

**Sarnath:** According to a notification issued by Union Ministry of Culture, the ancient Buddhist site located in the city in Uttar Pradesh has been declared as 'protected area of national importance' by Archaeological Survey of India (ASI). For declaring the *stupa* as protected area, govt sought public feedback on 8 Mar 2019 for a period of two months. The Stupa is known as 'Chaukhandi' because of its four-armed plan. The stupa is an ancient Buddhist site which evolved from burial mounds and served as a shrine for a relic of Buddha.

**Tulmulla (J&K):** Hundreds of Kashmiri Pandit devotees prayed at the famous Ragnya Devi temple here in Jammu and Kashmir's Ganderbal district as the Kheer Bhawani mela was celebrated amid chants of religious hymns and ringing of temple bells. Nestled in the shade of mammoth Chinar trees in Tulmulla village, the temple witnessed a massive gathering of devotees, most of them Kashmiri Pandits, who have journeyed from across the country. The Kheer Bhawani mela is one of the biggest religious functions of the displaced community. Walking barefoot,

the devotees carried rose petals and offered tribute to the goddess as men took a dip in the stream close to the shrine.

**Mexico:** India has been designated as the Guest of Honour at the 33rd Feria Internacional del Libro de Guadalajara (Guadalajara International Book Fair). The book fair, to be organised Nov 30-Dec 8, will be "the largest book fair in the Spanish-speaking world". The dedicated India pavilion at the fair will showcase over 35 Indian authors and artists, along with 15 publishing houses. Ancient and rare manuscripts, including the Mahabharata and the Ramayana will be put on exhibition, along with photo books, handicrafts and paintings.

**Jakarta:** A column of thick ash was spewed 7 km high to the sky from the crater of Mount Sinabung volcano in Sumatra Island of western Indonesia, the country's national volcanology agency said. Mt Sinabung volcano is at the second highest alert level with no-go zone of 5km from the crater. Mt Sinabung, 2,475 metres high, is located in Karo district of North Sumatra province. In its eruption in 2014, 16 people were killed and thousands displaced.

**Rome:** Mount Etna in southern Italy has burst into life, spitting molten lava high into the sky, though cloud cover ruined the view for those brave enough to venture up the flanks of Europe's highest volcano. The National Institute of Geophysics and Vulcanology (INGV) said there was "lively spattering" as fire and hot ash spewed high into the sky in an eruption which began and had slowed slightly next day but still posed a risk to climbers. The volcano on the island of Sicily previously erupted in Dec.

**Buenos Aires:** The Social Justice and Empowerment minister Thaawarchand Gehlot visited the capital city of Argentina to participate in 2nd Global Disability Summit. The objective of the three-day summit was to deliberate on issues across the world concerning empowerment and inclusion of Persons with Disabilities and to work out a mechanism for enabling them to live an independent life.

**Kolkata:** The second edition of the India International Mega Trade fair (IIMTF) was held in the city to promote business and trade around the region, besides encouraging joint ventures, tie-ups and investment in the country.



# Sports

## Athletics

### IAAF is now World Athletics

World athletics' governing body, the International Association of Athletics Federations (IAAF), is to be rebranded as World Athletics. The IAAF was initially founded in 1912 as the International Amateur Athletic Federation. The body, currently presided over by Sebastian Coe, took its present name in 2001 and World Athletics should be operational from Oct.

## Basketball

### Punjab Police win

Punjab Police and Eastern Railway won the men's and women's titles respectively in the 33rd Federation Cup basketball tournament. Punjab Police beat Indian Army while Eastern Railway beat Tamil Nadu.

## Boxing

### India bags 57 medals

India bagged a total of 57 medals, including 12 Gold, 18 Silver and 27 Bronze, at India Open International Boxing tournament in Guwahati. MC Mary Kom, Shiva Thapa, L Sarita Devi and Naman Tanwar won gold in their respective finals.

## Cricket

### India beat Pak

In the World Cup clash against Pakistan, Virat Kohli's men proved they are far too superior with an 89-run triumph. Rohit Sharma's masterly 140 (113b, 14x4, 3x6), his second in the current championship, helped India post 336 for five.

### ICC launches criio campaign

The ICC launched the criio campaign on the eve of the men's World Cup, bringing together 460mn people playing cricket globally to celebrate the magnificent diversity of cricket. The ICC asked the fans

to join the social cricket tribe by sharing pictures and videos of where and how they play cricket across the world, using the newly launched #criio and visiting criio.com.

## Football

### Liverpool beats Tottenham

An early goal from Mohamed Salah and a late one from Divock Origi gave Liverpool a 2-0 win over Tottenham Hotspur in all-English Champions League final.

### Chhetri becomes most capped

Sunil Chhetri has become the most capped India player by surpassing Bhaichung Bhutia's 107 international matches. In his milestone match of the King's Cup football tournament in Buriram, Thailand, he scored the lone goal for his side.

### 2020 Copa America

Australia will be one of the two guest nations at the 2020 Copa America. The second nation is Qatar. The 2020 tournament will be co-hosted by Argentina and Colombia.

## FIFA Rankings

India remains unmoved at 101st position, after FIFA, the apex body of football, released the latest team rankings. Belgium strengthens their top position, adding nine points to the previous standings.

## Golf

### Gary Woodland wins

American Gary Woodland won the 2019 United States Open Championship at Pebble Beach Golf Links in California. The victory secures the 35-year-old's first major career title.

## Hockey

### India wins FIH Series Finals

In the FIH Men's Series Finals, India

defeated South Africa by five goals to one in a summit clash at the Kalinga Stadium in Bhubaneswar.

### Cantor Fitzgerald U21

The Indian junior women's hockey team clinched the Cantor Fitzgerald U21 International four-nations title after beating Ireland 1-0 in the final at Dublin, Ireland.

## Motorsports

### Hamilton wins

Lewis Hamilton won the 2019 Monaco Grand Prix F1 championship. An emotional Lewis Hamilton dedicated his third Monaco GP win to Niki Lauda.

### Canadian Grand Prix

Lewis Hamilton won a record-equalling seventh triumph at the Canadian Grand Prix F1 championship in Montreal.

## Shooting

### India's best ever show

In shooting, India produced their best ever show at the ISSF World Cup with a total tally of five gold medals in Munich, Germany. India topped the medals tally with five golds and a silver.

## Squash

### Joshna Chinappa wins

Joshna Chinappa won a record 17th national squash title after outplaying Tamil Nadu's Sunayna Kuruvilla in the final.

## Tennis

### French Open 2019

The 2019 French Open was the 123rd edition of a Grand Slam tennis tournament.

- **Men's Singles** – Spain's Rafael Nadal defeated Dominic Thiem of Austria.
- **Men's Doubles** – Andreas Mies & Kevin Krawietz of Germany defeated Fabrice Martin & Jérémie Chardy of France.
- **Women's singles** – Ashleigh Barty of Australia defeated Marketa Vondrousova of Czech Republic.
- **Women's Doubles** – Hungary's Tímea Babos & France's Kristina Mladenovic defeated Zheng Saisai & Duan Yingying of China.
- **Mixed Doubles** – Chinese Taipei's Latisha Chan & Ivan Dodig of Croatia defeated Gabriela Dabrowski of Canada & Mate Pavic of Croatia.



# Awards

## BBC award for NGO

**A**kshaya Patra, a non-profit organisation running one of the world's largest school meals projects in India, has been awarded the BBC World Service Global Champion Award for the programme. The award, presented at the BBC Food and Farming Awards in Bristol, recognises a person or project that is changing the way the world produces, processes, consumes or thinks about food for the better.

## Nine Dots Prize

Indian writer Annie Zaidi was announced as the 2019 winner of Nine Dots Prize. The \$100,000 award is a prestigious book prize created to award innovative thinking that addresses contemporary issues around the world. Mumbai-based Zaidi, a freelance writer, won for her entry *Bread, Cement, Cactus*.

## Horticulture award

**N**Kumar, Vice-Chancellor, Tamil Nadu Agricultural University, has been conferred the lifetime recognition award by the Confederation of Horticulture Associations of India. The award has been conferred for his outstanding contribution in the field of horticulture and academic leadership focussed on human resource development in agriculture.

## Order of the Rising Sun

Former foreign secretary Shyam Saran will be conferred with Japan's second highest national award for his contributions to strengthen the strategic ties and enhancing mutual understanding between India and Japan. The Govt of Japan has announced that in its 2019 Spring Imperial Decorations, it will confer 72-year-old Saran, 'the Order of the Rising Sun, Gold and Silver Star'.

## UNICEF's humanitarian award

Actor Priyanka Chopra will be awarded the Danny Kaye Humanitarian Award by UNICEF's American chapter at their Snowflake Ball in Dec. The award is named after actor-philanthropist Danny

Kaye, who was UNICEF's first Goodwill Ambassador. The actor is a UNICEF Goodwill Ambassador and has been a part of United Nations' global "Girl Up" Campaign.

## Jnanpith award

Renowned author Amitav Ghosh was awarded the 54th Jnanpith Award for his contribution to the enrichment of Indian literature in English. He was conferred the award by former governor of West Bengal Gopalkrishna Gandhi. Amitav Ghosh is the first English writer to get this prestigious award.

## Kyrgyzstan awards Jinping

Chinese President Xi Jinping was conferred with the highest national award of Kyrgyzstan, which hosted the 19th Shanghai Cooperation Organisation (SCO) summit recently. President of Kyrgyzstan Sooronbay Jeenbekov awarded his Chinese counterpart the Manas Order of the First Degree, the country's highest national prize.

## Women's Prize for Fiction 2019

A book about the wrongful conviction of a young black American man has won the 2019 Women's Prize for Fiction. *An American Marriage* by US writer Tayari Jones scooped the prize. The book was described by former US President Barack Obama as a "moving portrayal of the effects of a wrongful conviction on a young African-American couple".

## Amnesty awards Greta

Swedish teenage activist Greta Thunberg and the millions of school students she inspired to skip school to protest for climate action on Fridays won a global human rights award. Thunberg and her "Fridays for Future" global movement won Amnesty International's Ambassador of Conscience Award, joining the likes of South African leader Nelson Mandela and Nobel Peace Prize laureate Malala Yousafzai.

## Innovation Award

An Indian engineer whose low-cost

neonatal breathing device has saved the lives of new-born babies across small towns of India, has won the 2019 Commonwealth Secretary-General's Innovation for Sustainable Development Award in London. Nitesh Kumar Jangir, who created Saans as a breathing support device to tackle avoidable deaths of premature babies from respiratory distress syndrome due to a lack of immediate access to complex medical equipment, received his award in the People category.

## UN's Equator Prize

The women sangams (groups) of the Deccan Development Society have bagged the United Nations' Equator Prize for 2019. They have been selected for standing as 'an outstanding example of a local, nature-based solution to climate change and sustainable development.' The women farmers, majority of whom are Dalits, have been building their own seed banks and growing millets in the predominantly rain-fed villages of Sangareddy district.

## WHO award for Raj

The World Health Organization has selected the Rajasthan govt's Medical & Health Department for its award this year in recognition of its achievements in the field of tobacco control. The Health Department of the State is the only govt body in the country which will be awarded for its tobacco-free initiatives.

## Mexico honours Patil

Former President of India Pratibha Patil has been conferred the "Orden Mexicana del Aguila Azteca" (Order of the Aztec Eagle) - the highest civilian award of Mexico given to foreigners. The Ambassador of Mexico to India, Melba Pria, conferred the award on Patil - who created history as India's first woman President (2007-2012). Patil, 85, becomes only the second Indian head of state to get the award. Earlier, the late President S Radhakrishna had been conferred this honour.

## Global Leadership Awards

Google's India-born CEO Sundar Pichai and Nasdaq president Adena Friedman have been chosen for the prestigious Global Leadership Awards 2019 by business advocacy group US-India Business Council (USIBC) in recognition of the two companies' contribution as the leading technology-driven platforms.



### NASA to shut Spitzer

**N**ASA's Spitzer space telescope will be switched off permanently on Jan 30, 2020, after nearly 16 years of exploring the cosmos in infrared light, the Jet Propulsion Laboratory (JPL) said in a statement. Managed and operated by JPL, Spitzer is a small but transformational observatory. It revealed a new ring around Saturn, found evidence of several rocky collisions in distant solar systems, detected one of the most remote planets ever discovered — located about 13,000 light-years away from Earth — and discovered planets beyond our solar system — including the detection of seven Earth-size planets orbiting the star TRAPPIST-1.

### Highest weather stations

The National Geographic Society has announced the successful installation of the world's highest operating weather stations on Mount Everest to provide researchers, climbers, and the public with near real-time information about mountain conditions. The multi-disciplinary team installed the world's two highest operating automated weather stations at Balcony area (8,430m) and South Col (7,945m), as well as three other weather stations on Mount Everest.

### T-Series crosses 100mn mark

Bhushan Kumar-led music label T-Series has become the first ever YouTube channel to cross the 100-mn subscriber mark. In doing so, it has also pulled ahead of YouTuber PewDiePie's channels, and consolidated its position as the most subscribed channel on the platform. The channel had launched a campaign #BharatWinsYouTube, where it appealed to Indians to subscribe to the T-Series channel. While T-series launched its channel in 2006, PewDiePie was launched in 2010.

### India's only orangutan dies

A 41-year-old orangutan died of respiratory complications recently at Nandan Kanan Zoo in Odisha.

Orangutans are not native to India and Binny was brought in the zoo in 2003 from Pune. She was sourced from Singapore.

### India elected to UN-Habitat

India has been elected to the Executive Board of the first UN-Habitat Assembly at the Plenary Session of the Assembly held in Nairobi. The UN-Habitat has its headquarters located at Nairobi, Kenya. The special theme for the UN-Habitat Assembly this year was "Innovation for Better Quality of Life in Cities and Communities".

### NASA unveils schedule

NASA has unveiled the calendar for the "Artemis" programme that will return astronauts to the Moon for the first time in half a century, including eight scheduled launches and a mini-station in lunar orbit, by 2024. Artemis 1 will be an uncrewed mission around the Moon planned for 2020. Next will come Artemis 2, which will orbit Earth's satellite with a crew around 2022; followed finally by Artemis 3 that will put astronauts on lunar soil in 2024, including the first woman. The three will be launched into space by the biggest rocket of all time, the Boeing-led Space Launch System (SLS) currently under development.

### Isro launches NewSpace India

NewSpace India Limited (NSIL), the commercial arm of Indian Space Research Organisation (Isro), was officially inaugurated in Bengaluru recently. NSIL's main objective is to scale up industry participation in Indian space programmes. NSIL was inaugurated by Isro's honorary adviser, Dr K Kasturirangan, in the presence of chairman Dr K Sivan.

### ICANN partners NASSCOM

Global internet body ICANN and Indian IT industry body Nasscom announced collaboration to develop identifier technology that can be used for managing devices and infrastructure using internet. Under the collaboration, both the bodies will first focus on updating Internet

of Things (IoT) devices using domain name system (DNS) even in situation when the manufacturer or supplier has closed down the business.

### Facebook launches Confetti

Social networking giant Facebook has announced its first interactive game show, titled "Confetti", in India. Starting Jun 12, the interactive show is being aired on Facebook's dedicated video platform – Facebook Watch. First launched in the US, the interactive game will challenge participants to answer pop culture trivia questions for a chance to win ₹3 lakh as cash prize every day.

### India's own space station

India plans to have its own space station, and modalities for it will be worked out after the first manned mission, Gaganyaan, scheduled for Aug 2022, K Sivan, Chairman of the Indian Space Research Organisation (ISRO), has said. A detailed report in this regard would be submitted to the govt after the Gaganyaan mission. Dr Sivan said the proposed space station was envisaged to weigh 20 tonnes and serve as a facility where astronauts can stay for 15-20 days, and it would be placed in an orbit 400km above earth. The time frame for launch is 5-7 years after Gaganyaan.

### ISRO to launch Chandrayaan-2

The Indian Space Research Organisation (ISRO) has found a suitable window to launch India's, second spacecraft to the moon, 'Chandrayaan-2' between Jul 9 and Jul 16 with an expected soft landing on the moon on Sep 6. GSLV Mark-III will launch Chandrayaan-2 from Sriharikota during the favoured window time. All three modules of the moon mission – Orbiter, Lander-Vikram and Rover-Pragyan – are ready. India is standing on a cusp of creating history by becoming the only country in the world to launch a rover in the lunar South Pole.

### Apple introduces web login

Apple Inc has launched a "Sign In With Apple" function to rival Facebook and Google web login accounts, drawing a contrast with rivals by stressing protection of users' information. Apple will also tighten controls on location tracking. When users sign in with their Google or Facebook Inc profiles to third-party apps, the apps often share valuable data with Google and Facebook, a practice that Apple is looking to stop.

# IBPS RRB Officer (PT)

**(Based on memory)**

## Test-I: Reasoning Ability

**Directions (Q. 1-5):** Study the following information carefully and answer the given questions:

Eleven boxes A, B, C, D, E, F, G, H, I, J, K are kept one above the other. Box G is kept at fifth position from the top. Two boxes are kept between G and H. Box D is kept just above box H. There are as many boxes above box D as below box B. Five boxes are kept between box F and box K, which is kept at one of the positions below box G. Box A is kept at one of the positions above box F. Only one box is kept between Box G and Box C. Box I is kept above box E but not just above. Box E is not kept immediately above or immediately below box C.

1. What is the position of box I?  
1) 8th from the bottom    2) 7th from the top  
3) 3rd from the top    4) 6th from the bottom  
5) None of these
2. How many boxes are kept between box E and Box H?  
1) Seven    2) Six    3) Five  
4) Four    5) Eight
3. Which of the following statements is true regarding box J?  
1) It is 7th from the bottom.  
2) Box K is placed above box J.  
3) Only two boxes are kept between box B and box J.  
4) It is kept just below box H.  
5) All are true
4. Which of the following represent the boxes kept between boxes A and I?  
1) C, B    2) A, K    3) F, G    4) J, D    5) None of these
5. Which of the following boxes is kept just above box B?  
1) C    2) K    3) F  
4) D    5) None of these

**Directions (Q. 6-8):** Study the following information carefully and answer the given questions:

Point B is 14m east of point A. Point C is 9m north of point B. Point D is 12m east of point C. Point E is 15m south of point D. Point F is 30m west of point E. Point G is 10m north of point E. Point H is 18m east of point G.

6. If point X is 6m south of point A then which point is at the shortest distance from point X?  
1) E    2) A    3) F    4) B    5) G
7. What is the distance of point C from Point H?  
1) 9m    2) 5m    3) 4m    4) 6m    5) 7m

8. Point B is in which direction with respect to Point F?  
1) South    2) South-east    3) North  
4) North-east    5) North-west

**Directions (Q. 9-13):** Study the following information carefully and answer the given questions:

Eight persons A, B, C, D, E, F, G and H are sitting around a circular table such that five of them are facing towards the centre and the rest are facing away from the centre. Three persons are sitting between F and H, who is facing the centre. C is 2nd to the right of F and faces the opposite direction of F. A sits 3rd to the left of C. G is one of the neighbours of E. Two persons sit between G and B, who is not a neighbour of H. G does not face C. G and A face the same direction but opposite that of F.

9. What is the position of E with respect to A?  
1) Immediate right    2) Fifth to the left  
3) Second to the right    4) Second to the left  
5) None of these
10. How many persons are sitting between C and H, when counted from the left of C?  
1) One    2) Two    3) Three    4) Four    5) None
11. Four of the five are alike in a certain way. Which of the following does not belong to that group?  
1) C    2) B    3) F    4) D    5) E
12. Which of the following represents an immediate neighbour of G?  
1) C    2) B    3) F    4) D    5) A
13. Which of the following is not true regarding F?  
1) He faces towards the centre.  
2) E is on the immediate left of F.  
3) Two persons sit between F and D, when counted from the right of D.  
4) All are true  
5) No one sits between F and B.

**Directions (Q. 14-18):** Study the following information carefully and answer the given questions:

A certain number of persons are sitting in a row facing north. M sits 4th to the right of S. Five persons sit between M and X. T sits at one of the positions left of S. The number of persons sitting between M and U is the same as between S and T. Q is 2nd from one of the extreme ends. Four persons sit between S and U. No one sits to the right of N, who is on the immediate right of P. X is 3rd to the left of P. Not more than two persons sit between Q and U.

14. How many persons are sitting in the row?  
1) 17    2) 20    3) 24    4) 26    5) 27

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15. How many persons are sitting between S and T?  
1) Seven 2) Six 3) Five 4) Four 5) Eight
16. What is the position of U from the left end?  
1) 6th 2) 5th 3) 4th 4) 2nd 5) 3rd
17. How many persons are sitting between Q and M?  
1) Seven 2) Eleven 3) Ten  
4) Nine 5) Eight
18. Which of the following represents a person sitting at an extreme end?  
1) M 2) U 3) X 4) P 5) T
19. If the second, fourth, seventh and eighth letter of the word "FRACTION" are combined to form a meaningful word, then what will be the 3<sup>rd</sup> letter from the left in the word thus formed? If more than one meaningful word is formed then the answer is X. If no such word is formed then the answer is Z.  
1) O 2) X 3) R 4) Z 5) C
20. How many pair of digits have same number of digits between them in the number 573814269 as in the numeric series?  
1) Five 2) Four 3) Six  
4) Three 5) More than six

**Directions (Q. 21-25): Study the following information carefully and answer the given questions:**

Movies of different duration were released on different days of a week from Monday to Friday. Movie A was released on Tuesday. No movie was released between A and the one which is of 75-minute duration. Only one movie is released between the one which is of 75-minute duration and the one which is of 100-minute duration. No movie was released between the one which is of 100 minute and B. Only one movie was released after B. B was released immediately after the 100-minute-duration movie. Movie C was released immediately after the one which is of 130-minute duration. More than two movies were released between C and D. The movie which is of 90-minute duration released was before E. One of the movie was of 20 minutes more duration than E.

21. How many movies were released after E?  
1) One 2) Two 3) None  
4) Three 5) More than three
22. Which of the following movies was of 150-minute duration?  
1) E 2) A  
3) There is no such movie 4) C 5) D
23. What is the total duration (in minutes) of movie D and E together?  
1) 135 2) 225 3) 165  
4) 175 5) 190
24. Which of the following statements is true regarding B?  
1) The movie released after B is of 120-minute durations

- 2) Two movies were released between A and B.  
3) Movie B is of 100-minute duration.  
4) Total duration of movie B and A is 225 minutes.  
5) Movie A was released after B.
25. Which of the following statements is true?  
1) The movie released before A is of 130-minute duration.  
2) Three movies were released between A and E.  
3) No movie was released between A and E.  
4) Total duration of movie C and A is 230 minutes  
5) Movie C was released immediately after E.

**Directions (Q. 26-28): Study the following information carefully and answer the given questions:**

F is the husband of G. K is the mother-in-law of G. H is the father of F. M is the mother of H. P is the mother of K and B.

26. If Y is the father of H then how is Y related to M?  
1) Mother 2) Father 3) Sister  
4) Brother 5) Husband
27. How is P related to F?  
1) Grandfather 2) Aunt 3) Mother  
4) Grandmother 5) Wife
28. How is B related to H?  
1) Sister 2) Brother  
3) Husband 4) Can't be determined  
5) Wife

**Directions (Q. 29-31): Study the following information carefully and answer the given questions:**

There are six persons M, N, O, P, Q and R of different heights. N is shorter than M but taller than Q. Only two persons are taller than M. R is taller than Q and O. Q is not the shortest. The one who is the second shortest is 154m. P is not the shortest person.

29. If M is 19m taller than Q, then what is the height of M?  
1) 190m 2) 181m 3) 175m 4) 130m 5) 173m
30. If P is 181m then which of the following statements is/are true?

- I Only one person is taller than P.
- II The difference between the heights of P and Q is 27m.
- III O is the shortest person.  
1) Only I 2) Only I and II 3) All are true  
4) Only II and III 5) Only I and III

31. How many persons are shorter than N?  
1) One 2) Two 3) None  
4) Three 5) More than three

**Directions (Q. 32-35): In this question, two/three statements followed by two conclusions numbered I and II have been given. You have to take the given statements to be true even if they seem to be at variance with commonly known facts and then decide which of the given conclusions logically follows from the given statements. Give answer**

- 1) if only conclusion I follows
- 2) if only conclusion II follows

- 3) if either conclusion I or II follows  
 4) if neither conclusion I nor II follows  
 5) if both conclusion I and II follow.
32. **Statements:** All Grills are Arrows. Some Hats are Grills. Some Cells are Arrows.

**Conclusion:**

- I. Some Cells are definitely not Grills.  
 II. Some Hats can never be Arrows.

33. **Statements:** All Grills are Arrows. Some Hats are Grills. Some Cells are Arrows.

**Conclusion:**

- I. Some Hats are Arrows.  
 II. Some Grills are Cells.

34. **Statements:** Some Doors are Fans. No Door is a Rose. No Fan is a Shelf.

**Conclusion:**

- I. Some Fans can never be Roses.  
 II. Some Roses are Shelves is a possibility.

35. **Statements:** Some Doors are Fans. No Door is a Rose. No Fan is a Shelf.

**Conclusions:**

- I. All Doors are Shelves is a possibility.  
 II. All Shelves can be Doors.

**Directions (Q. 36-40):** Study the following information carefully and answer the given questions:

Fourteen persons are sitting in two parallel rows such that seven persons are sitting in each row. A, B, C, D, E, F and G are sitting in row-1 facing north while P, Q, R, S, T, U and V are sitting in row-2 facing south.

G sits third to the left of A and neither of them sits at any extreme end of the row. The one facing A sits immediate right to T. Only one person sits between T and Q. The one who faces Q sits third to the right of E. S sits to the immediate left of V. S faces neither G nor E. D is an immediate neighbour of the one who faces S. The one who faces C sits fifth to the left of P. B sits third to the left of F. U sits at one of positions to the right of R.

36. Four of the following are alike in a certain way and so form a group. Which of the following does not belong to that group?

- 1) U      2) B      3) T      4) C      5) P

37. How many persons sits between F and C?

- 1) One      2) Two      3) None  
 4) Three      5) More than three

38. Which of the following is not true regarding U?

- 1) No one sits to the right of U.  
 2) U sits third to the right of Q.  
 3) P is an immediate neighbour of U.  
 4) E is an immediate neighbour of the one who faces U.  
 5) Only two persons sit between U and S.

39. What is the position of C with respect to A?

- 1) Second to the left  
 2) Third to the right  
 3) Immediate right

- 4) Immediate left  
 5) Second to the right  
 40. What is the position of B with respect to D?  
 1) Third to the left  
 2) Second to the left  
 3) Fourth to the left  
 4) Third to the right  
 5) Fifth to the right

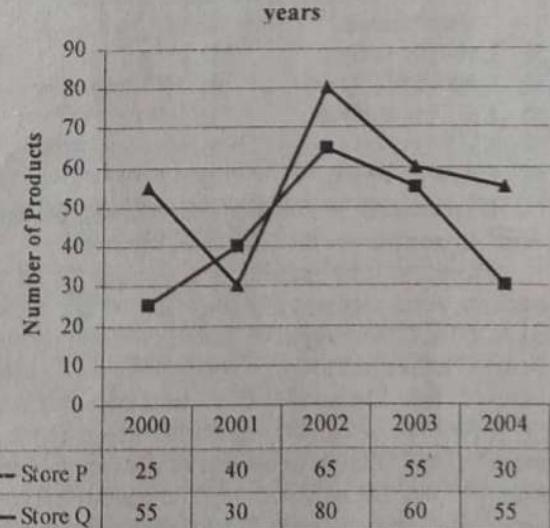
## Test-II: Quantitative Aptitude

**Directions (Q. 41-45):** Find the wrong number in the following number series.

41. 1 3 7 15 31 64 127  
 1) 1      2) 3      3) 15      4) 64      5) 127  
 42. 1 15 119 475 949 947 473  
 1) 947      2) 475      3) 15      4) 473      5) 1  
 43. 250 260 291 314 340 370 405  
 1) 370      2) 314      3) 260      4) 405      5) 250  
 44. 750 535 411 348 322 314 315  
 1) 315      2) 750      3) 411      4) 348      5) 314  
 45. 2 7 27 107 427 1708 6827  
 1) 27      2) 1708      3) 2      4) 6827      5) 7

**Directions (Q. 46-50):** Study the line-graph carefully and answer the questions given below.

This graph shows the total no. of products (kid + adult) in two different stores P and Q in five different years



46. What is the difference between the total no. of products in store P in year 2003 and 2004 together and the total no. of products in store P in year 2000?  
 1) None of these      2) 10  
 3) 20      4) 15  
 5) 5
47. If the total no. of products in both the stores in year 2006 is increased by 20% as compared to year 2004, then find the total no. of products in year 2006.

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- 1) 102                    2) None of these  
 3) 96                    4) 108  
 5) 92
48. What is the ratio of the total no. of products in store Q in year 2002 and 2003 together to the total no. of products in store Q in year 2000?  
 1) 23 : 12              2) 23 : 11              3) 28 : 11  
 4) None of these      5) 27 : 13
49. What is the average no. of products in all the years together in store P?  
 1) 48                    2) 43                    3) 57  
 4) None of these      5) 53
50. Total no. of products in store P in year 2003 and in store Q in year 2004 together is what per cent more/less than the total no. of products in store Q in year 2000?  
 1) 150%                2) 40%                    3) 125%  
 4) 100%                5) 50%

**Directions (Q. 51-55):** In these questions two equations numbered I and II are given. You have to solve both the equations and mark the appropriate option. Give answer

- 1) if  $x > y$   
 2) if  $x < y$   
 3) if  $x \geq y$   
 4) if  $x \leq y$   
 5) if  $x = y$  or relationship between x and y can't be established.
51. I.  $x^2 - 20x + 96 = 0$                     II.  $y^2 = 64$   
 52. I.  $4x^2 - 21x + 20 = 0$                     II.  $3y^2 - 19y + 30 = 0$   
 53. I.  $x^2 - 11x + 24 = 0$                     II.  $y^2 - 12y + 27 = 0$   
 54. I.  $x^2 + 12x + 35 = 0$                     II.  $5y^2 + 33y + 40 = 0$   
 55. I.  $4x^2 + 9x + 5 = 0$                     II.  $3y^2 + 5y + 2 = 0$

**Directions (Q. 56-60):** Study the following paragraph carefully and answer the questions given below.

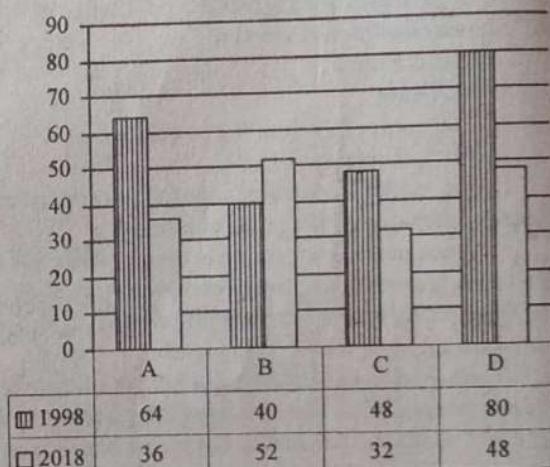
There are 1000 students in a college. Out of 1000 students, some appeared in exams 'X', 'Y' and 'Z' while some did not. The number of students who did not appear in any exam is equal to the number of students appeared in exam 'Z' only. The number of students appeared in exam 'Y' is 360. The ratio of the number of students appeared in exam 'X' and 'Y' only to number of students appeared in exam 'Y' and 'Z' only is 2 : 3. The number of students appeared in exam 'X' and 'Z' both is half of the number of students appeared in exam 'Z' only. The number of students appeared in exam 'X' only is 50% more than the number of students appeared in 'Y' only. The number of students appeared in all the three exams is 4% of the total number of students in the college. The number of students appeared in exam 'Y' only is the same as the number of students appeared in 'Y' and 'Z' only.

56. How many students appeared in at least two exams?

- 1) 240                    2) 260                    3) 300  
 4) 360                    5) 500

57. How many students appeared in two exams only?  
 1) 280                    2) 220                    3) 340  
 4) 300                    5) 260
58. How many students appeared in at most two exams?  
 1) 240                    2) 260                    3) 300  
 4) 500                    5) 960
59. How many students did not appear in exam Y?  
 1) 440                    2) 360                    3) 540  
 4) 640                    5) None of these
60. How many students appeared in exam X or in exam Z?  
 1) 240                    2) 360                    3) 500  
 4) 680                    5) 760

**Directions (Q. 61-65):** Study the bar-graph carefully and answer the questions given below.  
 The number of tigers in different National Parks, ie A to D, of a country in two different years



61. The number of tigers in National Park 'B' and 'C' together in 2018 is how much less/more than the number of tigers in National Park 'A' and 'D' together in 1998?  
 1) 41                    2) 44                    3) 52                    4) 60                    5) 72
62. The number of tigers in National Park 'D' in both years together is what per cent of the number of tigers in National Park 'C' in both years together?  
 1) 60%                    2) 160%                    3) 140%                    4) 120%                    5) 180%
63. Find the ratio of the number of tigers in National Park 'A' in 2018 to the number of tigers in National Park 'B' in 1998.  
 1) 9 : 10                2) 10 : 9                3) 16 : 13                4) 13 : 16                5) 3 : 4
64. The number of tigers in National Park 'E' in 2018 is 40% more than the number of tigers in National Park 'D' in 1998 while the number of tigers in National park 'E' in 1998 is 25% less than the number of tigers in National Park 'C' in 2018. Find the total number of tigers in National Park 'E' in 1998 and 2018 together.  
 1) 148                    2) 84                    3) 172

### IBPS RRB Officer PT (Previous)

- 4) 160      5) 136
65. The average number of tigers in all national parks in 2018 is how much less/more than the average number of tigers in all national parks in 1998?  
 1) 14      2) 16      3) 18  
 4) 20      5) 22
66. The difference between the downstream speed and the upstream speed of a boat is 6 km/hr and the boat travels 72 km from P to Q (downstream) in 4 hours. Then find the speed of the boat in still water.  
 1) 15 km/hr      2) 18 km/hr      3) 20 km/hr  
 4) 16 km/hr      5) 24 km/hr
67. In a vessel, there are two types of liquid – A and B – in the ratio of 5 : 9. 28 litres of the mixture is taken out and 2 litres of type B liquid is poured into it. The new ratio A : B thus formed is 1 : 2. Find the initial quantity of the mixture in the vessel.  
 1) 84 lit      2) 42 lit      3) 50 lit  
 4) 56 lit      5) 70 lit
68. The average weight of 5 students in a class is 25.8 kg. When a new student joins them, the average weight increases by 3.9 kg. Then find the approximate weight of the new student.  
 1) 55 kg      2) 49 kg      3) 42 kg  
 4) 44 kg      5) 58 kg
69. A person has purchased two adjacent plots – one is in rectangular shape and other is in square shape – and combines them to make a single new plot. The breadth of the rectangular plot is equal to the side of the square plot and the cost of fencing the new plot is ₹390 (₹5/m). Find the side of the square if the length of the rectangular plot is 15m.  
 1) 10m      2) 12m      3) 8m      4) 9m      5) 6m
70. A shopkeeper marks his article 50% above the cost price and gives a discount of 20% on it. If he later marked his article 75% above the cost price and gave a discount of 20% on it then earlier profit is what per cent of the later profit?  
 1) 50%      2) 60%      3)  $33\frac{1}{3}\%$   
 4) 40%      5) 75%
71. A person invested two equal amounts in two different schemes. In the first scheme, the amount is invested at 8% p.a. on SI for T years and the SI received is ₹2000, while in the second scheme, the amount is invested at 10% p.a. for 2 years at CI and the compound interest received is ₹1050. Find the value of T.  
 1) 4 years      2) 8 years      3) 6 years  
 4) 5 years      5) 3 years
72. Satish saves 20% of his monthly salary. And of the remaining salary he gives to his mother and sister its one-fourth and half respectively and the remaining salary he submits as his EMI for the payment of his car. If his annual EMI was ₹60,000, then find his monthly salary.  
 1) ₹40,000      2) ₹35,000      3) ₹32,000  
 4) ₹30,000      5) ₹25,000
73. The sum of four times of an amount ‘x’ and  $(x - 9.75)$  is ₹442. Find the approximate value of x.  
 1) ₹85      2) ₹90      3) ₹100  
 4) ₹110      5) ₹75
74. A and B entered into a partnership by investing some amounts. The investment of A is twice of the investment of B. Another person C joined them after 4 months. At the end of a year, the profit share of A and C is equal. Then the profit share of B is what per cent of the profit share of C?  
 1) 50%      2)  $33\frac{1}{3}\%$       3) 40%      4) 60%      5) 75%
75. The ratio of the age of Ishu 8 years hence to that of Ahana 6 years hence is 5 : 6. The age of Ishu 10 years hence is equal to the age of Ahana 6 years hence. Then, find the present age of Ishu.  
 1) 1.5 years      2) 2 years      3) 3 years  
 4) 4 years      5) 5 years
76. What is the difference between 20% of P and 20% of (P + 5000)?  
 1) 1500      2) 1200      3) 1000      4) 2000      5) 1600
77. The ratio of the diameter of the base to the height of a cylinder is 2 : 3. Find the radius of the cylinder if the approximate volume of the cylinder is  $3234.01 \text{ cm}^3$ .  
 1)  $\frac{21}{2}$  cm      2)  $\frac{7}{2}$  cm      3) 21 cm  
 4) 7 cm      5) 14 cm
78. A train of some length passes the platform of length 524 m in 55 seconds. Find the length of the train if the speed of train is 72 km/hr.  
 1) 476 m      2) None of these      3) 428 m  
 4) 526 m      5) 576 m
79. The efficiency of B is two times more than the efficiency of A. Both started working alternately, starting with B, and completed the work in total 37 days. If C alone completes the same work in 50 days then find in how many days A and C together will complete the work.  
 1) 24 days      2) 30 days      3) 36 days  
 4) 48 days      5) 18 days
80. 7 men and 6 women together can complete a piece of work in 8 days and work done by a woman in one day is half the work done by a man in one day. If 8 men and 4 women started working and, after 3 days, 4 men left the work and 4 new women joined then, in how many more days will the work be completed?  
 1) 7 days      2) 6 days      3) 5.25 days  
 4) 6.25 days      5) 8.14 days

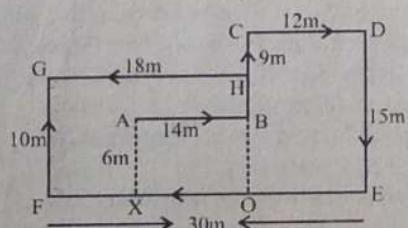
## IBPS RRB Officer PT (Previous)

### Answers

(1-5):

Box No:	
1	D
2	H
3	A
4	F
5	G
6	I
7	C
8	J
9	E
10	K
11	B

(6-8):

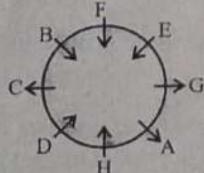


6. 3

7. 2; CH = DE - OH = 15 - 10 = 5m

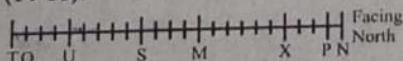
8. 4

(9-13):



9. 4      10. 1      11. 1      12. 5      13. 3

(14-18):



14. 3

15. 5      16. 2      17. 2      18. 5

19. 2; Given word: fraction

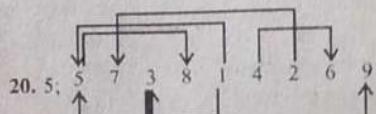
Second letter  $\Rightarrow$  R

Fourth letter  $\Rightarrow$  C

Seventh letter  $\Rightarrow$  O

Eighth letter  $\Rightarrow$  N

∴ The meaningful words formed are CORN and CRON.



(21-25):

Days	Movies	Duration
Monday	D	75
Tuesday	A	90
Wednesday	E	100
Thursday	B	130
Friday	C	120

21. 2

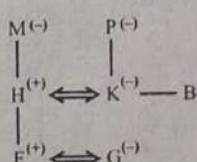
22. 3

23. 4;  $75 + 100 = 175$  minutes

24. 1

25. 3

(26-28):



26. 5      27. 4      28. 4

(29-31):

P/R > R/P > M > N > Q > O

↓

29. 5;  $M = 154 + 19 = 173$ m

30. 4

31. 2

32. 4; Some Hats are Grills (I) + All Grills are Arrows (A) = I + A = Some Hats are Arrows (I). Hence, conclusion II does not follow.

Again, Some Cells are Arrows (I) + (All Grills are Arrows (A)  $\rightarrow$  conversion  $\rightarrow$ ) Some Arrows are Grills (I) = I + I = No conclusion. Hence, conclusion I does not follow.

33. 1; Some Hats are Grills (I) + All Grills

are Arrows (A) = I + A = I = Some Hats are Arrows. Hence, conclusion I follows.

Again, All Grills are Arrows (A) + (Some Cells are Arrows  $\rightarrow$  conversion  $\rightarrow$ ) Some Arrows are Cells (I) = A + I = No conclusion. Hence, II does not follow.

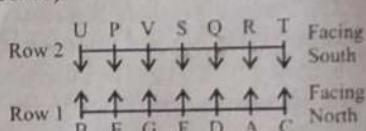
34. 5; No Door is a Rose (E)  $\rightarrow$  conversion  $\rightarrow$  No Rose is a Door (E) + Some Doors are Fans (I) = E + I = O\* = Some Fans are not Roses. Hence, conclusion I follows.

Again, Some Doors are Fans (I) + No Fan is a Shelf (E) = I + E = O = Some Doors are not Shelves.

Now, No Rose is a Door (E) + Some Doors are not Shelves = E + O = No conclusion. But the possibility in II exists. Hence, II follows.

35. 2; Some Doors are Fans (I) + No Fan is a Shelf (E) = I + E = O = Some Doors are not shelves. Hence the possibility in I does not exist. Thus, I does not follow. But the possibility in II exists. Thus, conclusion II follows.

(36-40):



36. 5      37. 2      38. 2      39. 3      40. 3

41. 4; The series is  $\times 2 + 1$  repeated; ie,  $1 \times 2 + 1 = 3$ ,  $3 \times 2 + 1 = 7$ ,  $7 \times 2 + 1 = 15$ ,  $15 \times 2 + 1 = 31$ ,

$31 \times 2 + 1 = 63$ ,  $63 \times 2 + 1 = 127$

Hence, there should be 63 in place of 64.

42. 1; The series  $\times 16 - 1$ ,  $\times 8 - 1$ ,  $\times 4 - 1$ ,  $\times 2 - 1$ ,  $\times 1 - 1$ ,  $\times 0.5 - 1$  ...

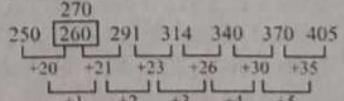
ie,  $1 \times 16 - 1 = 15$ ,  $15 \times 8 - 1 = 119$ ,

$119 \times 4 - 1 = 475$ ,  $475 \times 2 - 1 = 949$ ,

$949 \times 1 - 1 = 948$ ,  $948 \times 0.5 - 1 = 473$

Hence, there should be 948 in place of 947.

43. 3; The series is



Hence, there should be 270 in place of 260.

44. 5; The series is  $-(6^3 - 1)$ ,  $-(5^3 - 1)$ ,  $-(4^3 - 1)$

ie,  $750 - (6^3 - 1) = 535$ .

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$$535 - (5^3 - 1) = 411, 411 - (4^3 - 1) = 348, \\ 348 - (3^3 - 1) = 322, 322 - (2^3 - 1) = 315, \\ 315 - (1^3 - 1) = 315$$

Hence, there should be 315 in place of 314.

45. 2; The series is  $\times 4 - 1$  (repeated); ie,  $2 \times 4 - 1 = 7, 7 \times 4 - 1 = 27,$

$$27 \times 4 - 1 = 107, 107 \times 4 - 1 = 427,$$

$$427 \times 4 - 1 = 1707, 1707 \times 4 - 1 = 6827$$

Hence, there should be 1707 in place of 1708.

46. 5; Required difference

$$= (30 + 55) - (25 + 55) = 85 - 80 = 5$$

47. 1; Total no. of products in 2006

$$= (30 + 55) \times \frac{120}{100} = 85 \times \frac{6}{5} = 102$$

$$48. 3; \text{Reqd ratio} = \frac{Q_{2002+2003}}{Q_{2000}}$$

$$= \frac{80+60}{55} = \frac{140}{55} = \frac{28}{11} = 28 : 11$$

49. 2; Reqd average

$$= \frac{25+40+65+55+30}{5} = \frac{1}{5} \times 215 = 43$$

50. 4; Reqd % more

$$= \frac{(55+55)-(55)}{55} \times 100 = \frac{55}{55} \times 100 = 100\%$$

51. 3; I.  $x^2 - 20x - 96 = 0$

$$\begin{array}{c} \text{Step I. } -12 \quad -8 \\ \diagdown \quad \diagup \\ -12 \end{array}$$

$$\begin{array}{c} \text{Step II. } -12 \quad -8 \\ \diagdown \quad \diagup \\ 1 \quad 1 \end{array}$$

Step III.  $x = 12, 8$

$$\text{II. } y^2 = 64$$

$$\therefore y = \pm 8$$

Hence,  $x \geq y$

52. 5; I.  $4x^2 - 21x + 20 = 0$

$$\begin{array}{c} \text{Step I. } -16 \quad -5 \\ \diagdown \quad \diagup \\ -16 \end{array}$$

$$\begin{array}{c} \text{Step II. } -16 \quad -5 \\ \diagdown \quad \diagup \\ 4 \quad 4 \end{array}$$

$$\text{Step III. } x = 4, \frac{5}{4}$$

$$\text{II. } 3y^2 - 19y + 30 = 0$$

$$\begin{array}{c} \text{Step I. } -10 \quad -9 \\ \diagdown \quad \diagup \\ -10 \end{array}$$

$$\begin{array}{c} \text{Step II. } -10 \quad -9 \\ \diagdown \quad \diagup \\ 3 \quad 3 \end{array}$$

$$\text{Step III. } y = \frac{10}{3}, 3$$

Hence, no relationship can be established.

53. 5; I.  $x^2 - 11x + 24 = 0$

$$\begin{array}{c} \text{Step I. } -8 \quad -3 \\ \diagdown \quad \diagup \\ -8 \end{array}$$

$$\begin{array}{c} \text{Step II. } -8 \quad -3 \\ \diagdown \quad \diagup \\ 1 \quad 1 \end{array}$$

$$\text{Step III. } 8, 3 \\ \text{II. } y^2 - 12y + 27 = 0$$

$$\begin{array}{c} \text{Step I. } -9 \quad -3 \\ \diagdown \quad \diagup \\ -9 \end{array}$$

$$\begin{array}{c} \text{Step II. } -9 \quad -3 \\ \diagdown \quad \diagup \\ 1 \quad 1 \end{array}$$

$$\text{Step III. } y = 9, 3$$

Hence, no relationship can be established.

54. 4; I.  $x^2 + 12x + 35 = 0$

$$\begin{array}{c} \text{Step I. } 7 \quad 5 \\ \diagdown \quad \diagup \\ 7 \end{array}$$

$$\begin{array}{c} \text{Step II. } +7 \quad +5 \\ \diagdown \quad \diagup \\ 1 \quad 1 \end{array}$$

$$\text{Step III. } x = -7, -5$$

$$\text{II. } 5y^2 + 33y + 40 = 0$$

$$\begin{array}{c} \text{Step I. } 25 \quad 8 \\ \diagdown \quad \diagup \\ 25 \end{array}$$

$$\begin{array}{c} \text{Step II. } 25 \quad 8 \\ \diagdown \quad \diagup \\ 5 \quad 5 \end{array}$$

$$\text{Step III. } y = -5, -\frac{8}{5}$$

Hence,  $x \leq y$

55. 4; I.  $4x^2 + 9x + 5 = 0$

$$\begin{array}{c} \text{Step I. } 5 \quad 4 \\ \diagdown \quad \diagup \\ 5 \end{array}$$

$$\begin{array}{c} \text{Step II. } 5 \quad 4 \\ \diagdown \quad \diagup \\ 4 \quad 4 \end{array}$$

$$\text{Step III. } x = -\frac{5}{4}, -1$$

$$\text{II. } 3y^2 + 5y + 2 = 0$$

$$\begin{array}{c} \text{Step I. } 3 \quad 2 \\ \diagdown \quad \diagup \\ 3 \end{array}$$

$$\begin{array}{c} \text{Step II. } 3 \quad 2 \\ \diagdown \quad \diagup \\ 3 \quad 3 \end{array}$$

$$\text{Step III. } y = -1, -\frac{2}{3}$$

Hence,  $x \leq y$

(56-60):

Total no. of students = 1000

The no. of students appeared in exam Z only =  $a$  = The no. of students not appeared in any exam.

Total no. of students appeared in exam Y = 360

The ratio of the number of students appeared in exam X and Y only to the no. of students appeared in exam Y and Z only = 2 : 3

The no. of students appeared in exam X

$$\text{and Z both} = \frac{a}{2}$$

Number of students appeared in all the three exams = 4% of 1000 = 40

Number of students appeared in exam Y only = Number of students appeared in Y and Z only =  $3x$

∴ Number of students appeared in exam X

$$\text{and Y only} = \frac{2}{3} \times 3x = 2x$$

The no. of students appeared in exam X only = 150% of  $3x = 4.5x$

$$\text{Now, } 2x + 3x + 4.5x + 40 = 360$$

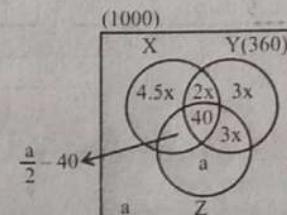
$$\Rightarrow 8x = 320$$

$$\therefore x = 40$$

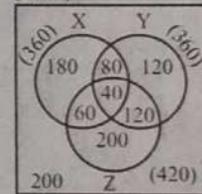
$$\text{And } 12.5x + a + \frac{a}{2} + a = 1000$$

$$\frac{5a}{2} = 1000 - 12.5 \times 40 = 500$$

$$\Rightarrow a = 200$$



(1000)



(1000)

56. 3; The no. of students appeared in at least two exams =  $80 + 120 + 60 + 40 = 300$

57. 5; The no. of students appeared in two exams only =  $80 + 60 + 120 = 260$ .

58. 5; The no. of students appeared in at most two exams =  $1000 - 40 = 960$

59. 4; The no. of students not appeared in exam Y =  $1000 - 360 = 640$

60. 4; The no. of students appeared in exam X or in exam Z =  $180 + 60 + 40 + 80 + 200 + 120 = 680$

61. 1; The no. of tigers in National Park in B and C together in 2018 =  $52 + 32 = 84$

The no. of tigers in National Park A and D together in 1998 =  $64 + 80 = 144$

$$\therefore \text{Reqd \%} = \frac{144 - 84}{144} \times 100 = \frac{60}{144} \times 100 =$$

$$\frac{125}{3} = 41\frac{2}{3}\% \approx 41$$

$$62. 2; \text{Required \%} = \frac{80 + 48}{48 + 32} \times 100$$

$$= \frac{128}{80} \times 100 = \frac{128}{4} \times 5 = 32 \times 5 = 160\%$$

$$63. 1; \text{Required ratio} = \frac{36}{40} = \frac{9}{10} = 9 : 10$$

64. 5; The no. of tigers in National Park E

$$\text{in 2018} = \frac{80 \times 140}{100} = 112$$

## IBPS RRB Officer PT (Previous)

The no. of tigers in National Park E in

$$1998 = 32 \times \frac{75}{100} = 32 \times \frac{3}{4} = 24$$

∴ Total no. of tigers in National Park E in 2018 and 1998 together =  $112 + 24 = 136$

$$65. 2; \text{ Required no.} = \frac{232 - 168}{4} = \frac{64}{4} = 16$$

$$66. 1; \text{ Downstream speed} = \frac{72}{4} = 18 \text{ kmph}$$

Now, according to the question,

$$DN - UP = 6$$

$$\Rightarrow UP = 18 - 6 = 12 \text{ kmph}$$

$$\therefore \text{Speed of boat} = \frac{1}{2} (18 + 12) = 15 \text{ kmph}$$

$$67. 4; \begin{array}{r} A \\ 5 \end{array} \quad \begin{array}{r} B \\ 9 \end{array}$$

$$\text{Mixture of Quantity A} = \frac{28}{14} \times 5 = 10 \text{ litres}$$

$$\text{Mixture of Quantity B} = \frac{28}{14} \times 9 = 18 \text{ litres}$$

$$\text{Now, } \frac{\frac{x \times 5}{14} - 10}{\frac{x \times 9}{14} - 18 + 2} = \frac{1}{2}$$

$$\Rightarrow \frac{5x - 140}{9x - 224} = \frac{1}{2}$$

$$\Rightarrow 10x - 280 = 9x - 224$$

$$\Rightarrow x = 56 \text{ litres}$$

**Quicker Method:**

After withdrawal of 28 litres the ratio of A to B is the same as 5 : 9

$$\begin{array}{r} A \\ 5 \\ 5 : 9 \end{array} \quad \begin{array}{r} B \\ 1 \\ 1 : 2 \times 5 \end{array} \quad \boxed{I} \equiv 2 \text{ litres}$$

$$\begin{array}{r} 5 \\ 5 : 10 \end{array} \leftarrow$$

$$\therefore A + B \text{ after withdrawal} = (5 + 9)2 = 28$$

$$\therefore \text{Initial} = 28 + 28 = 56$$

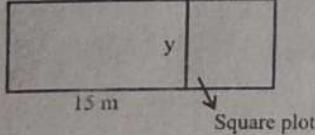
68. 2; Weight of new student

$$= 6(25.8 + 3.9) - 5 \times 25.8$$

$$= 6 \times 29.7 - 129 = 178.2 - 129$$

$$= 49.2 \text{ kg} \approx 49 \text{ kg}$$

69. 2; Rectangular plot



$$\text{Now, } 2(y + 15) + 2y = \frac{390}{5}$$

$$\Rightarrow 2y + 30 + 2y = 78$$

$$\Rightarrow 4y = 48$$

$$\therefore y = 12 \text{ m}$$

70. 1; Let CP be ₹100

Then MP = ₹150

$$SP = 150 \times \frac{80}{100} = ₹120$$

$$\text{Profit} = 120 - 100 = ₹20$$

$$\text{Again, New MP} = ₹175$$

$$\therefore SP = \frac{175}{100} \times 80 = 175 \times \frac{4}{5} = ₹140$$

$$\therefore \text{Profit} = 140 - 100 = ₹40$$

$$\therefore \text{Required \%} = \frac{20}{40} \times 100 = 50\%$$

71. 2; CI @ 10% per annum equivalent to

$$10 + 10 + \frac{10 \times 10}{100} = 21\%$$

$$\text{Now, } 21\% = 1050$$

$$\therefore 100\% = \frac{1050}{21} \times 100 = ₹5000$$

$$\text{Now, } T = \frac{SI \times 100}{P \times R} = \frac{2000 \times 100}{5000 \times 5} = 8 \text{ years}$$

72. 5; EMI per month of Satish

$$= 100 - \left( 20 + 80 \times \frac{1}{4} + 80 \times \frac{1}{2} \right)\%$$

$$= (100 - 80) = 20\%$$

$$\text{Now, } 20 \times 12 = 60000$$

$$\therefore 1 = 250$$

$$\text{So, } 100 = ₹25,000$$

73. 2; According to the question,

$$4x + x - 9.75 = 442$$

$$\Rightarrow 5x = 451.75$$

$$\therefore x = \frac{451.75}{5} = ₹90$$

74. 1;  $A : B : C$

$$12 \times 2x : 12 \times x : 8 \times y$$

$$\text{Now, according to the question, } 12 \times 2x = 8y$$

$$\Rightarrow y = 3x$$

$$\therefore \text{Required \%} = \frac{12x}{8 \times 3x} \times 100 = 50\%$$

Profit of C = Profit of A

$$\text{So, required \%} = \frac{12x}{24x} \times 100 = 50\%$$

75. 2; Ishu Ahana  
Present age I A  
(8 years hence)  $5x : 6x$  (6 years hence)  
Now, According to question,

$$5x + 2 = 6x$$

$$\Rightarrow x = 2$$

$$\therefore \text{Present Age of Ishu} = 5 \times 2 - 8 = 2 \text{ years}$$

$$76. 3; \text{ Difference} = 20\% \text{ of } (P + 500) - 20\% \text{ of } P = 20\% \text{ of } 5000 = 1000$$

$$77. 4; \text{ Radius of cylinder} = \frac{2x}{2} = x$$

Height of cylinder =  $3x$

$\therefore$  Volume of cylinder =  $\pi r^2 h$

$$\text{Now, } \frac{22}{7} \times (x)^2 \times 3x = 3234.01$$

$$\Rightarrow \frac{66x^3}{7} = 3234.01$$

$$\Rightarrow x^3 = \frac{3234.01 \times 7}{66} = 343$$

$$\therefore x = \sqrt[3]{7 \times 7 \times 7} = 7$$

78. 5; According to the question,

$$L_T + L_p = 72 \times \frac{5}{18} = 20$$

$$\Rightarrow L_T + 524 = 1100$$

$$\therefore L_T = 1100 - 524 = 576 \text{ m}$$

79. 2; A B  
Efficiency A : A + 2A = 3A

Now, according to the question,

$$19 \times 3A + 18 \times A = 75A$$

$$\therefore \text{Efficiency of C} = \frac{75A}{A + 1.5A} = 1.5A$$

So, (A + C) together can complete work is  $\frac{75A}{A + 1.5A} = 30$  days.

80. 4; Total work =  $(14 + 6) \times 8 = 160$  units

In 3 days total work =  $20 \times 3 = 60$  units

Remaining work =  $160 - 60 = 100$  units

$\therefore$  100 units work is to be done with  $(20 - 4)$

$$\Rightarrow 16 \text{ efficiency in } \frac{100}{16} = 6 \frac{1}{4} = 6.25 \text{ days}$$

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## PRACTICE SET

# IBPS RRB Officer (PT)

### Test-I: Quantitative Aptitude

1. A 30-litre mixture contains milk and water in the ratio of 2 : 1. 15 litres of the mixture is taken out and replaced with pure milk and the operation is repeated once more. At the end of the two removals and replacements, what is the ratio of milk to water in the resultant mixture?  
 1) 10 : 3      2) 11 : 1      3) 7 : 1  
 4) 9 : 5      5) 11 : 8
2. A conical tank is connected with a pipe. The cross-section of the pipe is 3.5 m and the rate of flow of water inside the pipe is 2 m/min. If the height of the cone is 105 m and its base radius is 3 m then in how much time will the conical tank be full? (in min)  
 1)  $12\frac{6}{7}$       2)  $11\frac{5}{7}$       3)  $12\frac{2}{7}$   
 4)  $16\frac{2}{7}$       5) None of these
3. If a shopkeeper marks an article 20% above his old marked price and sells without any discount, he gets a profit of 44% on its cost price. If he marks 25% above his old marked price and sells without any discount then he gets a profit of ₹375 on his cost price. Find the cost price of the article.  
 1) ₹800      2) ₹750      3) ₹600  
 4) ₹1150      5) None of these
4. A can do a piece of work in 30 days. B can do the same piece of work in 18 days. C can do it in 42 days. A worked for 10 days and handed over to B, who worked for 3 days and left the job for C. How many days will C take to finish the work?  
 1) 17 days      2) 24 days      3) 21 days  
 4) 16 days      5) None of these

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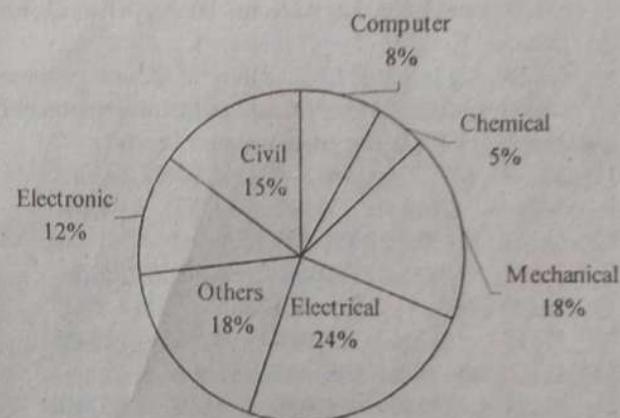
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5. In how many ways can 3 boys and 3 girls sit in a row so that neither any two boys nor any two girls sit together?  
 1) 72      2) 48      3) 100      4) 165      5) 92

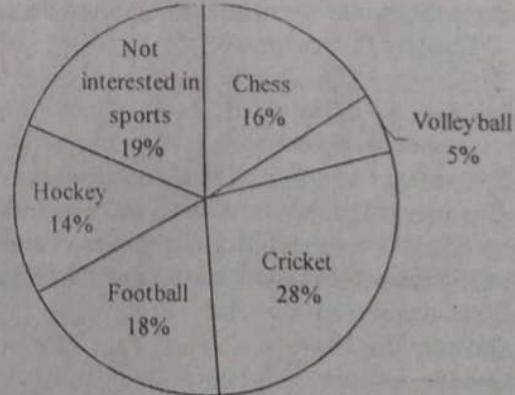
Directions (Q. 6-10): Study the pie-charts given below and answer the following questions.

Percentage of students studying in various branches of an engineering college



Total no. of students = 3000

Percentage of students interested in various sports of the engineering college



Total no. of students = 3000

6. If 10% of Civil students, 15% of Mechanical students and 10% of Electrical students are not interested in sports then what is the average number of students of these branches who are interested in sports?  
 1) 320      2) 504      3) 476  
 4) 720      5) None of these
7. What is the ratio of the member of students who play Volleyball to the number of students who study in Mechanical branch?  
 1) 5 : 18      2) 2 : 7      3) 3 : 11      4) 19 : 31      5) 4 : 7

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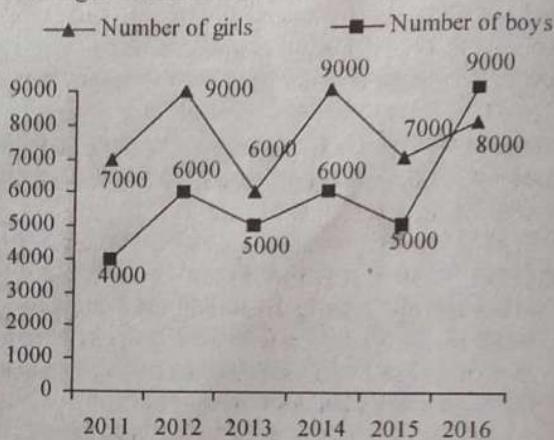
8. If 20% students of Electrical branch fail and out of these, 40% are not interested in sports, then the number of failed Electrical students who are not interested in sports is approximately what per cent of the total number of students who are not interested in sports?  
 1) 9% 2) 17% 3) 10% 4) 11% 5) None of these
9. If 60% of Mechanical students and 30% of Electrical students are interested in football then what is their ratio?  
 1) 3:2 2) 5:4 3) 7:5 4) 4:1 5) 3:1
10. The percentage of students who are interested in Chess is the same (20%) in all branches. What is the difference between the number of Electrical and Mechanical students who are interested in Chess games?  
 1) 120 2) 36 3) 15 4) 60 5) None of these
- Directions (Q. 11-15):** What should come in place of question mark (?) in the given number series?
11. 27 31 ? 229 941 4741 28495  
 1) 71 2) 65 3) 102 4) 52 5) 67
12. 6 13 ? 91 200 391  
 1) 36 2) 21 3) 43 4) 92 5) 54
13. 7 22 93 ? 2305 14046  
 1) 436 2) 736 3) 861 4) 636 5) 463
14. 956 700 572 508 476 ?  
 1) 375 2) 380 3) 460 4) 390 5) 470
15. 7353.0625 2100.875 600.25 171.5 ? 14  
 1) 82.25 2) 71.75 3) 60 4) 49 5) 52

**Directions (Q. 16-20):** In each of the given questions two quantities numbered I and II are given. You have to solve both the quantities and mark the appropriate answer.

- 1) Quantity I  $\geq$  Quantity II  
 2) Quantity I  $<$  Quantity II  
 3) Quantity I  $\leq$  Quantity II  
 4) Quantity I  $>$  Quantity II  
 5) Quantity I = Quantity II or No relation
16. **Quantity I:** The speed of a boat is 200% more than the speed of the current. If the boat can travel a distance of 36 km downstream in 3 hours then find the speed of the boat upstream (kmph).  
**Quantity II:** 4 kmph
17. **Quantity I:** ₹1600  
**Quantity II:** A shopkeeper allows a discount of 10% on the marked price of an item and sells it for ₹1800. Find the marked price of the article.
18. **Quantity I:** If  $x^2 - 2x - 143 = 0$  then find the value of x.  
**Quantity II:** If  $y^2 + 11y - 152 = 0$  then find the value of y.
19. The sum of five consecutive even numbers is 90.  
**Quantity I:** The sum of the second number and the fifth number.  
**Quantity II:** The sum of the third number and the fourth number.

20. The radius of a circle is equal to the side of a square whose area is  $784 \text{ cm}^2$ .  
**Quantity I:** Perimeter of the square  
**Quantity II:** Circumference of the circle  
**Directions (Q. 21-25):** Study the following line graph and table carefully to answer the questions that follow:

Total number of selected boys and total number of selected girls in IBPS PO in various years



Percentage of rural boys among the total no. of boys and percentage of rural girls among the total no. of girls selected in IBPS PO exam

Years	% of rural boys	% of rural girls
2011	25%	28%
2012	17%	24%
2013	30%	26%
2014	35%	40%
2015	20%	34%
2016	25%	32%

21. What is the ratio of the number of boys selected from urban areas in 2015 to the number of girls selected from rural areas in 2013?  
 1) 101:31 2) 100:39 3) 99:37  
 4) 107:29 5) 91:21
22. What is the difference between the total number of boys selected from urban areas and the total number of girls selected from urban areas in all the years?  
 1) 6250 2) 5650 3) 5750 4) 4850 5) 4650
23. In 2014, the number of boys selected from urban areas is approximately what per cent of the number of boys selected from rural areas in that year?  
 1) 98% 2) 201% 3) 175%  
 4) 186% 5) 86%
24. In 2012, the number of boys selected from urban areas is approximately what per cent more than the number of boys selected from rural areas in the same year?  
 1) 410% 2) 388% 3) 275%  
 4) 315% 5) None of these

25. What is the approximate average number of boys selected from rural areas in all six years?  
 1) 1478    2) 2150    3) 1968    4) 3170    5) 1578
26. Five times of the sum of 'x' and  $(x - 7.72)$  is ₹445.6. Find the approximate value of 'x'.  
 1) 39.42    2) 46.42    3) 48.42    4) 32.42    5) 52.24
27. The sum of the volume of a cylinder and the volume of a cone is  $343\pi \text{ cm}^3$ . The height of the cylinder and the cone are 3 cm each respectively. If the radius of the cone is 10 cm, then what is the ratio of the radius of the cylinder to the radius of the cone?  
 1) 5 : 3    2) 11 : 15    3) 7 : 11    4) 9 : 10    5) 2 : 7
28. A train 'A', which is 150m long, can cross a platform, which is 100m long, in 10 seconds. The ratio of the speed of train A to that of train B is 3 : 2. Find the length of train B if it can cross a pole in 6 seconds.  
 1) 60 m    2) 40 m    3) 55 m    4) 35 m    5) None of these
29. A man can row 25 km upstream and 40 km downstream in 9 hours. Also, he can row 35 km upstream and 50 km downstream in 12 hours. Find the rate of current and the speed of the man in still water.  
 1) 8 km/hr    2) 12 km/hr    3) 7 km/hr  
 4) 7.5 km/hr    5) 6.5 km/hr
30. I buy two chairs for ₹1260. I sell one so as to lose 5% and the other so as to gain 10%. On the whole transaction I neither lose nor gain. What did each chair cost? (in ₹)  
 1) 720, 540    2) 840, 420    3) 670, 590  
 4) 910, 350    5) None of these

**Directions (Q. 31-35):** Study the following information carefully to answer the questions given below it.

In a school Y there are 700 students. The ratio of boys to girls is 4 : 3. Rasgulla, Laddu and Gulabjamun are distributed among them. 10% of boys get only Rasgulla, 8% of boys get only Laddu and 15% of boys get only Gulabjamun. 5% of boys get only Rasgulla and Laddu, 12% of boys get only Laddu and Gulabjamun and 25% of boys get only Gulabjamun and Rasgulla. Remaining boys get all three sweets.

20% of girls get only Rasgulla, 15% of girls get only Laddu and 10% of girls get only Gulabjamun. 8% of girls get only Laddu and Rasgulla, 18% of girls get only Laddu and Gulabjamun and 6% of girls get only Gulabjamun and Rasgulla. Remaining girls get all three sweets.

31. How many boys get only one type of sweets?  
 1) 120    2) 132    3) 148  
 4) 210    5) None of these
32. How many girls get only two types of sweets?  
 1) 80    2) 72    3) 109    4) 96    5) 175
33. What is the ratio of the number of boys who get only Laddu to that of girls who get only Rasgulla?  
 1) 9 : 13    2) 7 : 11    3) 8 : 15    4) 6 : 11    5) 17 : 21
34. How many girls get only one type of sweets?  
 1) 135    2) 120    3) 95    4) 210    5) None of these

35. Total number of boys and girls who get all three sweets is  
 1) 210    2) 169    3) 139    4) 148    5) 89

36. Four circles having equal radii are drawn with centres at four corners of a square. Each circle touches the other two adjacent circles. If the area of the square outside the circle is  $378 \text{ cm}^2$ , what is the radius of the circle? (in cm)  
 1) 21    2) 14    3) 28    4) 36    5) None of these

**Directions (Q. 37-38):** Study the following information carefully to answer the questions that follow.

A committee of five members is to be formed out of 4 professors, 5 teachers and 2 readers. Find the number of ways in which the committee can be made if

37. the committee should consist of 2 professors, 2 teachers and 1 reader.  
 1) 120    2) 105    3) 240    4) 80    5) None of these

38. the committee should include all the 2 readers.  
 1) 90    2) 88    3) 84    4) 210    5) 105

39. A and B are partners in a business. They invest in the ratio of 5 : 6. At the end of 8 months A withdraws. If they receive profits in the ratio of 5 : 9, then find how long B's investment was used.  
 1) 8 months    2) 6 months    3) 9 months  
 4) 12 months    5) None of these

40. Two trains, A and B, start from station X and Y towards each other. They take 9 hours and 4 hours to reach Y and X respectively after they meet. If train A is moving at 40 kmph, then the speed of train B is  
 1) 40 kmph    2) 30 kmph    3) 35 kmph  
 4) 50 kmph    5) 60 kmph

## Test-II: Reasoning Ability

**Directions (Q. 41-45):** Study the following information carefully and answer the questions given below:

Seven friends M, N, O, P, Q, R and S live on different floors of a building but not necessarily in the same order.

There is only one person between R and Q. R does not live above O. S does not live on the topmost floor. O lives below two persons but does not live below either Q or R. M does not live above N, who does not live on an odd-numbered floor. Q does not live above the floor on which R lives. M does not live on an even-numbered floor.

41. How many persons live between the floors on which P and Q live?  
 1) Two    2) Three    3) Four    4) Five    5) None of these
42. If M lives just above Q then who among the following lives on floor no. 1?  
 1) P    2) S    3) R    4) O    5) None of these
43. Which of the following statements is true?  
 1) N lives on the third floor.  
 2) R lives just below S.  
 3) There is only one person between N and O.

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- 4) None is true  
 5) P lives immediately above N.  
 44. Who among the following lives on the third floor?  
 1) S      2) P      3) M  
 4) Can't be determined      5) R  
 45. Which of the following groups lives on even-numbered floors?  
 1) N, R, S      2) N, R, Q      3) S, M, P  
 4) M, Q, O      5) None of these

**Directions (Q. 46-48):** Study the following information carefully and answer the questions given below:

Point K is 12m east of point J. Point L is 7m north of point K. Point M is 10m east of point L. Point N is 13m south of point M. Point O is 24m west of point N. Point P is 8m north of point O. Point Q is 16m east of point P.

46. If point X is 4m north of point J then which point is southwest from point X?  
 1) N      2) J      3) L      4) K      5) P

47. What is the distance of point L from point Q?

- 1) 9m      2)  $\sqrt{31}$ m      3) 4m      4)  $\sqrt{29}$ m      5) 7m

48. In which direction is Point K with respect to point O?  
 1) South      2) Southeast      3) North  
 4) Northeast      5) Northwest

**Directions (Q. 49-53):** Study the following information carefully and answer the questions given below:

There are eight persons B, H, D, C, X, V, L and M are sitting in a row. Some of them are facing south and some are facing north but not necessarily in the same order.  
**Note:** Facing the same direction means if one person faces north then the other person also faces north and if one person faces south then the other person also faces south. Facing the opposite direction means if one person faces north then the other person faces south and *vice versa*.

M sits third to the left of L, who sits third left of X. B sits fifth to the right of D, who is facing opposite direction of C. C is four places away from H, who is not an immediate neighbour of B. Only four persons are facing north. X is not facing south and doesn't sit at any extreme end of line. The ones who sit at the extreme ends of the line face opposite directions. Neither D nor V is an immediate neighbour of C.

49. Which of the following statements is true regarding L?  
 1) L is facing the same direction as D.  
 2) L is facing the opposite direction of X.  
 3) L sits on the immediate left of B.  
 4) Only two persons sit between X and L.  
 5) Both 3) and 4)

50. Who among the following sits second from the west end of the row?

- 1) C      2) X      3) B      4) H      5) None of these

51. What is the position of D with respect to L?  
 1) Third to the left      2) Fourth to the left  
 3) Third to the right      4) Second to the right  
 5) None of these  
 52. Which of the following pairs sit at extreme ends of the line?  
 1) M, X      2) D, C      3) V, H  
 4) D, M      5) C, M  
 53. Four of the following five are alike in a certain way and hence form a group. Which is the one that does not belong to that group?  
 1) M      2) D      3) X      4) L      5) C  
 54. If 'A \$ B' means 'A is father of B', 'A # B' means 'A is daughter of B' and 'A @ B' means 'A is sister of B', then how is E related to K in the given expression 'H @ E \$ J # K'?  
 1) Husband      2) Father      3) Uncle  
 4) Cannot be determined      5) None of these  
 55. If 'P \$ Q' means 'P is father of Q', 'P # Q' means 'P is mother of Q' and 'P \* Q' means 'P is sister of Q', then how is G related to D in the given expression 'D # E \$ F \* G'?  
 1) Granddaughter      2) Grandson  
 3) Nephew      4) Cannot be determined  
 5) None of these  
**Directions (Q. 56-60):** Study the following information carefully and answer the questions given below:

Eight persons J, K, L, M, N, O, P and Q are sitting around a circular table, facing the centre. Each of them likes a different colour, viz White, Yellow, Pink, Blue, Black, Green, Brown and Red but not necessarily in the same order.

K sits second to the left of O. The one who likes Red is an immediate neighbour of O. Only three persons sit between the one who likes Red and J. Only one person sits between the one who likes Blue and J. The one who likes Yellow sits on the immediate right of the one who likes Blue. Q sits second to the right of O. M likes Red. L and N are immediate neighbours of each other. Neither L nor N likes Blue. The one who likes Black sits on the immediate left of K. The one who likes Green sits second to the right of the one who likes Yellow. The one who likes Brown is an immediate neighbour of the one who likes Blue. L sits second to the right of the one who likes White.

56. Who among the following sits second to the right of J?  
 1) The one who likes Green  
 2) The one who likes Pink  
 3) The one who likes Blue  
 4) The one who likes Black  
 5) None of these  
 57. Who among the following likes Brown?  
 1) K      2) O      3) Q      4) P      5) None of these

58. What is the position of P with respect to the one who likes Pink?  
 I) Third to the left      2) Third to the right  
 3) Fourth to the left      4) Fourth to the right  
 5) Immediate left

59. Which of the following statements is true?  
 1) The one who likes Green sits second to the left of the one who likes Pink.  
 2) J is an immediate neighbour of the one who likes Black.  
 3) M sits exactly between K and the one who likes Brown.  
 4) Only four persons sit between the one who likes Yellow and K.  
 5) Both 1) and 3)

60. Four of the following five are alike in a certain way and thus form a group. Which is the one that does not belong to that group?  
 1) White – M      2) Q – Pink      3) Black – P  
 4) N – Blue      5) Green – O

**Directions (Q. 61-65):** Each of the questions below consists of a question and two statements numbered I and II given below it. You have to decide whether the data provided in the statements are sufficient to answer the question. Read the question and both the statements and give answer

- 1) if the data in statement I alone are sufficient to answer the question, while the data in statement II alone are not sufficient to answer the question.  
 2) if the data in statement II alone are sufficient to answer the question, while the data in statement I alone are not sufficient to answer the question.  
 3) if the data either in statement I alone or in statement II alone are sufficient to answer the question.  
 4) if the data in both statement I and II together are not sufficient to answer the question.  
 5) if the data in both statement I and II together are necessary to answer the question.

61. Who amongst A, B, C, D and E is the shortest?  
 I. D is shorter than E but taller than C.  
 II. B is not as tall as A.

62. Five friends Ramesh, Ajay, Sohan, Amit and Kunal are sitting around a circular table. Are they all facing the centre?  
 I. Ramesh sits second to the left of Ajay. Ajay faces the centre. Sohan sits second to the right of Ramesh.

- II. Amit sits third to the left of Kunal. Kunal faces the centre. Ajay sits on the immediate left of Amit but Kunal is not an immediate neighbour of Ajay.

63. Is S grandmother of B?  
 I. A is mother of B. B is son of C. C is son of S.  
 II. M is father of O and O is daughter of S.

64. In which direction is Point P with respect to point Q?  
 I. If a person walks 4m towards the north from point P and takes two consecutive right turns, each after walking 4m, he would reach point R, which is 8m away from point Q.

- II. Point S is 2m towards the east of point P and 4m towards the west of point Q.

65. Six persons S, N, Q, D, B and K live in a building but not necessarily in the same order. There are six floors in that building and only one person lives on each floor. The ground floor of the building is numbered 1 and the one above it is numbered 2 and so on. The topmost floor of the building is numbered 6. Who among them lives on the topmost floor of the building?  
 I. S lives on the 2nd floor. Only two persons live between S and N. B lives immediately below D.  
 II. D lives on the 4th floor. Only two persons live between D and Q. N lives immediately below K. N lives on an odd-numbered floor.

**Directions (Q. 66-70):** In each of the questions given below, relationship between the different elements is shown in the statements. The statements are followed by conclusions. Study the conclusions based on the given statements and select the appropriate answer.

66. Statements:  $S \leq T = K \geq A \geq C = D; F \geq K$

Conclusions: I.  $F \geq D$       II.  $A > S$

- 1) Only conclusion I is true.  
 2) Only conclusion II is true.  
 3) Either conclusion I or II is true.  
 4) Neither conclusion I nor II is true.  
 5) Both conclusions I and II are true.

67. Statements:  $Q = L < N \leq P = G \leq S; K = N$

Conclusions: I.  $S \leq L$       II.  $Q > K$

- 1) Only conclusion I is true.  
 2) Only conclusion II is true.  
 3) Neither conclusion I nor II is true.  
 4) Either conclusion I or II is true.  
 5) Both conclusions I and II are true.

68. Statements:  $L < B = E \leq W; X = E$

Conclusions: I.  $W = X$       II.  $X < W$

- 1) Only conclusion I is true.  
 2) Either conclusion I or II is true.  
 3) Only conclusion II is true.  
 4) Neither conclusion I nor II is true.  
 5) Both conclusions I and II are true.

69. Statements:  $U \leq N < I = J; N < Y$

Conclusions: I.  $U > Y$       II.  $J < Y$

- 1) Only conclusion I is true.  
 2) Both conclusions I and II are true.  
 3) Either conclusion I or II is true.  
 4) Only conclusion II is true.  
 5) Neither conclusion I nor II is true.

70. Statements:  $X = T < S \leq D; Z > T$

Conclusions: I.  $Z > X$       II.  $Z \geq D$

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- 1) Only conclusion I is true.
- 2) Only conclusion II is true.
- 3) Neither conclusion I nor II is true.
- 4) Either conclusion I or II is true.
- 5) Both conclusions I and II are true.

**Directions (Q. 71-75):** Study the following information carefully and answer the questions given below:

Seven persons live in a building but not necessarily in the same order. There are seven floors in that building and only one person lives on each floor. Each of them was born in different months of the same year starting from January to July. The ground floor of the building is numbered 1 and the one above it is numbered 2 and so on. The topmost floor of the building is numbered 7.

Only three persons live above the floor on which W lives. Only three persons live between the floors on which the one who was born in July and the one who was born in April live. Y lives immediately below the floor on which A lives. Only two persons live between the floors on which X and the third oldest live, and the latter lives below the floor on which X lives. C was not born in January. Only one person lives between the floors on which W and the youngest person live. The one who was born in June lives on an even-numbered floor. X lives neither immediately above nor immediately below the floor on which the one who was born in May lives.

W does not live immediately below or immediately above the floor on which Z lives. The one who was born in June lives immediately above the floor on which B lives. The one who lives immediately above C was not born in July.

71. How many persons live between the floors on which Z and the person who was born in March live?  
1) None      2) Three      3) Two  
4) One      5) More than three
72. Who among the following was born in January?  
1) Y      2) W      3) X  
4) Z      5) C
73. Which of the following statements is true?  
1) X lives on an odd-numbered floor.  
2) A lives below the floor on which Y lives.  
3) W lives on the middle floor of the building.  
4) Only one person lives below B's floor.  
5) None is true
74. Four of the following five are alike in a certain way and hence form a group. Which is the one that does not belong to that group?  
1) Y-May      2) B-March  
3) C-February      4) Z-January  
5) A-July
75. Which of the following represents those who live on even-numbered floors?

- 1) Z, X      2) A, W      3) A, Y  
4) X, B      5) C, B

**Directions (Q. 76-77):** Study the following information carefully and answer the questions given below:

Six persons R, S, T, U, V and W have different heights. T is taller than V. U is taller than only V. W is shorter than only R, who is taller than T. U is not as tall as T. S is not as tall as T.

76. How many persons are there between U and R?  
1) None      2) One      3) Two  
4) Can't determine      5) None of these

77. How many persons are taller than U?  
1) None      2) One      3) Three      4) Four      5) None of these

**Directions (Q. 78-80):** In each question below are given three statements followed by two conclusions numbered I and II. You have to take the given two statements to be true even if they seem to be at variance with commonly known facts. Read all the statements and then decide which of the given conclusions logically follows from the statements, disregarding commonly known facts. Give answer

- 1) if only conclusion I follows.
- 2) if only conclusion II follows.
- 3) if either conclusion I or II follows.
- 4) if neither conclusion I nor II follows.
- 5) if both conclusions I and II follow.

(78-79):

**Statements:** All watches are rings.  
Some rings are belts.  
Some belts are bracelets.

**78. Conclusions:** I. Some watches being belts is a possibility.

II. All bracelets are rings.

**79. Conclusions:** I. No bracelet is a belt.

II. At least some rings are watches.

**80. Statements:** All officers are clerks.  
Some clerks are peons.  
No peon is a manager.

**Conclusions:** I. All managers being clerks is a possibility.

II. Some officers are peons.

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## Answers

1. 2; Quicker approach:

Only milk is added after removal of  $\left(\frac{15}{30} = \frac{1}{2}\right)$  of the quantity each time. So, quantity of water becomes  $\frac{1}{2}$  of quantity of water after each operation. Thus water left after two operations =  $10 \times \left(\frac{1}{2}\right) \times \left(\frac{1}{2}\right) = 2.5$  liters and milk =  $30 - 2.5 = 27.5$  litres. So required ratio =  $27.5 : 2.5 = 11 : 1$ . Thus, the required ratio of milk to water in the resultant mixture =  $11 : 1$ .

2. 1; Volume of conical tank =  $\frac{1}{3} \pi r^2 h$

$$= \frac{1}{3} \times \frac{22}{7} \times 3 \times 3 \times 105 = 990 \text{ m}^3$$

Water coming out of pipe in 1 min = area of cross-section of pipe  $\times$  speed of water

$$\text{flow} = \pi r^2 \times 2 = \frac{22}{7} \times 3.5 \times 3.5 \times 2 = 77 \text{ m}^3/\text{min}$$

$\therefore$  Time taken to fill the tank

$$= \frac{990}{77} = \frac{90}{7} \text{ min} = 12\frac{6}{7} \text{ min}$$

3. 2; Let the old marked price be  $100x$ . Then new marked price will be  $120x$ . Now, 144% of CP =  $120x$

$$\therefore CP = \frac{250}{3} x$$

Now, according to the question,  $125x - CP = 375$ .

$$\text{or, } 125x - \frac{250x}{3} = 375$$

$$\therefore x = \frac{375 \times 3}{125} = 9$$

$$\text{Hence, } CP = \frac{250}{3} \times 9 = ₹750$$

$$4. 3; A's 1 \text{ day's work} = \frac{1}{30}$$

$$A's 10 \text{ days' work} = \frac{1}{3}$$

$$B's 1 \text{ day's work} = \frac{1}{18}$$

$$B's 3 \text{ days' work} = \frac{1}{6}$$

$\therefore$  Remaining work

$$= 1 - \left(\frac{1}{3} + \frac{1}{6}\right) = 1 - \left(\frac{2+1}{6}\right) = \frac{1}{2}$$

$$\therefore C's 1 \text{ day's work} = \frac{1}{42}$$

$\therefore C$  can do  $\frac{1}{2}$  work in  $42 \times \frac{1}{2} = 21$  days

Another Method:

LCM of 30, 18 and 42 = 630 units (Total work)

$$\text{Now, } A \text{ can do } \frac{630}{30} = 21 \text{ units/day}$$

B can do  $\frac{630}{18} = 35$  units/day

C can do  $\frac{630}{42} = 15$  units/day

$$\begin{aligned} A's 10 \text{ days' work} + B's 3 \text{ days' work} \\ = 10 \times 21 + 35 \times 3 = 210 + 105 = 315 \text{ units} \\ \therefore \text{Remaining units} = (630 - 315) \\ = 315 \text{ units} \end{aligned}$$

$$\therefore 315 \text{ units work done by C in } \frac{315}{15} \\ = 21 \text{ days}$$

5. 1; Arrangement

B	G	B	G	B	G
---	---	---	---	---	---

OR,  $\boxed{G \quad B \quad G \quad B \quad G \quad B}$

[B  $\rightarrow$  Boys, G  $\rightarrow$  Girls]

In first arrangement, boys can sit in  $3!$  ways and girls can sit in  $3!$  ways.

$$\therefore \text{Total arrangements} = 3! \times 3! = 6 \times 6 \\ = 36 \text{ ways}$$

Hence, required no. of ways = (first + second) =  $(36 + 36) = 72$

6. 2;  $\therefore$  Reqd avg.

$$\begin{aligned} &\frac{30 \times 15 \times \frac{90}{100} + 30 \times 18 \times \frac{85}{100} + 30 \times 24 \times \frac{90}{100}}{3} \\ &= \frac{105 + 459 + 648}{3} = 504 \end{aligned}$$

7. 1;  $\therefore$  Reqd ratio =  $30 \times 5 : 30 \times 18 \\ = 5 : 18$

8. 3; We take only percentage value for calculation.

$$\text{Then, reqd \%} = \frac{24 \times \frac{1}{5} \times \frac{2}{5}}{19} \times 100$$

$$= \frac{24 \times 8}{19} = \frac{192}{19} \approx 10$$

9. 1;  $\therefore$  Required ratio

$$= 18 \times 60 : 24 \times 30 = 3 : 2$$

$$10. 2; \text{Reqd difference} = 30 \times \frac{20}{100} \{24 - 18\} \\ = 6 \times 6 = 36$$

11. 1; The series is  $\times 1 + 2^2, \times 2 + 3^2, \times 3 + 4^2, \times 4 + 5^2 \dots$

$$\text{ie } 27 \times 1 + 2^2 = 31, 31 \times 2 + 3^2 = 71,$$

$$71 \times 3 + 4^2 = 229, 229 \times 4 + 5^2 = 941,$$

$$941 \times 5 + 6^2 = 4741, 4741 \times 6 + 7^2 = 28495$$

12. 1; The series is  $(+2^3 - 1^3), (+3^3 - 2^3), (+4^3 - 3^3), (+5^3 - 4^3) \dots$

$$\text{ie } 6 + (2^3 - 1^3) = 6 + 7 = 13,$$

$$13 + (3^3 - 2^3) = 13 + 23 = 36,$$

$$36 + (4^3 - 3^3) = 36 + 55 = 91,$$

$$91 + (5^3 - 4^3) = 91 + 109 = 200,$$

$$200 + (6^3 - 5^3) = 200 + 191 = 391, \dots$$

13. 1; The series is  $\times 2 + 2^3, \times 3 + 3^3, \times 4 + 4^3, \times 5 + 5^3, \times 6 + 6^3$

$$\text{ie } 7 \times 2 + 2^3 = 22, 22 \times 3 + 3^3 = 93$$

$$93 \times 4 + 4^3 = 436, 436 \times 5 + 5^3 = 2305,$$

$$2305 \times 6 + 6^3 = 14046$$

14. 3; The series is  $-256, -128, -64, -32, -16 \dots$

ie  $956 - 256 = 700, 700 - 128 = 572,$

$572 - 64 = 508, 508 - 32 = 476,$

$476 - 16 = 460$

15. 4; The series is  $+3.5, +3.5, +3.5 \dots$

$ie 7353.0625 + 3.5 = 2100.875,$

$2100.875 + 3.5 = 600.25,$

$600.25 + 3.5 = 171.5, 171.5 - 3.5 = 49,$

$49 + 3.5 = 14, \dots$

16. 4; Quantity I.

Boat	Current
Ratio of speed	$100 + 100 \times \frac{200}{100} = 100$
	$= 300$
	$= 3$

Now, downstream speed =  $\frac{36}{3} = 12 \text{ kmph}$

Now,  $(3 + 1) = 4 = 12$

$\therefore$  Upstream speed  $(3 - 1) = 2 = \frac{12}{4} \times 2$

$= 6 \text{ kmph}$

Quantity II. 4

Hence QI > QII

17. 2; Quantity I: ₹1600

Quantity II:  $MP \times \frac{90}{100} = 1800$

$$\Rightarrow MP = 1800 \times \frac{100}{90}$$

$\therefore MP = ₹2000$

Hence, Quantity I < Quantity II

18. 5;

$$x^2 - 2x - 143 = 0$$

$$\begin{array}{ccc} & -13 & +11 \\ Step \text{ I.} & \swarrow & \searrow \end{array}$$

$$\begin{array}{ccc} -13 & & +11 \\ Step \text{ II.} & \frac{-13}{1} & \frac{+11}{1} \\ & \downarrow & \downarrow \end{array}$$

Step III.  $x = -13, -11$

Quantity II

$$y^2 + 11y - 152 = 0$$

$$\begin{array}{ccc} & +19 & -8 \\ Step \text{ I.} & \swarrow & \searrow \end{array}$$

$$\begin{array}{ccc} +19 & & -8 \\ Step \text{ II.} & \frac{+19}{1} & \frac{-8}{1} \\ & \downarrow & \downarrow \end{array}$$

Step III.  $y = -19, 8$

Hence, relationship can't be established.

19. 5;

Middle term of the series is  $\left(\frac{90}{5} = \right) 18$

$\Rightarrow$  Numbers are : 14, 16, 18, 20, 22

$$\Rightarrow QI = 16 + 22 = 38$$

$$\text{and } QII = 18 + 20 = 38$$

Hence, QI = QII

20. 2; Side of the square =  $\sqrt{784} = 28 \text{ cm}$

= Radius of the circle.

Quantity I: Perimeter of the square

$$= 4 \times 28 = 112 \text{ cm}$$

Quantity II: Circumference of the circle

$$= 2\pi r = 2 \times \frac{22}{7} \times 28 = 176 \text{ cm}$$

Note: When radius of circle and side of square are equal the circumference of circle

# IBPS RRB Officer (PT)

always greater than the perimeter of square. Hence, Quantity I < Quantity II

$$21. 2; \text{ Reqd ratio} = 5000 \times 80 : 6000 \times 26 = 100 : 39$$

$$22. 2; \text{ Reqd difference} = (70 \times 72 + 90 \times 76 + 60 \times 74 + 90 \times 60 + 70 \times 66 + 80 \times 68) - (40 \times 75 + 60 \times 83 + 50 \times 70 + 60 \times 65 + 50 \times 80 + 90 \times 75) = 31780 - 26130 = 5650$$

$$23. 4; \text{ Reqd percentage} = \frac{65}{35} \times 100 = 185.71 \approx 186\%$$

24. 2; Reqd percentage

$$= \frac{83-17}{17} \times 100 = \frac{66}{17} \times 100 = 388.23 \approx 388\%$$

25. 1; Reqd average

$$\frac{40 \times 25 + 60 \times 17 + 50 \times 30 + 60 \times 25}{6} = \frac{35 + 50 \times 20 + 90 \times 25}{6}$$

$$\frac{1000 + 1020 + 1500 + 2100 + 1000 + 2250}{6} = \frac{8870}{6}$$

$$= 1478.3 \approx 1478$$

26. 3; According to the question,  
 $5(x + x - 7.72) = 445.6$

$$\therefore x = \frac{445.6 + 38.6}{10} = \frac{484.2}{10} = 48.42$$

27. 4; According to the question,

$$\frac{1}{3} \pi R^2 H + \pi r^2 h = 343\pi$$

$$\frac{1}{3} \times 10 \times 3 \times 10 + r^2 \times 3 = 343$$

$$\Rightarrow 3r^2 = 243$$

$$\Rightarrow r^2 = 81$$

$$\therefore r = \pm 9$$

Neglect negative value.

$$\therefore r = 9$$

So, reqd ratio = 9 : 10

28. 5; Let the speed of train A be  $S_A$ .  
 distance = speed × time

$$\text{Now, } S_A \times 10 = (150 + 100)$$

$$\text{or, } S_A = 25 \text{ m/s}$$

Ratio of speed = 3 : 2

$$\therefore \text{Speed of train B} = \frac{25}{3} \times 2 = \frac{50}{3}$$

$$\therefore \text{Length of train B} = \frac{50}{3} \times 6 = 100\text{m}$$

29. 4; Quicker Approach:

Upstream	Downstream	Time
25	40	9
35	50	10

Upstream speed of man

$$= \frac{25 \times 50 - 35 \times 40}{50 \times 9 - 40 \times 12} = \frac{-150}{-30} = 5 \text{ kmph}$$

Downstream speed of man

$$= \frac{25 \times 50 - 35 \times 40}{25 \times 10 - 35 \times 9} = \frac{25 \times 50 - 35 \times 40}{25 \times 12 - 35 \times 9}$$

$$= \frac{+150}{+15} = 10 \text{ kmph}$$

$$\therefore \text{Speed of man} = \frac{5+10}{2} = 7.5 \text{ km/hr}$$

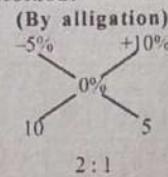
30. 2; Let the first chair cost ₹x

$$\text{Then, } x \left( \frac{95}{100} \right) + (1260 - x) \left( \frac{110}{100} \right) = 1260$$

$$\text{or, } x \left( \frac{110-95}{100} \right) = 1260 \left( \frac{110-100}{100} \right)$$

$$\therefore x = ₹840 \text{ and } 1260 - 840 = ₹420$$

Quicker Method:



$$\Rightarrow \text{Cost} = \frac{1260}{3} \times 2 = 840 \text{ and } 1260 - 840 = 420$$

$$= 420$$

(31-35):

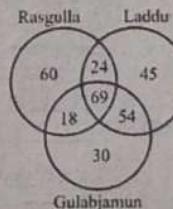
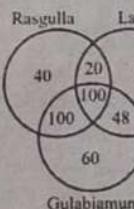
Total students = 700

$$\text{Boys} = \frac{700}{7} \times 4 = 400$$

$$\text{Girls} = \frac{700}{7} \times 3 = 300$$

Now,

$$\text{Boys} = 400 \quad \text{Girls} = 300$$



31. 2; ∴ Reqd number =  $40 + 32 + 30 = 132$

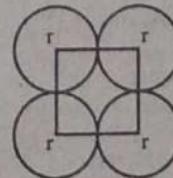
32. 4; ∴ Reqd number =  $24 + 54 + 18 = 96$

33. 3; ∴ Reqd ratio =  $32 : 60 = 8 : 15$

34. 1; ∴ Reqd number =  $60 + 45 + 30 = 135$

35. 2; ∴ Reqd number =  $100 + 69 = 169$

36. 1; Let radius of circle be 'r' cm.



Then, the side of the square will be  $2r$  cm.

Area covered by the circles in the square

$$= 4 \times \frac{1}{4} \times \pi r^2 = \pi r^2$$

Area of the square =  $(2r)^2 = 4r^2 \text{ cm}^2$

According to the question,

Remaining area of the square =  $4r^2 - \pi r^2$

$$\therefore 4r^2 - \pi r^2 = 378$$

$$\text{or, } r^2 \left( 4 - \frac{22}{7} \right) = 378$$

$$\text{or, } r^2 \left( \frac{6}{7} \right) = 378$$

$$\text{or, } r^2 = 63 \times 7 = 9 \times 7 \times 7$$

$$\therefore r = 21 \text{ cm}$$

37. 1; ∴ Reqd no. of ways

$$= {}^4C_2 \times {}^5C_1 \times {}^3C_1 = \frac{4 \times 3}{2} \times \frac{5 \times 4}{2} \times 2 = 6 \times 5 \times 4$$

$$= 120$$

38. 3; Reqd no. of ways

$$= {}^2C_2 \times {}^3C_1 = \frac{1 \times 9 \times 8 \times 7}{3 \times 2} = 84$$

39. 4; Ratio of profit = 5 : 9

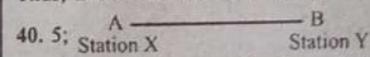
Now,

$$\frac{I_A}{I_B} = \frac{P_A}{P_B}$$

$$\text{or, } \frac{5 \times 8}{6 \times \text{month}(x)} = \frac{5}{9}$$

$$\therefore x = 12 \text{ months}$$

Thus, B invested for 12 months.

40. 5; 

Let the speed of train A be  $S_A = 40 \text{ km/hr}$  and that of train B be  $S_B$ .

Then, time taken by train A =  $T_A = 9 \text{ hours}$

Time taken by train B =  $T_B = 4 \text{ hours}$

Using formula,  $\frac{S_A}{S_B} = \sqrt{\frac{T_B}{T_A}}$

$$\Rightarrow \frac{40}{S_B} = \sqrt{\frac{4}{9}} = \frac{2}{3}$$

$$\Rightarrow \frac{40}{S_B} = \frac{2}{3}$$

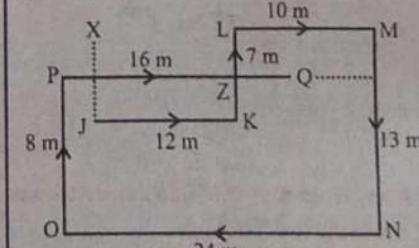
$$\therefore S_B = 60 \text{ km/hr}$$

(41-45):

Floor	Person
7	P
6	N
5	O
4	R
3	S/M
2	Q
1	M/S

41. 3    42. 2    43. 5    44. 4    45. 2

(46-48):



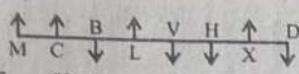
46. 5

$$47. 4; LQ = \sqrt{LZ^2 + ZQ^2}$$

$$= \sqrt{(13-8)^2 + (10-8)^2} = \sqrt{5^2 + 2^2} = \sqrt{29} \text{ m}$$

48. 4; Northeast

(49-53):



49. 5    50. 1

51. 5; fourth to the right

52. 4    53. 2

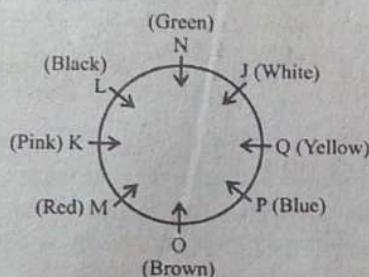
$$54. I; H(-) \rightarrow E(+) \Leftrightarrow K(-) \\ J(+)$$

Thus, E is husband of K.

55. 4; D(-)

$$\begin{array}{c} E(+) \\ | \\ F(-) \rightarrow G \end{array}$$

Thus, the gender of G is not clear.  
(56-60):



56. 4    57. 2    58. 2    59. 5

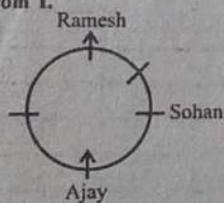
60. 4; In all other options the given persons sit opposite the given colours.)

61. 4; From I. E > D > C

From II. A > B

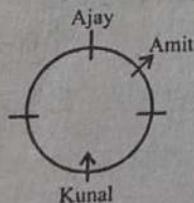
Thus, both I and II together are not sufficient to answer.

62. 3; From I.



Thus, I alone is sufficient to answer.

From II.



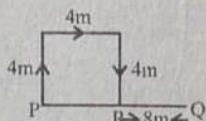
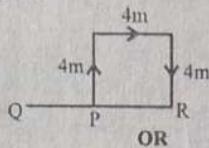
Thus, II alone is also sufficient to answer.

63. 5; From I and II.

$$\begin{array}{c} S(-) \Leftrightarrow M(+) \\ | \\ A(-) \Leftrightarrow C(+) \quad O(-) \\ | \\ B(+) \end{array}$$

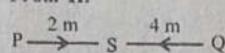
Thus, S is grandmother of B.

64. 2; From I.



Thus, I alone is not sufficient.

From II.



Thus, II alone is sufficient to answer.

65. 2; From I.

Floor	Person
6	Q/K
5	N
4	D
3	B
2	S
1	K/Q

Thus, I alone is not sufficient.

From II.

Floor	Person
6	K
5	N
4	D
3	S/B
2	B/S
1	Q

Thus, II alone is sufficient to answer.

66. 1; Given statements

$$S \leq T = K \geq A \geq C = D \quad \dots (i)$$

$$F \geq K \quad \dots (ii)$$

Combining (i) and (ii), we get

$$F \geq K \geq A \geq C = D \quad \dots (iii)$$

Check for conclusion I.

From (iii), F  $\geq$  D is true.

Check for conclusion II.

From (i), we can't compare A and S. Hence II (A > S) is not true.

67. 3; Given statements:

$$Q = L < N \leq P = G \leq S \quad \dots (i)$$

$$K = N \quad \dots (ii)$$

Combining (i) and (ii), we get

$$Q = L < N = K \quad \dots (iii)$$

Check for conclusion I.

From (i), L < S is true. Hence I (S  $\geq$  L) is not true.

Check for conclusion II.

From (iii), Q < K is true. But Q > K is not true.

68. 2; Given statements:

$$L < B = E \leq W \quad \dots (i)$$

$$X = E \quad \dots (ii)$$

Combining (i) and (ii), we get

$$L < B = E = X \leq W \quad \dots (iii)$$

Check for conclusion I.

From (iii), W = X is not definitely true.

Check for conclusion II.

From (iii), X < W is not definitely true.

But, both make a complementary pair for  $X \leq W$ . Hence, either I or II is true.

69. 5; Given statements:

$$U \leq N < I = J \quad \dots (i)$$

$$N < Y \quad \dots (ii)$$

Combining (i) and (ii), we get

$$U \leq N < Y \quad \dots (iii)$$

$$Y > N < I = J \quad \dots (iv)$$

Check for conclusion I.

From (iii), U < Y is true. But U > Y is not true.

Check for conclusion II.

From (iv), we can't compare J and Y. Thus, II (J < Y) is not true.

70. 1; Given statements:

$$X = T < S \leq D \quad \dots (i)$$

$$Z > T \quad \dots (ii)$$

Combining (i) and (ii), we get

$$D \geq S > T = X < Z \quad \dots (iii)$$

Check for conclusion I.

From (iii), X < Z or Z > X is true.

Check for conclusion II.

From (iii), we can't compare Z and D. Thus, II (Z  $\geq$  D) is not true.

(71-75):

Floor	Person	Month
7	Z	January
6	X	April
5	C	February
4	W	June
3	B	March
2	A	July
1	Y	May

71. 2    72. 4

73. 3

74. 5; In all other options the given persons live on odd-numbered floors.

75. 2

(76-77):

$$R > W > T > S > U > V$$

76. 5    77. 4

78. 1; All watches are rings (A) + Some rings are belts (I) = A + I = No conclusion. But the possibility in I exists. Hence, conclusion I follows.

Again, Some rings are belts (I) + Some belts are bracelets (L) = I + I = No conclusion. Hence, conclusion II does not follow.

79. 2; From the third statement, conclusion I does not follow.

From first statement, conclusion II follows.

80. 1; Some clerks are peons (I) + No peon is a manager (E) = I + E = O = Some clerks are not managers. But the possibility in I exists. Hence, conclusion I follows.

Again, All officers are clerks (A) + Some clerks are peons (I) = A + I = No conclusion. Hence, conclusion II does not follow.

## PRACTICE SET

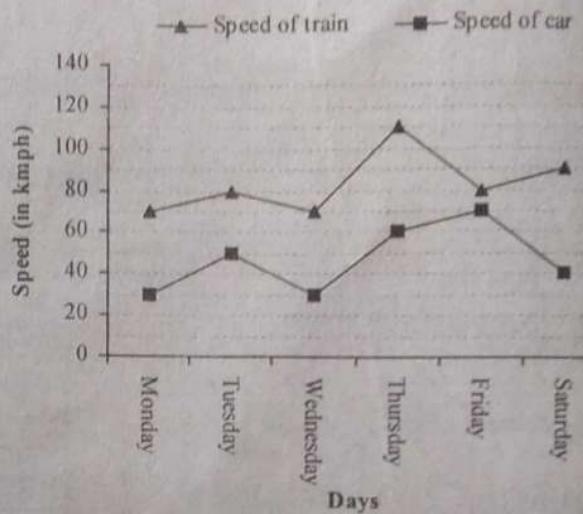
# IBPS RRB Assistant (PT)

### Test-I: Numerical Ability

**Directions (Q. 1-5):** What should come in place of question mark (?) in the given number series.

1. 695 685 ? 625 545 385  
1) 655 2) 665 3) 645 4) 675 5) 635
2. 19 ? 38 55 77 104  
1) 30 2) 32 3) 21 4) 26 5) 19
3. 8 9 20 ? 256 1285  
1) 45 2) 62 3) 63 4) 58 5) 72
4. 19 36 70 138 ? 546  
1) 220 2) 230 3) 260 4) 321 5) 274
5. 97 106 98 107 99 ?  
1) 95 2) 120 3) 108 4) 170 5) 165
6. If a son is one-third the age of his father now and was one-fifth the age of his father 6 years ago, then how old will his father be 4 years hence? (in years)  
1) 60 2) 35 3) 40  
4) 52 5) None of these
7. The average monthly income of five earning members of a family is ₹7550. One member passes away and the average monthly income becomes ₹7050. What was the monthly income of the person who is no more?  
1) ₹10500 2) ₹8200 3) ₹9550  
4) ₹9100 5) ₹8750
8. Neelam bought a scooter at 10% discount on MRP. After a year Neelam sells the scooter to Nitu at 5% loss. After another year Nitu sells the scooter at 10% profit to Nilu. If Nilu paid ₹56430, then find the MRP of scooter. (in ₹)  
1) 60000 2) 52000 3) 45000  
4) 72000 5) None of these
9. Neelam can do  $\frac{1}{3}$  of a work in 5 days while Nitu can do  $\frac{1}{2}$  of the work in 5 days. How long will it take for both of them to finish the work if Neelam starts the work and they work on alternate days?  
1) 9 days 2) 12 days 3) 13 days  
4) 7 days 5) None of these
10. In a cricket tournament, there were 253 matches played. Every team played one match with each other. The number of teams participating in the tournament is  
1) 21 2) 23 3) 19  
4) 27 5) 31

**Directions (Q. 11-15):** Study the following line-graph to answer the questions. The graph shows the speed (in km/hr) of car and that of train on six different days in a week.



11. If the time taken by the car is thrice the time taken by the train on Wednesday, then the distance covered by the car is approximately what per cent more than the distance covered by the train on that day?  
1) 15% 2) 20% 3) 30% 4) 29% 5) 25%
  12. For which day, the percentage increase/decrease in the speed of the train from the previous day is the maximum?  
1) Wednesday 2) Friday 3) Thursday  
4) Tuesday 5) Saturday
  13. What is the average speed of the car on Monday, Wednesday and Thursday together if the car travelled the same distance on each of these days?  
1) 28 km/hr 2) 36 km/hr 3) 40 km/hr  
4) 39 km/hr 5) 52 km/hr
  14. On Friday, the train covered a distance of 200 km while the car covered 180 km. What is the ratio of time taken by the car to the time taken by the train on that day?  
1) 21 : 19 2) 31 : 30 3) 36 : 35  
4) 17 : 16 5) 41 : 40
  15. If both the train and the car travelled for 2 hours 20 minutes each on Tuesday, then what is the difference between the distance travelled by the train and that by the car on that day?  
1) 70 km 2) 60 km 3) 78 km  
4) 42 km 5) None of these
- Directions (Q. 16-25):** What should come in place of question mark (?) in the given questions?
16.  $30\% \text{ of } 320 + 4 = ?$   
1) 24 2) 12 3) 28  
4) 32 5) 9

17.  $? - \sqrt{81} - \sqrt{144} = 28$   
 1) 21    2) 27    3) 49    4) 58    5) 42

18.  $(34 + \sqrt{16} \times \sqrt{4}) \div 2 = ?$   
 1) 6.2    2) 7.5    3) 2.3    4) 8.5    5) 5.1

19.  $2\frac{1}{3} + 5\frac{7}{25} + 3\frac{11}{15} = ?$   
 1)  $9\frac{91}{31}$     2)  $11\frac{26}{75}$     3)  $8\frac{26}{57}$     4)  $5\frac{61}{29}$     5)  $7\frac{71}{37}$

20.  $\left( \left( \sqrt{\frac{784}{49}} \times 1.5 \right)^2 \right) = ?$   
 1) 36    2) 19    3) 154    4) 31    5) 42

21.  $1265 + 2105 + 875 - ? = 3652 - 1050$   
 1) 2122    2) 1905    3) 1220    4) 1643    5) 3105

22.  $? \times 25 = 9^4 - 156$   
 1) 165.2    2) 125.5    3) 256.2    4) 176.2    5) 161.2

23.  $\% \text{ of } (120 \div 3) = ?$   
 1) 11.2    2) 12.5    3) 19.5    4) 21.2    5) 29.5

24.  $6.5 \times 14 \div 2 = ?$   
 1) 227.5    2) 119.7    3) 132.5    4) 97.5    5) 75.2

25.  $? - \sqrt{626} - \sqrt{1024} = \sqrt{3249}$   
 1) 110    2) 115    3) 95    4) 81    5) 76

Directions (Q. 26-30): Study the following information carefully to answer the questions that follow:

The table shows the number of students enrolled in B Tech programme in four different colleges.

College	Total number of enrolled students	The ratio of boys enrolled to girls enrolled	Percentage of students selected for scholarship
A	500	3 : 2	30
B	280	4 : 3	25
C	350	5 : 2	36
D	400	3 : 5	42

26. What is the difference between the total number of students who did not get scholarship from A and D together and the total number of students who did not get scholarship from B and C together?  
 1) 128    2) 98    3) 148    4) 120    5) None of these

27. What is the approximate average number of students who got selected from scholarship from all the colleges?  
 1) 128    2) 78    3) 202    4) 163    5) None of these

28. What is the ratio of the number of boys enrolled in A and B together to the number of girls enrolled in C and D together?  
 1) 46 : 35    2) 39 : 31    3) 51 : 29  
 4) 41 : 39    5) 37 : 32

29. The total number of girls enrolled in A and D together is approximately what per cent of the number of boys enrolled in C and B together?  
 1) 110%    2) 195%    3) 104%  
 4) 96.1%    5) 215%

30. The total number of boys enrolled in all the colleges is what per cent more/less than the total number of girls enrolled in all the colleges?  
 1) 19%    2) 28%    3) 35%    4) 42%    5) 13%

Directions (Q. 31-35): In each of the following questions two equations numbered I and II are given. You have to solve both the equations and mark the appropriate option. Give answer

- 1) if  $x > y$
- 2) if  $x < y$
- 3) if  $x \geq y$
- 4) if  $x \leq y$
- 5) if  $x = y$  or relationship between  $x$  and  $y$  cannot be determined

- |                              |                           |
|------------------------------|---------------------------|
| 31. I. $x^2 + 9x + 20 = 0$   | II. $y^2 - 19y + 78 = 0$  |
| 32. I. $5x^2 - 21x + 20 = 0$ | II. $2y^2 - 12y + 16 = 0$ |
| 33. I. $x^2 - 23x + 132 = 0$ | II. $y^2 - 17y + 72 = 0$  |
| 34. I. $2x + 3y = 5$         | II. $x + 2y = 4$          |

35. I.  $x^2 = 961$                           II.  $y = \sqrt{961}$

36. Find the greatest number of six digits which, on being divided by 5, 6, 7, 8 and 9, leaves 3, 4, 5, 6 and 7 as remainder respectively.

- |           |           |           |
|-----------|-----------|-----------|
| 1) 997280 | 2) 997918 | 3) 995070 |
| 4) 994070 | 5) 989999 |           |

37. A starts a business with ₹3000. B joins him after 3 months with ₹5000. C puts a sum of ₹12000 in the business for 2 months only. At the end of the year, a total profit of ₹7525 is earned. What will be C's share?

- |          |          |          |
|----------|----------|----------|
| 1) ₹1720 | 2) ₹2010 | 3) ₹1675 |
| 4) ₹2120 | 5) ₹1550 |          |

38. The number of seats in a cinema hall is increased by 20%. The price on a ticket is also increased by 5%. What is the effect on the revenue collected?  
 1) 26% decrease    2) 20% decrease    3) 20% increase  
 4) 26% increase    5) 23% increase

39. A sum of ₹1550 is lent out in two parts – one at 10% and the other at 12%. If the total annual income is ₹162.75 the money lent at 10% is  
 1) ₹975.5    2) ₹1162.5    3) ₹1320.5  
 4) ₹720.2    5) None of the these

40. A right circular cone is exactly fitted inside a cube in such a way that the edges of the base of the cone are touching the edges of one of the faces of the cube and the vertex is on the opposite face of the cube. If the volume of the cube is 2744 then, what is the volume of the cone?  
 1) 650 cm<sup>3</sup>    2) 820 cm<sup>3</sup>    3) 719 cm<sup>3</sup>  
 4) 727 cm<sup>3</sup>    5) 620 cm<sup>3</sup>

## **Test-II: Reasoning Ability**

**Directions (Q. 41-45):** The following questions are based on the five three-digit numbers given below:

246    317    657    781    342

41. If 2 is added to the first digit of each of the numbers, how many numbers thus formed will be completely divisible by three?  
 1) None      2) Two      3) One  
 4) Three      5) More than three
42. If all the digits in each number are arranged in descending order within the number, how many such numbers formed are divisible by two?  
 1) None      2) One      3) Two  
 4) Three      5) Four
43. If all the digits in each number are arranged in ascending order within the number, which of the following will be the second lowest number in the new arrangement of the numbers?  
 1) 317      2) 781      3) 246  
 4) 657      5) 342
44. If the positions of the third and the second digit of each number are interchanged, then what will be the resultant of the first digit of the second lowest number thus formed multiplied by the third digit of the highest number thus formed?  
 1) 24      2) 21      3) 18      4) 33      5) 12
45. How many numbers are there in which the difference between the first and the third digit is greater than the second digit?  
 1) None      2) Two      3) Three  
 4) One      5) More than three

**Directions (Q. 46-50):** Study the following information carefully and answer the questions given below:

Eight persons G, H, I, J, K, L, M and N are sitting around a circular table, facing the centre. H sits exactly between M and J. N sits third to the left of H and second to the right of G. I sits exactly between G and M. H and K do not sit opposite each other.

46. Who among the following sits third to the left of J?  
 1) K      2) G      3) L      4) J      5) H
47. How many persons are there between N and M?  
 1) Three      2) One      3) Two  
 4) None      5) More than three
48. Who among the following sits fourth to the right of J?  
 1) K      2) M      3) G      4) L      5) H
49. Who among the following sits opposite K?  
 1) M      2) I      3) G      4) H      5) J
50. Four of the following five are alike in a certain way and hence form a group. Which is the one that does not belong to that group?  
 1) M-H      2) G-I      3) L-G      4) J-H      5) H-J

**Directions (Q. 51-53):** Each of the questions below

consists of a question and two statements numbered I and II given below it. You have to decide whether the data provided in the statements are sufficient to answer the question. Read both the statements and give answer

- 1) if the data in statement I alone are sufficient to answer the question, while the data in statement II alone are not sufficient to answer the question.
  - 2) if the data in statement II alone are sufficient to answer the question, while the data in statement I alone are not sufficient to answer the question.
  - 3) if the data either in statement I alone or in statement II alone are sufficient to answer the question.
  - 4) if the data in both statement I and II together are not sufficient to answer the question.
  - 5) if the data in both statement I and II together are necessary to answer the question.
51. How is P related to Q?  
 I. Q is brother of R, who is daughter of P.  
 II. S is husband of P.
  52. How is Sudha related to Sunil?  
 I. Sudha's brother is the only grandson of Sunil's father.  
 II. Sudha has only one brother.
  53. In which direction is P with respect to Q?  
 I. Q is towards north of R.  
 II. Q is towards south of S, which is towards west of P.
- Directions (Q. 54-57):** In each of the questions below are given two or three statements followed by two conclusions numbered I and II. You have to take the given statements to be true even if they seem to be at variance with commonly known facts and then decide which of the given conclusions logically follow from the given statements, disregarding commonly known facts.
- Give answer**
- 1) if only conclusion I follows.
  - 2) if only conclusion II follows.
  - 3) if either conclusion I or II follows.
  - 4) if neither conclusion I nor II follows.
  - 5) if both conclusion I and II follow.
54. Statements: No chair is a table.  
 Some tables are windows.  
 All windows are doors.  
 Conclusions: I. No door is a chair.  
 II. At least some doors are tables.
  55. Statements: All hotels are restaurants.  
 All restaurants are motels.  
 No motel is a dhaba.  
 Conclusions: I. No hotel is a dhaba.  
 II. All motels are restaurants.
  56. Statements: Some phones are modems.  
 Some modems are switches.  
 All switches are fans.  
 Conclusions: I. No phone is a switch.  
 II. Some switches are phones.

57. **Statements:** Some papers are pencils.

Some pencils are pens.

**Conclusions:** I. No pen is a paper.

II. At least some papers are pens.

**Directions (Q. 58-62):** Study the following information carefully and answer the questions given below:

Eight persons are sitting in two parallel rows containing four persons each in such a way that there is an equal distance between adjacent persons. In row 1, P, Q, R and S are seated and all of them are facing south. In row 2, I, J, K and L are seated and all of them are facing north. Therefore, in the given seating arrangement each member sitting in a row faces another member of the other row.

K sits second to the right of I. The one who faces I sits on the immediate right of R. P faces the immediate neighbour of I. L sits on immediate left of the one who faces S. L does not sit at either extreme end of the row.

58. Who among the following faces P?

- |      |                         |      |
|------|-------------------------|------|
| 1) I | 2) J                    | 3) K |
| 4) L | 5) Cannot be determined |      |

59. Who among the following faces the one who sits exactly between K and I?

- |      |                         |      |
|------|-------------------------|------|
| 1) P | 2) Q                    | 3) R |
| 4) S | 5) Cannot be determined |      |

60. Who among the following faces K?

- |      |                         |      |
|------|-------------------------|------|
| 1) P | 2) Q                    | 3) R |
| 4) S | 5) Cannot be determined |      |

61. Which of the following is true regarding Q?

- 1) Q sits exactly between R and S.
- 2) S sits second to the right of Q.
- 3) Q sits at an extreme end of the row.
- 4) Q is an immediate neighbour of the person who faces J.
- 5) None is true

62. Four of the following five are alike in certain way and hence form a group. Which is the one that does not belong to that group?

- |      |      |      |
|------|------|------|
| 1) I | 2) S | 3) J |
| 4) K | 5) P |      |

63. In a certain code language BEST is written as '2 # & 3' and BITE is written as '2 \* 3 #'. How may BETTER be written in that code language?

- |           |           |
|-----------|-----------|
| 1) 2#32&% | 2) 2#33#% |
| 3) 2#*&%% | 4) 3#33#% |
| 5) 2#33#* |           |

64. What should come next in the following letter series?

- |        |        |        |        |        |
|--------|--------|--------|--------|--------|
| GFE    | JIH    | MLK    | PON    | ?      |
| 1) TRQ | 2) SRP | 3) SRQ | 4) STQ | 5) SUQ |

65. Which of the following will come in place of question mark (?) in the following series based on the English alphabetical order?

- |       |       |       |   |    |
|-------|-------|-------|---|----|
| OR    | MP    | KN    | ? | GJ |
| 1) KL | 2) MN | 3) IL |   |    |
| 4) IJ | 5) ML |       |   |    |

**Directions (Q. 66-70):** Study the following information carefully and answer the questions given below:

Seven friends P, Q, R, S, T, U and V have exams on one of the seven days of the same week, starting from Monday and ending on Sunday but not necessarily in the same order.

V's exam is on one of the days before Wednesday. Only three persons have exams between those of V and Q. Only two persons have exams between those of R and T. T's exam is before R's but not on Thursday. As many persons have exams between those of R and Q as between those of U and P. U's exam is on one of the days before that of R.

66. T is related to Wednesday. In the same way P is related to Sunday. Which of the following day is V related to following the same pattern?

- |            |                  |           |
|------------|------------------|-----------|
| 1) Tuesday | 2) Thursday      | 3) Monday |
| 4) Friday  | 5) None of these |           |

67. On which of the following days is P's exam?

- |           |             |              |
|-----------|-------------|--------------|
| 1) Friday | 2) Tuesday  | 3) Wednesday |
| 4) Sunday | 5) Saturday |              |

68. Whose exam is on Sunday?

- |      |                        |      |
|------|------------------------|------|
| 1) Q | 2) R                   | 3) S |
| 4) P | 5) Can't be determined |      |

69. Whose exam is on the day immediately after V's exam?

- |      |      |      |      |      |
|------|------|------|------|------|
| 1) S | 2) U | 3) P | 4) T | 5) Q |
|------|------|------|------|------|

70. If all the persons are made to sit in alphabetical order starting from Monday then the position of how many will remain unchanged?

- |          |         |        |
|----------|---------|--------|
| 1) None  | 2) Two  | 3) One |
| 4) Three | 5) Four |        |

**Directions (Q. 71-73):** Study the following information carefully and answer the questions given below:

'P @ Q' means 'P is father of Q'

'P \$ Q' means 'P is wife of Q'

'P + Q' means 'P is daughter of Q'

'P # Q' means 'P is brother of Q'

71. How is O related to G in the following expression?  
'O @ A # C \$ G'

- |           |                  |                  |
|-----------|------------------|------------------|
| 1) Father | 2) Father-in-law | 3) Mother-in-law |
| 4) Son    | 5) None of these |                  |

72. Which of the following symbols should replace the question mark (?) in the given expression to make R maternal uncle of H?

'R? T \$ U @ H'

- |      |                  |      |
|------|------------------|------|
| 1) + | 2) \$            | 3) # |
| 4) @ | 5) None of these |      |

73. How is J related to B in the following expression?

'C # B \$ E # G + J'

- |                  |                  |                  |
|------------------|------------------|------------------|
| 1) Father        | 2) Father-in-law | 3) Mother-in-law |
| 4) Either 2 or 3 | 5) None of these |                  |

**Directions (Q. 74-75):** Study the following information carefully and answer the questions given below:

A man starts walking from the point P and walks 10 m

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towards north. Then he takes a right turn and walks 15 m. Now he walks 6 m after taking a left turn. Finally, he takes a left turn and walks 15 m and stops at the point V.

74. How far is point V with respect to point P?

- 1) 20 m      2) 16 m      3) 15 m
- 4) 22 m      5) None of these

75. Towards which direction was the man walking before stopping at point V?

- 1) South      2) West      3) North
- 4) East      5) None of these

**Directions (Q. 76-80):** Study the following information carefully and answer the questions given below:

Seven friends R, S, T, U, V, W and X work in three different companies TCS, Wipro and HCL with at least two in each of the three companies. Each of them likes a different fruit, viz Orange, Mango, Litchi, Apple, Banana, Guava and Grapes.

R likes Grapes and works in the same company in which V works. X likes Guava but he does not work in Wipro. The one who likes Litchi works in the same company in which

T works. S works in HCL only with the one who likes Apple. V works neither in HCL nor in Wipro. U does not like Litchi. V likes neither Banana nor Mango. S does not like Banana. T does not like Apple or Litchi.

76. Who among the following likes Mango?

- 1) V      2) W      3) U
- 4) S      5) None of these

77. Which of the following fruits does U like?

- 1) Litchi      2) Apple      3) Orange
- 4) Mango      5) None of these

78. Who among the following likes Orange?

- 1) V      2) T      3) S
- 4) U      5) None of these

79. Which of the following groups work in TCS?

- 1) SU      2) XRW      3) RXV
- 4) TWU      5) None of these

80. Which of the following combinations is correct?

- 1) U – Apple – TCS      2) S – Mango – HCL
- 3) T – Banana – TCS      4) All are correct
- 5) None of these

## Answers

1. 2; The series is  $-10, -20, -40, -80, \dots$

$$\text{ie } 695 - 10 = 685$$

$$685 - 20 = 665$$

$$665 - 40 = 625$$

$$625 - 80 = 545$$

$$545 - 160 = 385$$

2. 4; The series is

$$\begin{array}{ccccccccc} 19 & 26 & 38 & 55 & 77 & 104 \\ +7 & +12 & +17 & +22 & +27 & \\ \hline +5 & +5 & +5 & +5 & +5 \end{array}$$

3. 3; The series is  $\times 1 + 1, \times 2 + 2, \times 3 + 3, \times 4 + 4, \dots$

$$\text{ie } 8 \times 1 + 1 = 9$$

$$9 \times 2 + 2 = 20$$

$$20 \times 3 + 3 = 63$$

$$63 \times 4 + 4 = 256$$

$$256 \times 5 + 5 = 1285$$

4. 5; The series is  $+17, +34, +68, +136, +272, \dots$

$$\text{ie, } 19 + 17 = 36$$

$$36 + 34 = 70$$

$$70 + 68 = 138$$

$$138 + 136 = 274$$

$$274 + 272 = 546$$

5. 3; The series is  $+9, -8, +9, -8$  repeated alternately.

$$\text{ie } 97 + 9 = 106$$

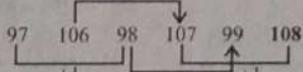
$$106 - 8 = 98$$

$$98 + 9 = 107$$

$$107 - 8 = 99$$

$$99 + 9 = 108$$

OR,



6. 3; Let the father's present age be  $3x$  years. So, the son's present age will be  $x$  years.

Now,

$$3x - 6 = 5(x - 6)$$

$$\text{or, } 3x - 5x = -24$$

$$\therefore x = 12 \text{ years}$$

$$\therefore \text{Father's age } 4 \text{ year hence} \\ = 3x + 4 = 3 \times 12 + 4 = 40 \text{ years}$$

**Logical Method:**

$$\begin{array}{lll} \text{Father} & \text{Son} \\ \text{In terms of ratio} & 3 : 1 \times 4(5-1) = [12 : 4] : 2 \\ (\text{Present age}) & 6 \text{ years ago} & 5 : 1 \times 2(3-1) = [10 : 2] \end{array}$$

$$\text{Now, } 2 = 6$$

$$\therefore 12 = 6 \times 2 = 36 \text{ years}$$

$$\text{Hence four years hence father's age} \\ = 36 + 4 = 40 \text{ years}$$

$$7. 3; \text{Monthly income of the dead person} \\ = (5 \times 7550 - 4 \times 7050) = 37750 - 28200 \\ = ₹9550$$

$$8. 1; \text{Nilu's CP} = 56430 \times \left( \frac{100}{110} \times \frac{100}{95} \times \frac{100}{90} \right)$$

$$= 56430 \times \frac{10}{11} \times \frac{20}{19} \times \frac{10}{9} = ₹60000$$

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$$9. 2; \text{ Neelam's one day's work is } \frac{1}{3 \times 5} = \frac{1}{15}$$

Nitu's one day's work is  $\frac{1}{2 \times 5} = \frac{1}{10}$   
Now, in 2 days work completed by Neelam and Nitu

$$= \frac{1}{15} + \frac{1}{10} = \frac{2+3}{30} = \frac{5}{30} = \frac{1}{6}$$

So, Neelam and Nitu will take  $(6 \times 2) = 12$  days if they work alternately.

Another Method:

Neelam can do 1 work in  $5 \times \frac{3}{1} = 15$  days

Nitu can do 1 work in  $5 \times \frac{2}{1} = 10$  days

LCM of 15 and 10 = 60 (units of total work)

Neelam can do  $\left(\frac{60}{15}\right) 4$  units/day

Nitu can do  $\left(\frac{60}{10}\right) 6$  units/day

$\therefore$  In 2 days (Neelam + Nitu) can do  $(4+6) = 10$  units work when they work alternately.

Now,  $(2 \times 6)$  days =  $10 \times 6 = 60$  units (Total work finished)

Hence work will be finished in 12 days.

10. 2;  $\because n_c = 253$

$$\text{or, } \frac{n(n-1)}{2} = 253$$

$$\text{or, } n(n-1) = 506 = 22 \times 23$$

$$\therefore n = 23$$

11. 4; Let the time taken by the train be 't' hours. Then time taken by the car will be '3t' hours.

$\therefore$  Required percentage

$$= \frac{30 \times 3t - 70 \times t}{70t} \times 100 = \frac{20t}{70t} \times 100$$

$$= 28.57 \approx 29\%$$

12. 3; The percentage increase/decrease in the speed of train

$$\text{On Tuesday} = \frac{80-70}{70} \times 100$$

$$= \frac{100}{7}\% = 14\frac{2}{7}\% \text{ increase}$$

$$\text{On Wednesday} = \frac{80-70}{80} \times 100$$

$$= 12.5\% \text{ decrease}$$

$$\text{On Thursday} = \frac{110-70}{70} \times 100 = \frac{400}{7}\%$$

$$= 57\frac{1}{7}\% \text{ increase}$$

$$\text{On Friday} = \frac{110-80}{110} \times 100$$

$$= \frac{300}{11}\% = 27\frac{3}{11}\% \text{ decrease}$$

$$\text{On Saturday} = \frac{90-80}{80} \times 100 = \frac{25}{2}\%$$

$$= 12.5\% \text{ increase}$$

$$\text{Thus, on Thursday } 57\frac{1}{7}\% \text{ increase.}$$

$$13. 2; \text{ LCM of } 30, 30 \text{ and } 60 = 60$$

$$\therefore \text{Time taken on Monday} = 2 \text{ hours}$$

$$\text{Time taken on Wednesday} = 2 \text{ hours}$$

$$\text{Time taken on Thursday} = 1 \text{ hour}$$

$$\text{Average speed} = \frac{60 \times 3}{2+2+1} = \frac{180}{5} = 36$$

$$14. 3; \therefore \text{Required ratio of time} = \frac{180}{70} : \frac{200}{80}$$

$$= 36 : 35$$

$$15. 1; \text{ Time} = 2 \text{ hours } 20 \text{ minutes} = 2\frac{20}{60}$$

$$= 2\frac{1}{3} = \frac{7}{3} \text{ hours.}$$

$$\therefore \text{Reqd difference} = \frac{7}{3} \times (80-50)$$

$$= \frac{7}{3} \times 30 = 70 \text{ km}$$

$$16. 1; ? = 30\% \text{ of } 320 + 4$$

$$\text{or, } ? = \frac{30}{100} \times 320 \times \frac{1}{4} = 24$$

$$17. 3; ? - \sqrt{81} - \sqrt{144} = 28$$

$$\text{or, } ? = 28 + 9 + 12 = 49$$

$$18. 4; (34 + \sqrt{16 \times 4}) + 2 = ?$$

$$\text{or, } ? = \left(34 + \frac{1}{4} \times 2\right) \times \frac{1}{2} = 8.5$$

$$19. 2; ? = 2\frac{1}{3} + 5\frac{7}{25} + 3\frac{11}{15}$$

$$\text{or, } ? = (2+5+3) + \left(\frac{1}{3} + \frac{7}{25} + \frac{11}{15}\right)$$

$$\text{or, } ? = 10 + \left(\frac{25+21+55}{75}\right)$$

$$\text{or, } ? = (10+1) + \frac{26}{75} = 11\frac{26}{75}$$

$$20. 1; \left(\left(\sqrt{\frac{784}{49}} \times 1.5\right)^2\right) = ?$$

$$\text{or, } ? = \left(\frac{28}{7} \times 1.5\right)^2$$

$$\therefore ? = 36$$

21. 4;

$$1265 + 2105 + 875 - ? = 3652 - 1050$$

$$\text{or, } ? = 5295 - 3652 = 1643$$

$$22. 3; ? \times 25 = 9^4 - 156$$

$$\therefore ? = \frac{6561-156}{25} = 256.2$$

$$23. 2; ? \% \text{ of } (120 + 3) = 5$$

$$\therefore ? = \frac{5 \times 100 \times 3}{120} = 12.5$$

$$24. 1; 6.5 \times 14 + 2 = ? + 5$$

$$\therefore ? = \frac{6.5 \times 14 \times 5}{2} = 227.5$$

$$25. 2; ? - \sqrt{676} - \sqrt{1024} = \sqrt{3249}$$

$$\text{or, } ? = 57 + 26 + 32 = 115$$

$$26. 3; \therefore \text{Required difference}$$

$$= \left(\frac{500 \times 70}{100} + \frac{400 \times 58}{100}\right) - \left(\frac{280 \times 75}{100} + \frac{350 \times 64}{100}\right)$$

$$= (350 + 232) - (210 + 224)$$

$$= 582 - 434$$

$$= 148$$

$$27. 1; \therefore \text{Required average}$$

$$= \frac{5 \times 30 + 280 \times \frac{1}{4} + 35 \times 3.6 + 4 \times 42}{4}$$

$$= \frac{150 + 70 + 126 + 168}{4} = \frac{514}{4}$$

$$= 128.5 \approx 128$$

$$28. 1; \therefore \text{Required ratio}$$

$$= \left(\frac{500}{5} \times 3 + \frac{280}{7} \times 4\right) : \left(\frac{350}{7} \times 2 + \frac{400}{8} \times 5\right)$$

$$= (300 + 160) : (100 + 250)$$

$$= 460 : 350 = 46 : 35$$

$$29. 1; \text{Reqd \%} = \frac{\left(\frac{500}{5} \times 2 + \frac{400}{8} \times 5\right)}{\left(\frac{350}{7} \times 5 + \frac{280}{7} \times 4\right)} \times 100$$

$$= \frac{200+250}{250+160} \times 100 = \frac{450}{410} \times 100 = \frac{4500}{41}$$

$$= 109.75\% \approx 110\%$$

$$30. 2; \therefore \text{Required percentage}$$

$$= \frac{(300+160+250+150)-(200+120+100+250)}{(200+120+100+250)} \times 100$$

$$= \frac{860-670}{670} \times 100 = \frac{190}{670} \times 100 = \frac{1900}{67}$$

$$= 28.35 \approx 28\%$$

$$31. 2; I. \quad x^2 + 9x + 20 = 0$$

$$\begin{array}{c} x^2 + 9x + 20 = 0 \\ \diagdown \quad \diagup \\ (x+5)(x+4) = 0 \end{array}$$

$$\text{Step I.} \quad \begin{array}{c} 5 \\ \diagdown \quad \diagup \\ x+5 \quad x+4 \end{array}$$

$$\text{Step II.} \quad \begin{array}{c} 5 \\ \diagdown \quad \diagup \\ 1 \quad 1 \end{array}$$

$$\text{Step III. } x = -5, -4$$

## IBPS RRB Assistant (PT)

II.  $y^2 - 19x + 78 = 0$

Step I.  $\begin{array}{r} -13 \\ \swarrow \quad \searrow \\ -6 \end{array}$

Step II.  $\begin{array}{r} -13 \quad -6 \\ \hline 1 \quad 1 \end{array}$

Step III.  $y = 13, 6$

Hence,  $x < y$

32. 5; I.  $5x^2 - 21x + 20 = 0$

Step I.  $\begin{array}{r} -25 \quad +4 \\ \swarrow \quad \searrow \\ -25 \quad +4 \end{array}$

Step II.  $\begin{array}{r} -25 \quad +4 \\ \hline 5 \quad 5 \end{array}$

Step III.  $x = 5, -\frac{4}{5}$

II.  $2y^2 - 12y + 16 = 0$

Step I.  $\begin{array}{r} -8 \quad -4 \\ \swarrow \quad \searrow \\ -8 \quad -4 \end{array}$

Step II.  $\begin{array}{r} -8 \quad -4 \\ \hline 2 \quad 2 \end{array}$

Step III.  $y = 4, 2$

Hence, relationship can't be established.

33. 1; I.  $x^2 - 23x + 132 = 0$

Step I.  $\begin{array}{r} -12 \quad -11 \\ \swarrow \quad \searrow \\ -12 \quad -11 \end{array}$

Step II.  $\begin{array}{r} -12 \quad -11 \\ \hline 1 \quad 1 \end{array}$

Step III.  $x = 12, 11$

II.  $y^2 - 17y + 72 = 0$

Step I.  $\begin{array}{r} -9 \quad -8 \\ \swarrow \quad \searrow \\ -9 \quad -8 \end{array}$

Step II.  $\begin{array}{r} -9 \quad -8 \\ \hline 1 \quad 1 \end{array}$

Step III.  $y = 9, 8$

Hence,  $x > y$

34. 2; I.  $2x + 3y = 5$  ... (i)  
II.  $x + 2y = 4$  ... (ii)

Solving (i)  $\times 2 -$  (ii)  $\times 3$ , we get

$x = 2$  and  $y = 3$

Hence,  $x < y$

35. 4; I.  $x^2 = 961$  II.  $y = \sqrt{961}$

$\therefore x = \pm 31$

$\therefore y = 31$

Hence,  $x \leq y$

36. 2; The LCM of 5, 6, 7, 8 and 9 = 2520  
The greatest number of 6 digits = 999999  
Dividing 999999 by 2520, we get 2079 as remainder.

Hence, the 6-digit number divisible by 2520 is  $(999999 - 2079)$  or 997920

Since,  $5 - 3 = 2, 6 - 4 = 2, 7 - 5 = 2, 8 - 6 = 2$ , the remainder in each case is less than the divisor by 2.

$\therefore$  The required number =  $997920 - 2 = 997918$

37. 1; Profit ratio will be

$$A : B : C = 3000 \times 12 : 5000 \times 9 : 12000 \times 2$$

So,  $12 : 15 : 8$

$$\therefore C's \text{ share} = \frac{7525}{35} \times 8 = ₹1720$$

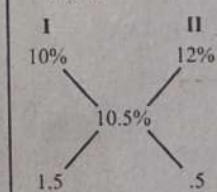
38. 4; Since there is an increase in the seats as well as in the price,

$\therefore$  Required percentage effect

$$= 20 + 5 + \frac{20 \times 5}{100} = 25 + 1 = 26\% \text{ increase}$$

39. 2; By alligation method:

$$\therefore \text{overall rate of interest} = \frac{162.75}{1550} \times 100 = 10.5\%$$



Therefore, the sum will be divided in the ratio of  $1.5 : 0.5 = 3 : 1$

$$\text{Thus, sum lent at } 10\% = \frac{1550}{4} \times 3 = ₹1162.5$$

40. 3; Edge of the cube =  $\sqrt[3]{2744} = 14 \text{ cm}$

$\therefore$  Radius of the cone = 7 cm

Height = 14 cm

$$\text{Volume of the cone} = \frac{1}{3} \pi r^2 h$$

$$= \frac{1}{3} \times \frac{22}{7} \times 7 \times 7 \times 14 = 718.66 \text{ cm}^3$$

$$\approx 719 \text{ cm}^3$$

41. 3; Given numbers:

246 317 657 781 342

After adding the numbers become

446 517 857 981 542

If the sum of digits is divisible by three the no. is divisible by three. Thus, the number divisible by three is 981.

42. 3; Given numbers:

246 317 657 781 342

After arranging the numbers become

642 731 765 871 432

Thus, the numbers divisible by two are 642 and 432.

43. 2; Given numbers:

246 317 657 781 342

After arranging the numbers become

246 137 567 178 234

Thus, the second lowest number is 178 ie 781.

44. 1; Given numbers:

246 317 657 781 342

After interchanging the numbers become

264 371 675 718 324

Now, the first digit of the second lowest number is '3' and the third digit of the highest number is '8'.

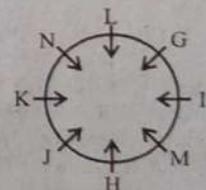
$$\therefore \text{Required resultant} = 3 \times 8 = 24$$

45. 4; Given numbers:

246 317 657 781 342

Thus, the difference between first and third digit of the number is greater than second digit in 317.

(46-50):



46. 3

47. 1

48. 3

49. 2

50. 4; In all other options the second person sits on the immediate left of the first person.

51. 5; From I and II.

$$P(-) \Leftrightarrow S(+)$$

$$Q(+) \text{ --- } R(-)$$

Thus, P is mother of Q.

## SPEED TEST

### IBPS-CWE PO/MT

### संख्यात्मक अभियोग्यता

(संपूर्ण हल सहित)

K. Kundan

Price: ₹230

## SPEED TEST

### IBPS-CWE PO/MT

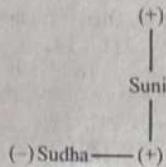
### Quantitative Aptitude

(Fully Solved)

K. Kundan

Price: ₹340

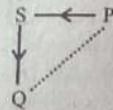
52. 1; From I.



Thus, Sudha is daughter of Sunil.

53. 2; From I. Nothing has been said about P. Hence I alone is not sufficient.

From II



Thus, P is northeast of Q.

54. 2; Some tables are windows (I) + All windows are doors (A) = I + A = I = Some tables are doors (I) → conversion → Some doors are tables. Hence II follows.

Again, No chair is a table (E) + Some tables are doors (I) = E + I = O\* = Some doors are not chairs (O). Hence conclusion I does not follow.

55. 1; All hotels are restaurants (A) + All restaurants are motels (A) = A + A = All hotels are motels (A) + No motel is a dhaba (E) = A + E = E = No hotel is a dhaba (E). Hence, conclusion I follows.

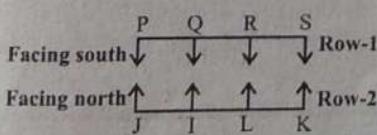
From the second statement conclusion II does not follow.

56. 3; Some phones are modems (I) + Some modems are switches (I) = I + I = No conclusion. Hence, conclusion I does not follow and conclusion II also does not follow. But, both make a complementary (E-I) pair. Hence, either I or II follows.

57. 3; Some papers are pencils (I) + Some pencils are pens (I) = I + I = No conclusion. Hence, conclusion I does not follow and conclusion II also does not follow.

But, both conclusions make a complementary pair (I-E). Hence, either conclusion I or II follows.

(58-62):



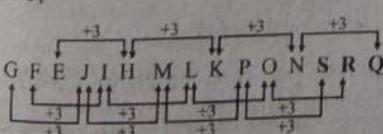
58. 2    59. 3    60. 4    61. 4

62. 1; In all other options the persons are at an extreme end of the row.

B	E	S	T	I
2	#	&	3	*

Thus, BETTER → 2#33#%

64. 3;



65. 3;

OR	MP	KN	IL	GU
-2	2	2	2	2

(66-70):

Day	Person
Monday	T
Tuesday	V
Wednesday	U
Thursday	R
Friday	P
Saturday	Q
Sunday	S

66. 2    67. 1    68. 3    69. 2  
70. 1; After changing the new position becomes

Day	Original position	New Person
Monday	T	P
Tuesday	V	Q
Wednesday	U	R
Thursday	R	S
Friday	P	T
Saturday	Q	U
Sunday	S	V

(76-80):

Person	Fruit							Company		
	Orange	Mango	Litchi	Apple	Banana	Guava	Grapes	TCS	Wipro	HCL
R	×	×	×	×	×	×	√	√	×	×
S	×	√	×	×	×	×	×	×	×	√
T	√	×	×	√	√	×	×	×	√	×
U	√	×	×	√	×	×	×	×	×	√
V	√	×	×	√	√	×	√	√	×	×
W	√	×	√	√	√	√	√	√	√	√
X	√	√	√	√	√	√	√	√	√	√

Summary,

Person	Company	Fruit
R	TCS	Grapes
S	HCL	Mango
T	Wipro	Banana
U	HCL	Apple
V	TCS	Orange
W	Wipro	Litchi
X	TCS	Guava

76. 4  
78. 1  
80. 2

77. 2  
79. 3

Thus, after comparing this position with the original position we get that none of their positions will remain unchanged.

71. 2; O(+)

A(+) — C(-) ↔ G(+)

Thus, O is father-in-law of G

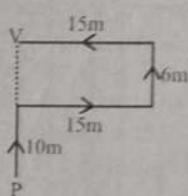
72. 3; According to the information given in the direction, '+' and 'S' denote females. So, 1) and 2) are ruled out. Now, we proceed for option 3). Then, we get

R(+) — T(-) ↔ U(+)

Thus, R is maternal uncle of H.

73. 4; C(+) — B(-) ↔ E(+) — G(-)

Here the gender of J is not clear. Thus, J is either father-in-law or mother-in-law of B. (74-75):



74. 2; PV = 10 + 6 = 16m

75. 2

## READ

### 25 PRACTICE SETS

for

IBPS

(Common Written Exam)

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# SBI Junior Associate (Main)-I

## Test-I: General/Financial Awareness

1. India has been elected to the Executive Board of the first UN-Habitat Assembly. The headquarters of the UN-Habitat is located in  
 1) Johannesburg    2) Geneva    3) New York  
 4) Nairobi        5) Bogota
2. Joko Widodo was re-elected as the President of which of the following countries recently?  
 1) Malaysia    2) Singapore    3) Cambodia  
 4) Brunei        5) Indonesia
3. Which firm is going to launch 'GlobalCoin' cryptocurrency in 2020?  
 1) Microsoft    2) Google    3) IBM  
 4) Apple        5) Facebook
4. Ride-hailing company Ola has launched Ola Money Credit Card in partnership with which of the following banks?  
 1) HDFC Bank    2) ICICI Bank    3) SBI Card  
 4) YES Bank      5) Kotak Mahindra Bank
5. The RBI has extended the timings for transactions through RTGS by one-and-a-half hours from 4:30 PM to 06 PM. Here, the term RTGS means  
 1) Real Time Group Settlement  
 2) Real Time Gross Settlement  
 3) Real Time Green Settlement  
 4) Real Time Grand Settlement  
 5) Real Time Grid Settlement
6. Chancellor Sebastian Kurz was ousted from power through a no-confidence vote in Parliament in which country recently?  
 1) Austria    2) Germany    3) Spain  
 4) Poland      5) Greece
7. Which of the following is an Indian Coast Guard (ICG) ship which was decommissioned recently?  
 1) Betwa    2) Tarmugli    3) Tarasa  
 4) Vigraha    5) Tabar
8. Four new judges were appointed to the Supreme Court recently. The sanctioned strength of the apex court, including the Chief Justice, is  
 1) 21    2) 27    3) 31    4) 35    5) 41
9. Which of the following has become the country's biggest company by revenue? In the fiscal year 2018-19 it reported a turnover of ₹6.23 lakh cr.  
 1) Indian Oil    2) ONGC    3) TCS  
 4) RIL            5) Vodafone Idea
10. The foreign direct investment (FDI) in India declined for the first time in the last six years in 2018-19. It declined by 1 per cent to  
 1) \$44.01bn    2) \$44.13bn    3) \$44.25bn  
 4) \$44.37bn    5) \$44.49bn
11. Which country launched a nuclear-powered icebreaker 'Ural' recently in order to improve its ability to tap the Arctic's commercial potential?  
 1) UK    2) Australia    3) China  
 4) US    5) Russia
12. The Integral Coach Factory (ICF) celebrated a major milestone by rolling out its 60,000th rail coach recently. The ICF is based in  
 1) Hyderabad    2) Bengaluru    3) Bhopal  
 4) Chennai      5) Varanasi
13. The 11th Joint Consular Committee Meeting between India and Iran took place in New Delhi recently. The currency of Iran is  
 1) Rial    2) Rand    3) Dinar    4) Riyal    5) Dirham
14. Which of the following is the first country in Asia to legalise same-sex marriage?  
 1) Japan    2) Taiwan    3) South Korea  
 4) Philippines    5) Vietnam
15. Corporation Bank has launched 'Corp SME Suvidha', a product for GST-registered MSMEs. The bank is headquartered in  
 1) Mangaluru    2) Bengaluru    3) Hyderabad  
 4) Chennai      5) Kolkata
16. Industries in China have been found releasing ozone-depleting CFC-11 gas. Chlorofluorocarbons were banned in 1987 by the  
 1) Geneva Protocol    2) Montreal Protocol  
 3) Vienna Convention    4) Kyoto Protocol  
 5) Basel Convention
17. The International Day for Biological Diversity is observed every year on which date?  
 1) 02 May    2) 08 May    3) 12 May  
 4) 22 May    5) 31 May
18. Prem Singh Tamang led Sikkim Karantikari Morcha (SKM) won recent assembly elections in which of the following states?  
 1) Odisha    2) Assam    3) Sikkim  
 4) Tripura    5) Arunachal Pradesh
19. The Global Facility for Disaster Reduction and Recovery (GFDRR) is a grant-funding mechanism managed by  
 1) IMF    2) WHO    3) ADB  
 4) WTO    5) World Bank

## SBI Junior Associate (Main)-I

20. The RBI will conduct an auction on Jun 13 to purchase govt securities under OMO for ₹15,000 cr to infuse liquidity. Here, OMO means  
 1) Out Market Operation  
 2) Overseas Market Operation  
 3) Old Market Operation  
 4) Open Market Operation  
 5) Outside Market Operation
21. Paljor Stadium is an association football stadium located in  
 1) Gangtok      2) Bhopal      3) Jaipur  
 4) Guwahati      5) Kolkata
22. Who among the following won the prestigious Man Booker International Prize for *Celestial Bodies*?  
 1) Olga Tokarczuk      2) Jokha Alharthi  
 3) Joanna Bator      4) Marion Poschmann  
 5) Annie Ernaux
23. The 'Pacific Vanguard' exercise was conducted recently between the navies of US and  
 1) Australia      2) South Korea      3) Japan  
 4) All the above      5) Only 1) and 2)
24. To be eligible for funding assistance from SIDBI, RBI-registered fintech NBFCs should have non-performing assets less than or equal to  
 1) 4 per cent      2) 5 per cent      3) 6 per cent  
 4) 7 per cent      5) 8 per cent
25. Which of the following private life insurers was conferred the FICCI Claims Excellence Award recently?  
 1) Bharti AXA      2) ICICI Prudential  
 3) HDFC Life      4) SBI Life  
 5) LIC of India
26. India's Mahesh Mangaonkar won the Sekisui Open in Kriens, Switzerland recently. He plays  
 1) tennis      2) badminton      3) squash  
 4) table tennis      5) snooker
27. Niki Lauda passed away recently. He was a former  
 1) cricketer      2) footballer  
 3) Formula One driver      4) chess player  
 5) cyclist
28. India has been ranked 117th out of 181 countries in the 2019 KidsRight Index. The index is topped by  
 1) Sweden      2) Norway      3) Switzerland  
 4) Portugal      5) Iceland
29. Sanjiv Puri has been appointed as the new chairman and managing director of which of the following firms?  
 1) HUL      2) ITC      3) L&T  
 4) Vodafone Idea      5) Bharti Airtel
30. Asian Development Bank (ADB) has signed an agreement to provide what amount as long-term financing to electrify railway tracks in India?  
 1) USD 350mn      2) USD 470mn      3) USD 540mn  
 4) USD 610mn      5) USD 750mn
31. Dr BD Mishra is the present governor of which of the following states? Bharatiya Janata Party (BJP) won the recent assembly elections there.  
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 3) Shivshankar Menon      4) Shyam Saran  
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34. Similipal National Park is a national park and a tiger reserve situated in the Mayurbhanj district in the Indian state of  
 1) Assam      2) Odisha      3) Jharkhand  
 4) West Bengal      5) Gujarat
35. Indian Overseas Bank (IOB) has launched 'Bank on Wheels' facility. The bank is headquartered in  
 1) Bengaluru      2) Kolkata      3) New Delhi  
 4) Chennai      5) Mumbai
36. As per the report by the Geological Survey of India (GSI), about 35% of India's total Graphite reserves are found in  
 1) Jharkhand      2) Madhya Pradesh  
 3) Maharashtra      4) Karnataka  
 5) Arunachal Pradesh
37. NewSpace India Limited (NSIL) is the new commercial arm of which of the following institutions?  
 1) HAL      2) BEL      3) IOC      4) ISRO      5) DRDO
38. Indian Space Research Organisation successfully launched its earth observation satellite from Sriharikota recently. The satellite is named  
 1) RISAT-1      2) EMISAT      3) AMSAT  
 4) RISAT-2B      5) None of these
39. Which firm has signed a defence contract worth ₹300cr with the Indian Navy to implement RFID (Radio Frequency Identification) based access control system?  
 1) Infosys      2) TCS      3) HCL  
 4) Tech Mahindra      5) Wipro
40. Who among the following has won the "Outstanding Performance of the Year" award at the CEAT Cricket Rating Awards 2019?  
 1) Rashid Khan      2) Yuzvendra Chahal  
 3) Jonny Bairstow      4) Kuldeep Yadav  
 5) Joe Root
41. A powerful earthquake measuring 8 on the Richter scale, rocked Peru recently. The capital of Peru is  
 1) Baku      2) Nassau      3) Lima  
 4) Yerevan      5) Bamako

## SBI Junior Associate (Main)-I

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37. NewSpace India Limited (NSIL) is the new commercial arm of which of the following institutions?  
 1) HAL      2) BEL      3) IOC      4) ISRO      5) DRDO
38. Indian Space Research Organisation successfully launched its earth observation satellite from Sriharikota recently. The satellite is named  
 1) RISAT-1      2) EMISAT      3) AMSAT  
 4) RISAT-2B      5) None of these
39. Which firm has signed a defence contract worth ₹300cr with the Indian Navy to implement RFID (Radio Frequency Identification) based access control system?  
 1) Infosys      2) TCS      3) HCL  
 4) Tech Mahindra      5) Wipro
40. Who among the following has won the "Outstanding Performance of the Year" award at the CEAT Cricket Rating Awards 2019?  
 1) Rashid Khan      2) Yuzvendra Chahal  
 3) Jonny Bairstow      4) Kuldeep Yadav  
 5) Joe Root
41. A powerful earthquake measuring 8 on the Richter scale, rocked Peru recently. The capital of Peru is  
 1) Baku      2) Nassau      3) Lima  
 4) Yerevan      5) Bamako

## SBI Junior Associate (Main)-I

42. India delivered the first pair of Mi-24 attack helicopters as replacement to the Air Force of which country recently?  
1) Afghanistan 2) Mauritius 3) Maldives  
4) Sri Lanka 5) Fiji
43. The World Health Organization (WHO) declared which African country free of deadly malaria recently?  
1) Algeria 2) Ghana 3) Jamaica  
4) Nigeria 5) South Africa
44. The Rohtang Pass, the gateway to Lahaul and Spiti valley, was re-opened recently. It is located in  
1) Jammu & Kashmir 2) Himachal Pradesh  
3) Arunachal Pradesh 4) Sikkim  
5) Uttarakhand
45. Cyril Ramaphosa was sworn in as the new President of which of the following African countries recently?  
1) Ghana 2) Kenya 3) Nigeria  
4) Jamaica 5) South Africa
46. The committee set up by the RBI on digital payments submitted its report recently. The committee was headed by  
1) Kris Gopalakrishnan 2) Sam Pitroda  
3) Nandan Nilekani 4) Oscar Fernandes  
5) Vishal Sikka
47. Shanghai Cooperation Organisation (SCO) was founded at a summit in Shanghai in  
1) 2001 2) 2003 3) 2005 4) 2007 5) 2011
48. The infrastructure investment fund board of which state has become the first sub-sovereign entity in India to issue Masala Bond?  
1) Karnataka 2) Kerala 3) Telangana  
4) Andhra Pradesh 5) Gujarat
49. India's economy will grow at what per cent by 2020 according to the Organisation for Economic Co-operation and Development (OECD)?  
1) 7.1 per cent 2) 7.2 per cent 3) 7.3 per cent  
4) 7.4 per cent 5) 7.5 per cent
50. Who among the following won the 2019 Monaco Grand Prix Formula One championship?  
1) Valtteri Bottas 2) Lewis Hamilton  
3) Sebastian Vettel 4) Fernando Alonso  
5) Kimi Raikkonen

## Test-II: General English

**Directions (Q. 51-55): Read the following passage and answer the questions as directed.**

The 'dismal science' of economics has been rendered infinitely more dismal by the news of the death of Alan B Krueger, who shaped labour and wage policy in the US and (A) informed public thinking on the subject around the world. It was a pioneering 1992 study by Krueger and his peer David Card that shattered the manufactured consensus among the economic orthodoxy that raising

the minimum wage would reduce employment. That study opened up the debate, (B) \_\_\_\_\_ set a higher benchmark for a living wage. Although it is Krueger's work on labour and wages that made the most material difference to policy-making, the Princeton Professor additionally ventured into other fields of economic endeavour that have enriched our understanding of the world. (C) For instance, in a 2003 paper that (1) advanced the "causal connection" between education, poverty and terrorism, Krueger (and fellow-researcher Jitka Malečková) (2) concluded that, contrary to conventional opinion, there was no direct connection between poverty and terrorism — and that countries with (3) explored economies as well as a high degree of civil liberties were more likely to be (4) targets of terrorism.

- And along with fellow-Princeton Professor Judd Cramer, Krueger accounted for cab-hailing service Uber's optimal capacity utilisation — as compared to taxi drivers. Additionally, in collaboration with psychologist-economist Daniel Kahneman and others, he addressed such existential questions as: 'Would you be happier if you were richer?' (Short answer: no; subjective well-being is shaped less by income and more by how we spend leisure time, and in fact, the search for higher incomes may cause us to misallocate time to lengthy commutes or to sacrifice leisure time.) And curiously, Krueger's exertions in the realm of 'rockonomics', the subject of an upcoming book, may even provide the economic (D) \_\_\_\_\_ for why superstars like Rajinikanth command a premium. That such a Beautiful Mind, given to understanding human well-being at many levels, should have been so cruelly shut down — by suicide — is, ironically, a tragic eventuality that defies any rationale.
51. Which of the following words can replace the word given in bold in (A) without changing the meaning of the sentence?  
1) effected 2) influenced 3) truncated  
4) brought out 5) transformed
52. Which of the following can be inferred from the passage?  
1) Raising the minimum wage reduces employment.  
2) Alan B Krueger's work shaped labour and wage policy in the US.  
3) Krueger suggested that there is a direct connection between poverty and terrorism.  
4) Both 1) and 2)  
5) All 1), 2) and 3)
53. Which of the following phrases should fill the blank given in (B) to make it grammatically and contextually correct and meaningful?  
1) it was the vision and foresight to  
2) a new era of liberalisation and rapid economic growth then enabled us  
3) led to India's declining role in global trade and economic affairs and

- 4) and influenced policy enough to  
 5) None of the above
54. The sentence given in (C) has four words given in bold. Amongst the given bold words, which of the following must replace each other to make the sentence contextually correct and meaningful?  
 1)2-4    2)2-3    3)1-4    4)3-4    5)1-3
55. Which of the following words given in the options should come at the place marked as 'D' in the above paragraph to make it grammatically and contextually meaningful and correct? Also, the word should fill the two sentences given below to make them contextually correct and meaningful.
- (i) The economic \_\_\_\_\_, in terms of economic efficiency, was agreed in terms of increasing competitiveness, rather than the change of ownership.  
 1) theory    2) development    3) rationale  
 4) transaction    5) achievements
- (ii) The \_\_\_\_\_ for this approach is important since we see it repeated in country after country.  
 1) theory    2) development    3) rationale  
 4) transaction    5) achievements

**Directions (Q. 56-60): Read the following passage and answer the questions as directed.**

New Zealand's Prime Minister Jacinda Ardern has become a world hero for (A) her shoulder to the Muslim community. If her black headscarf did not say it all, the expression of pain, compassion and kindness in her eyes did. Jacinda Ardern, New Zealand Prime Minister, was celebrated (I) young woman leader (she is an unmarried mother) who gave birth while she was PM, and even brought her baby to the UN. She has now caught the admiration of the world for the calm and compassionate, (II) heinous terror attacks in recent times, particularly in the tiny country considered among the safest in the world. Her leadership (III) following a horrendous attack during Friday prayers in two mosques in Christchurch where a racist, anti-immigrant, anti-Muslim white man from Australia gunned down 50 men and children who had assembled there. As he was shooting, he streamed a live video of the (B) massacre on social media. After the man's arrest, Ardern's measured response won hearts and minds across the world. She told reporters at Parliament as the horror of the tragedy unfolded: "We represent diversity, kindness, compassion.... a home for those who share our values ... refuge for those who need it." Her response to the mass murderer was: "You may have chosen us, but we utterly reject and condemn you."

This was signal enough from the leader to the people of New Zealand who reached out to the Muslim community in this tiny country of barely five million people. *Not only in Christchurch but also in other cities such as Auckland, people came out in support of both Muslims and immigrants and hashtags supporting the Muslim community started trending on twitter in no time. (C)*

*Expressing the "strongest possible condemnation of the ideology of the people who did this," in a widely circulating video, she added firmly: "We cannot and will not be shaken by this attack. We are a proud nation of more than 200 ethnicities, 160 languages and amongst that diversity we share common values, and the one on which we share currency right now, tonight, is our compassion and support for the community of those directly affected."* The next day she turned up at the Kilbirnie mosque in Wellington to lay flowers. (D) *And leading a delegation from various parties she specifically asked Muslim leaders what they expected from the leadership; she was told to visit the families of the victims and comfort them, and this is what she does.*

56. Which of the following words can come in the blank denoted by (A) the meaning of the sentence?  
 1) giving    2) providing    3) having  
 4) lending    5) sending
57. In the question below three phrases are given which must be filled in the positions given in (I), (II) and (III) in the passage. From the options given below, choose the correct order of the phrases that should be filled in the positions given.
- (A) skills were put to the ultimate test  
 (B) last year as a symbol of a progressive and unconventional  
 (C) but also firm manner in which she handled one of the most:  
 1)ABC    2)CAB    3)BCA  
 4)BAC    5)ACB
58. Which of the following words should be filled in the blank in (B) to make a contextually correct and meaningful sentence?  
 1) recent    2) gruesome    3) appealing  
 4) dangerous    5) emotional
59. Two sentences are given in italics on both sides of (C). Which of the following statements can come between the two sentences in place of (C) so as to maintain the continuity of the paragraph?
- 1) Even while she was hailed for her compassion and kindness across the world, particularly by Muslims, Ardern showed her tough side too.  
 2) How many leaders across the world show this kind of humility?  
 3) Hence all eyes were on her response to Trump when he called her after the attack.  
 4) No wonder that Ardern became an instant hit with not only her own people but also people from across the world, and hundreds of gushing tweets came rushing in.  
 5) Already her statement that she will review the country's gun laws has been met with criticism from the gun lobby.

## SBI Junior Associate (Main)-I

60. In the passage given, a sentence (D) is given in Italics. There may or may not be an error in one part of the sentence. Choose the part which has an error in it as your answer.
- 1) And leading a delegation from various parties she specifically
  - 2) asked Muslim leaders what they expected from the leadership;
  - 3) she was told to visit the families of the victims and comfort them,
  - 4) and this is what she does.
  - 5) No error

**Directions (Q. 61-65):** Read the following passage and answer the questions as directed.

The latest news doing the rounds is that banks have asked the Reserve Bank of India to defer the implementation of Ind AS (Indian Accounting Standards). The reason: the impact of Ind AS could be immense on their P&L account and balance sheet, which are already extremely weak. In its role as the regulator, the RBI might (A) to the request since we are already in the middle of March and there is no guidance yet from the central bank on critical concepts of Ind AS. It is (B) hoped that the RBI will announce that banks, along with insurance companies, should transition to Ind AS from financial year 2020-21. Whatever be the pressures, the RBI would do well not to defer the implementation of Ind AS for the banking sector. To a large extent, the delay in the implementation of Ind AS in banks can be attributed to the RBI. In 2014, a committee was appointed to study the impact of Ind AS on banks and a report was submitted in 2015. The committee (I) that Ind AS in general and the standard on financial instruments in particular would have on banks. The report (II) for unrealised gains/losses and fair value of the treasury investments of banks would hit banks the most. The report also stated that the much-discussed provision for non-performing assets (NPAs) would have a limited impact due to the prudential norms on asset classification and income recognition prescribed by the RBI.

The committee (III) that while the prudential norms should be the floor limit for provisioning, the Expected Credit Loss (ECL) model for Impairment that is mandated by Ind AS 109 could take care of any additional provisioning by the banks. All the other Ind ASs would have a minimal impact on the banking sector. (C) Despite having the committee (1) reference as a document for (2) report, the RBI decided to (3) tread slow on announcing a (4) transition date. In recent years, the RBI has had a lot of distractions in the form of Governor-level changes and differences of opinion with the government on dividend payouts. The net result: no time to focus on Ind AS.

There can be no two opinions on the fact that transitioning to Ind AS would impact income, profits, assets and liabilities of banks. Most banks would have

enough and more resources to handle Ind AS implementation. Truth be told, most banks have some experience in transitioning to Ind AS. A couple of years back, the RBI had asked banks also to do a dry run of Ind AS. Many have a bare-bones ECL model in place. (D) Even if there is a significant impact, it's better banks go ahead and brace for it since a mere deferment doesn't take away the problem or resolves it.

61. Which of the following words should be filled in the blank marked as (A) to make a contextually correct and meaningful sentence?
- 1) cede                  2) relinquish                  3) delegate
  - 4) ban                  5) accede
62. Which of the following words can replace the word given in bold in (B) without changing the meaning of the sentence?
- 1) calculated                  2) derived                  3) expected
  - 4) forecast                  5) accosted
63. In the question below three phrases are given which must be filled in the positions given in (I), (II) and (III) in the passage. From the options given below, choose the correct order of phrases that should be filled in the positions given.
- A. came out with a comprehensive report on the impact
  - B. also found a way out in that it recommended
  - C. made it amply clear that mark-to-market accounting
- 1)ABC                  2)CAB                  3)BCA                  4)BAC                  5)ACB
64. The sentence given in (C) has four words in bold. Amongst the given bold words, which of the following must replace each other to make the sentence contextually correct and meaningful?
- 1) I-2                  2) I-3                  3) I-4
  - 4) 3-4                  5) Both (1) and (2)
65. In the passage given, a sentence D is given in Italics. There may or may not be an error in one part of the sentence. Choose the part which has an error in it as your answer.
- 1) Even if there is a significant impact,
  - 2) it's better banks go ahead and brace for it
  - 3) since a mere deferment doesn't take away the problem
  - 4) or resolves it.
  - 5) No error
- Directions (Q. 66-70):** In each of the following questions a grammatically correct and meaningful sentence is given with four words in bold in each sentence. Which of the following words should replace each other to form a meaningful and grammatically correct sentence? The meaning can be different from the one in question.
66. The offer comes at a time when (A) demand for commercial space has been (B) soaring supply, resulting in (C) outpacing commercial (D) rental yields.
- 1) A-C                  2) A-D                  3) B-C
  - 4) A-B                  5) No Interchange Possible

### SBI Junior Associate (Main)-I

67. The (A) complicated property market and (B) fragmented land acquisition rules (C) make it necessary for Real Estate Investment Trusts (REITs) to take on (D) leverage and adopt a multi-layered holding structure.

- 1) B-C      2) A-D      3) B-D  
4) A-B      5) No Interchange Possible

68. Putting the company (A) through the insolvency process could lead to (B) most discounts and more delays as has been the case with (C) steep of the resolution cases (D) under the bankruptcy code.

- 1) C-D      2) A-D      3) B-D  
4) B-C      5) No Interchange Possible

69. Ever since Independence in 1947, India has carefully (A) crafted its policies, to avoid getting drawn into the (B) affect of regional conflicts and global rivalries, which (C) could adversely (D) vortex its national interests.

- 1) C-B      2) A-D      3) B-D  
4) A-B      5) No Interchange Possible

70. India has skilfully (A) conducted its diplomacy, (B) avoiding taking sides in sectarian and civilisational differences, while (C) advocating reconciliation between (D) contesting states.

- 1) C-B      2) A-D      3) B-D  
4) A-B      5) No Interchange Possible

**Directions (Q. 71-75):** In each of the following questions, a sentence has been given with some of its parts in bold. To make the sentence grammatically and idiomatically correct, you have to replace the bold part with the correct alternative given below. If the sentence is correct as it is, give 5) as your answer (ie No improvement).

71. The team got carried off when they won the championship and started shouting and throwing things around.

- 1) carried on      2) carried out      3) carried forward  
4) carried away      5) No improvement

72. It was on the front pages of all the papers for a few days, but the interest gradually died back.

- 1) died for      2) died off      3) died down  
4) died away      5) No improvement

73. The thieves made away with the painting.

- 1) made after      2) made it      3) made off  
4) made of      5) No improvement

74. They laid out a buffet lunch at the conference.

- 1) laid on      2) let in      3) let off  
4) lash out      5) No improvement

75. She found the course hard but she kept away it and completed it successfully.

- 1) kept back      2) kept around      3) kept at  
4) opted in      5) No improvement

**Directions (Q. 76-80):** In the questions given below a sentence is given with two blanks in each. Corresponding to each question two columns are given with three words in each column. Which combination of words from the two columns will perfectly fit into the blanks to make the sentence contextually correct and meaningful?

76. The NITI Aayog has now \_\_\_\_\_ up with a single measurable index for India and \_\_\_\_\_ out an inter-State (includes the Union Territories) comparison of the progress made.

Column I	Column II
A. given	D. took
B. come	E. made
C. let	F. worked
1) C-E	2) A-F      3) B-F
4) B-D	5) C-D

77. Even intrinsic values like freedom and democracy which have \_\_\_\_\_ instrumental significance do not \_\_\_\_\_ in the development goals and in the setting of targets.

Column I	Column II
A. little	D. participate
B. strange	E. figure
C. tremendous	F. count
1) C-D	2) A-F      3) B-F and A-E
4) B-D	5) C-E

78. In his famous book *Capital in the 21st Century*, Thomas Piketty has \_\_\_\_\_ evidence to show that \_\_\_\_\_ the rate of return on capital 'r' is higher than the growth rate (g), income inequality would widen.

Column I	Column II
A. adduced	D. where
B. revealed	E. since
C. proclaimed	F. for
1) A-D	2) A-F      3) B-F and A-E
4) B-D	5) C-D

79. It looks like banks in India can \_\_\_\_\_ be out of the news for an \_\_\_\_\_ period of time.

Column I	Column II
A. however	D. extended
B. never	E. certain
C. seldom	F. limited

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- 1) C-E      2) A-F      3) B-F and A-E  
 4) B-D      5) C-D
80. In recent years, the RBI has had a lot of \_\_\_\_\_ in the form of Governor-level changes and differences of opinion with the government on dividend

Column I	Column II	
A. troubles	D. payouts	
B. workloads	E. calculations	
C. distractions	F. distributions	
1) A-E      2) C-D      3) B-F and A-E 4) B-D      5) A-D		

**Directions (Q. 81-85):** In the following questions, a grammatically correct and meaningful sentence is given which is divided into five parts (A), (B), (C), (D) and (E). Part (E) is fixed and highlighted in BOLD. You have to arrange the other four parts to make a contextually and grammatically meaningful sentence (the meaning can be different from the one given in the question). If no such rearrangement is possible mark (5) as your answer, ie 'No rearrangement is possible'.

81. on an as-is-where-is basis to a 'strong investor' after a capital infusion, (A) / has since discarded this plan in favour of (B) / it is good to see that the Board, (C) / which originally mooted the idea of selling off IL&FS (D) / **piecemeal asset monetisation.** (E)  
 1) ACBDE      2) CADBE      3) DABCE  
 4) BACDE      5) No rearrangement is possible

82. are likely to seek another relaxation (A) / banks, through the Indian Banks' Association, (B) / from the Reserve Bank of India to defer (C) / the provisioning requirements for (D) / **their exposure to IL&FS.** (E)  
 1) ACBDE      2) CADBE      3) DABCE  
 4) BACDE      5) No rearrangement is possible

83. within the next four years, both industry players (A) / and the regulatory authorities have to scale up (B) / with India set to become (C) / the world's third biggest aviation market (D) / **their safety-related capabilities.** (E)  
 1) CDABE      2) CADBE      3) DABCE  
 4) BACDE      5) No rearrangement is possible

84. offer should pass muster (A) / that they will appeal to the NCLAT against the NCLT order (B) / the promoters of Essar Steel have stated (C) / on the grounds that their compelling (D) / **under Section 12A.** (E)  
 1) ACBDE      2) CADBE      3) DABCE  
 4) CBDAE      5) No rearrangement is possible

85. the world's second-largest civil aviation industry, (A) / some 20 per cent annually (B) / India is on its way to becoming (C) / having grown by (D) / **for the last four years.** (E)  
 1) ACBDE      2) DBECA      3) CADBE  
 4) BACD      5) No rearrangement is possible

**Directions (Q. 86-90):** In the questions given below

five words are given, in which four have a similar meaning and one word is the antonym of the other four words. Choose the word opposite in meaning of the other four as your answer.

- |                 |                  |               |
|-----------------|------------------|---------------|
| 86. 1) piteous  | 2) beseeching    | 3) cheerful   |
| 4) doleful      | 5) deplorable    |               |
| 87. 1) beckon   | 2) attract       | 3) entice     |
| 4) invite       | 5) repel         |               |
| 88. 1) emulate  | 2) neglect       | 3) imitate    |
| 4) mimic        | 5) mirror        |               |
| 89. 1) hold     | 2) cede          | 3) concede    |
| 4) give up      | 5) relinquish    |               |
| 90. 1) fidelity | 2) loyalty       | 3) allegiance |
| 4) attachment   | 5) faithlessness |               |

## Test-III: Reasoning Ability and Computer Aptitude

**Directions (Q. 91-95):** Study the following information carefully and answer the questions given below:

Seven friends P, Q, R, S, T, U and V are selling different numbers of chocolates on seven different days from Monday to Sunday. Each friend has a different number of chocolates, viz 17, 3, 19, 11, 29, 5 and 7, but not necessarily in the same order.

The one who sells 17 chocolates sells on Saturday. V sells 3 chocolates on Wednesday. Q sells chocolates immediately before the day on which T sells. Q does not sell chocolate on any of the days after V. The one who sells 7 chocolates sells neither on Friday nor before Friday. The one who sells 19 chocolates immediately after the day on which R sells. T does not sell 29 chocolates. The one who sells 5 chocolates sells neither immediately after nor immediately before the day on which V sells. U sells neither 19 chocolates nor on Sunday. S does not sell chocolate on any of the days before P.

- Which of the following statements is/are true?  
 1) P sells chocolate on Saturday.  
 2) T sells 5 chocolates.  
 3) S sells 3 chocolates.  
 4) U sells chocolate on Tuesday.  
 5) None is true
- How many chocolates does Q sell?  
 1) 7      2) 29      3) 17  
 4) 5      5) 11
- Four of the following five are alike in a certain way and hence form a group. Which of the following does not belong to that group?  
 1) R-Tuesday      2) P-Wednesday      3) S-Saturday  
 4) V-Monday      5) U-Thursday
- U sells chocolate on which day?  
 1) Monday      2) Saturday      3) Sunday  
 4) Wednesday      5) None of these

## SBI Junior Associate (Main)-I

95. How many chocolates does P sell?

- 1) 17    2) 3    3) 29    4) 19    5) None of these

**Directions (Q. 96-98):** Study the following information carefully and answer the questions given below:

A word and number arrangement machine when given an input line of words and numbers rearranges them following a particular rule in each step. The following is an illustration of an input and its rearrangement.

**Input:** protect 74 black 62 glorious 51 catch 35 14 arrow 85

**Step I:** 85 protect 74 black 62 glorious 51 catch 35 14 arrow

**Step II:** black 85 protect 62 glorious 51 catch 35 14 arrow 74

**Step III:** 62 black 85 protect glorious 51 35 14 arrow 74 catch

**Step IV:** glorious 62 black 85 protect 35 14 arrow 74 catch 51

**Step V:** 35 glorious 62 black 85 14 arrow 74 catch 51 protect

**Step VI:** 35 glorious 62 black 85 arrow 74 catch 51 protect 14

And step VI is the last step of the above input. As per the rules followed in the above steps, find out the appropriate steps for the given input.

**Input:** various 16 temporal 48 dockyard 75 floor 23 yard 41 notebook 53 high 32

96. How many elements are there between '16' and '32' in step IV?

- 1) None    2) Two    3) One  
4) Three    5) More than three

97. Which of the following numbers will be third to the right of the fifth from the left end in step VI?

- 1) yard    2) 75    3) dockyard  
4) 23    5) None of these

98. Which of the following outputs is the last step?

- 1) 32 notebook 48 floor 75 various 16 23 yard dockyard 53 high 41 temporal  
2) various 32 notebook 48 floor 75 16 yard dockyard 53 high 41 temporal 23  
3) 16 32 notebook 48 floor 75 dockyard 53 high 41 temporal 23 yard various  
4) 16 various 32 notebook 48 floor 75 dockyard 53 high 41 temporal 23 yard  
5) None of these

**Direction (Q. 99-100):** Study the following information and answer the following questions.

With an alarming decline in the groundwater level in parts of the city, several wells, handpumps and tube wells have stopped yielding water, causing immense hardship to the residents. People residing in Patna and adjoining areas are clamouring for potable water. It seems it has become a luxury item for the common people as they have to struggle to get water to perform their household chores.

(A) Government must provide water supply to the residents of the city at least two times a day.

(B) Several trees have been cut in the last five years for the construction of new houses in the city.

(C) Day by day population of the city is increasing and the government is not taking any strong action to curb it.

(D) Water level in the city has gone down by several feet in the last one decade in Patna and adjoining areas.

(E) Government must revamp all the dried ponds in the city and build reservoir to store water.

99. Which of the following among (A), (B), (C), (D) and (E) will be the best possible course of action to be taken by the government to tackle the water shortage in the city?

- 1) Only (B)    2) Only (C)    3) Only (A)  
4) Only (E)    5) Only (D)

100. Which of the following among (A), (B), (C), (D) and (E) will be a probable reason for the shortage of water in Patna and adjoining areas?

- 1) Only (A)    2) Only (D)    3) Only (C)  
4) Only (B)    5) Only (E)

**Directions (Q. 101-105):** Study the following information carefully and answer the questions given below:

Ten persons are sitting in two parallel rows containing five persons each in such a way that there is an equal distance between adjacent persons. In row-1 F, G, H, I and J are seated and all of them are facing north and in row-2 U, V, W, X and Y are seated and all of them are facing south, but not necessarily in the same order. Each of them likes a different fruits, viz Banana, Papaya, Grapes, Cherry, Orange, Apple, Coconut, Avocado, Guava and Kiwi, but not necessarily in the same order.

J sits exactly in the middle of the row and faces the one who likes Cherry. Only one person sits between J and the one who likes Orange. X faces one of the immediate neighbours of the one who likes Orange. Only one person sits between U and the one who likes Cherry. U is not an immediate neighbour of X. U faces one of the immediate neighbours of H. I is not an immediate neighbour of H. I faces neither X nor W. V is not an immediate neighbour of X. V faces the one who likes Papaya. I faces one of the immediate neighbours of the one who likes Apple. Only one person sits between the one who likes Apple and the one who likes Banana. The one who likes Guava and the one who likes Avocado face each other. Only two persons sit between the one who likes Avocado and the one who likes Coconut. F does not like Coconut. The one who likes Kiwi sits fourth to the left of the one who likes Guava.

101. Four of the following five are alike in a certain way and hence form a group. Which is the one that does not belong to that group?

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- 1) Y – Coconut    2) J – Guava    3) W – Papaya  
4) G – Kiwi    5) F – Banana
102. Who among the following likes Papaya?  
1) Y    2) V    3) W  
4) U    5) None of these
103. Who among the following sits third to the left of the one who likes Coconut?  
1) The one who likes Banana  
2) The one who likes Avocado  
3) The one who likes Orange  
4) Can't be determined  
5) None of these
104. How many persons sit between H and the one who faces the one who likes Apple?  
1) None    2) Two    3) Three  
4) One    5) None of these
105. Which of the following statements is not true?  
1) W likes Cherry.  
2) X faces one of the immediate neighbours of H.  
3) H and F are immediate neighbours.  
4) Both 1) and 3)  
5) None of these
- Directions (Q. 106-107):** In each question given below three statements are followed by three conclusions numbered I, II and III. You have to take the given statements to be true even if they seem to be at variance with the commonly known facts. Read the conclusions and decide which of them logically follows from the three given statements disregarding commonly known facts, and give answer.
106. **Statements:** Some buses are trains.  
No train is a car.  
All cars are bikes.
- Conclusions:** I. No bus is a car.  
II. Some bikes are buses.  
III. No car is a train.
- 1) Only I follows    2) Only I and II follow  
3) Only III follows    4) All follow  
5) None of these
107. **Statements:** No book is a copy.  
Some copies are papers.  
No paper is a board.
- Conclusions:** I. Some papers are not books.  
II. Some books are not boards.  
III. Some copies are not boards.
- 1) Only I and II follow    2) Only I and III follow  
3) Only II and III follow    4) Only II follows  
5) None of these

**Directions (Q. 108-110):** In each of the following questions, a question is followed by information given in three statements. You have to study the question along with the statements and decide the information given in which statement(s) is necessary and sufficient to answer the question.

108. How is E related to F?  
I. C is cousin of A and the only daughter of E.  
II. C is the only granddaughter of B, who has three children D, E and F.  
III. A is the only son of D, who is the only brother of his sisters.  
1) Only I and II    2) Only II and III  
3) All I, II and III    4) Data inadequate  
5) None of these
109. Among R, S, T, U and V who is the tallest?  
I. T is shorter than S but taller than V.  
II. R is shorter than S but taller than U.  
III. V is not the shortest.  
1) Only I and II    2) Only II and III  
3) Only I and III    4) Data inadequate  
5) None of these
110. T, R, M, H and N are sitting around a circular table facing the centre. Who sits on the immediate right of M?  
I. Only T sits between R and N.  
II. T sits on the immediate right of R.  
III. R sits on the immediate right of H.  
1) Only II    2) All I, II and III  
3) Only II and III    4) Only I and III  
5) None of these

**Directions (Q. 111-115):** Study the following information carefully and answer the questions given below:

Seven persons A, B, C, D, E, F and G go to play match on seven different days of the week starting from Monday and ending on Sunday. Each of them likes different sports, viz Cricket, Football, Kabaddi, Tennis, Volleyball, Badminton and Hockey but not necessarily in the same order. Each of them belongs to different states, viz Bihar, Jharkhand, Odisha, Punjab, Haryana, Rajasthan and Manipur but not necessarily in the same order.

B belongs to Rajasthan, goes to play match on the fourth day of the week and he likes neither Cricket nor Hockey. Only two persons go to play match between the days on which B and F play and neither of them goes to play match on the first day of the week. Only one person goes to play match between the days on which A and C play. C goes to play match neither on the first nor on the third day of the week. C belongs to Jharkhand and he likes Cricket. The one who belongs to Odisha, goes to play match on the last day of the week and likes Kabaddi. D goes to play match neither immediately before nor immediately after the day on which A goes to play. A belongs neither to Punjab nor to Haryana. G belongs to Bihar but goes to play match immediately after C. E likes Badminton but does not belong to Haryana. A likes neither Tennis nor Volleyball. The one who likes Football goes to play match immediately after the day on which the one who likes Cricket plays. D likes either Hockey or Volleyball.

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111. Who among the following likes Hockey?

- 1) The one who goes to play match on the fourth day of the week
- 2) The one who goes to play match immediately before E
- 3) The one who belongs to Manipur
- 4) The one who belongs to Jharkhand
- 5) None of these

112. Which of the following combinations is correct?

- 1) B – Tennis – Jharkhand
- 2) A – Hockey – Manipur
- 3) G – Football – Rajasthan
- 4) E – Football – Punjab
- 5) None of these

113. Four of the following five are alike in a certain way and hence form a group. Which is the one that does not belong to that group?

- 1) G – Jharkhand
- 2) C – Odisha
- 3) A – Haryana
- 4) B – Punjab
- 5) E – Rajasthan

114. If 'B' is related to 'Jharkhand' and 'G' is related to 'Odisha' in a certain way, which of the following is related to Rajasthan?

- 1) E
- 2) C
- 3) F
- 4) A
- 5) None of these

115. Who among the following belongs to Punjab?

- 1) A
- 2) E
- 3) D
- 4) F
- 5) None of these

**Directions (Q. 116-119):** Study the following information carefully and answer the questions given below:

There are seven members P, Q, R, S, T, U and V in a family. Each of them is related to the other.

P is older than Q but younger than T. The third oldest person in the family is 34 years old. Q is sister of P. R is father of P. The third youngest person of the family is 31 years old. V is the oldest person of the family. Q is niece of U. R is 32 years old. U is husband of T. V and S are a married couple. R's mother is 67 years old. R is younger than U. The oldest person of the family is a male member.

116. If the sum of age of Q and S is 83 years then find the age of Q.

- 1) 16 years
- 2) 22 years
- 3) 11 years
- 4) 27 years
- 5) None of these

117. How many persons are older than P?

- 1) None
- 2) Four
- 3) Five
- 4) Two
- 5) One

118. What is the possible age of the oldest person of the family?

- 1) 65 years
- 2) 70 years
- 3) 60 years
- 4) 56 years
- 5) 62 years

119. How is P related to V?

- 1) Grandson
- 2) Granddaughter
- 3) Son
- 4) Can't be determined
- 5) None of these

**Directions (Q. 120-124):** Study the following information carefully and answer the questions given below:

These questions are based on code languages which utilise letters in English alphabetical order. In each question, there is a word written in capital letters, with one letter underlined. For each letter in that word there is a code written. That code is denoted by 1, 2, 3, 4 and 5 but not necessarily in the same order. You have to find out the exact code for the underlined letter in the word. The number of that code is the answer. Please note that the same letter appearing together in word(s) may be coded differently.

120. FRESH

- |      |      |      |      |      |
|------|------|------|------|------|
| 1) I | 2) H | 3) V | 4) U | 5) S |
|------|------|------|------|------|

121. FLIGHT

- |      |      |      |      |      |
|------|------|------|------|------|
| 1) W | 2) L | 3) I | 4) O | 5) J |
|------|------|------|------|------|

122. FOSTER

- |      |      |      |      |      |
|------|------|------|------|------|
| 1) Q | 2) C | 3) M | 4) D | 5) R |
|------|------|------|------|------|

123. SECOND

- |      |      |      |      |      |
|------|------|------|------|------|
| 1) D | 2) N | 3) C | 4) T | 5) O |
|------|------|------|------|------|

124. TRUMP

- |      |      |      |      |      |
|------|------|------|------|------|
| 1) U | 2) Q | 3) U | 4) X | 5) T |
|------|------|------|------|------|

**Directions (Q. 125-127):** Study the following information and answer the following questions.

Woes continue to persist for the automobile industry with sales continuing to slip in April and piling inventory weighing on dealers' margins. Vehicle registrations fell 8% year on year last month, according to data collected from 1,171 out of 1,442 regional transport offices across the country and compiled by Federation of Automobile Dealers Associations (FADA), an industry body. The worst hit were commercial vehicles with 16% year-on-year dip in registration numbers to 63,360 units in April. Registrations of passenger vehicles and two-wheelers were down 2% and 9% to 2.42 lakh units and 12.85 lakh units, respectively. Three-wheeler registrations fell 13% at 47,183 units. As per historical data, during election years consumers tend to defer purchases until after general elections, which is likely the case this year too.

- (A) After the general election people hope of a change in the taxes on purchase of new vehicles.
- (B) Profit margin of two-wheeler and four-wheeler companies may dip in the first quarter of the new financial year.

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- (C) Several people are using public transport in the country with better connectivity and hassle-free service.
- (D) Purchasing of two-wheelers or four-wheelers is quite easy but their maintenance requires lots of costs.
- (E) Production of new vehicles will be stopped by the two-and four-wheeler companies in the country.
125. Which of the following among (A), (B), (C), (D) and (E) has been assumed in the given information? (An assumption is something that is supposed or taken for granted.)
- 1) Only (B)
  - 2) Only (C)
  - 3) Only (D)
  - 4) Only (E)
  - 5) Only (A)
126. Which of the following among (A), (B), (C), (D) and (E) will be an effect of the decrease in the sale of two-and four-wheelers in the country?
- 1) Only (D)
  - 2) Only (B)
  - 3) Only (C)
  - 4) Only (A)
  - 5) Only (E)
127. Which of the following among (A), (B), (C), (D) and (E) will be a probable reason for the decrease in the sale of two-and four-wheelers in the country?
- 1) Only (C)
  - 2) Only (D)
  - 3) Only (E)
  - 4) Only (A)
  - 5) Only (B)

**Directions (Q. 128-132):** Study the following information carefully and answer the questions given below:

Eight circular plates P, Q, R, S, T, U, V and W are placed from top to bottom but not necessarily in the same order. Each plate is of a different colour viz Red, Black, Blue, White, Orange, Pink, Yellow and Green but not necessarily in the same order. Each plate is made of different materials – Steel, Silver, Plastic and Wood. At least two plates are made of the same material. Consider the top as the 1st position and below it as 2nd and so on and the bottom as the 8th position.

Plate R is kept somewhere between V and W but W is placed below R. The two plates made of Wood are placed vertically adjacent to each other and one of the plates made of Wood is placed immediately below a plate of Silver. Only one plate is there between Q and S and S is made of Silver and both are in the top 4 positions when plates are arranged from top to bottom. The White plate is kept immediately below a Plastic plate and is made of the same material as S. The Blue plate is kept exactly between U and the Pink plate. Plate W is not Red. Only one plate is there between T and V, and V is kept immediately below the White plate. U is the Orange plate and made of Plastic and among top five. The Black plate is made of Plastic. R is neither Red nor Green. The Green plate is placed at even-numbered position but is not placed at the bottom. The Steel plate which is kept at the top is either Red or Yellow. Plate T is not made of wood.

128. Which of the following plates is made of Plastic?
- 1) U
  - 2) W
  - 3) T
  - 4) Both 1) and 2)
  - 5) R
129. Which of the following plates is placed at the bottom?
- 1) The Yellow plate
  - 2) A plate made of Plastic
  - 3) The Pink plate
  - 4) A plate are made of wood
  - 5) None of these
130. Which of the following plates is Black?
- 1) P
  - 2) Q
  - 3) S
  - 4) W
  - 5) R
131. Which of the following statements is true?
- 1) Q is a White plate and is made of Plastic.
  - 2) V is placed at the 5th position and is made of Wood.
  - 3) T is a Pink plate but is not made of Steel.
  - 4) W is placed at the bottom and is made of Steel.
  - 5) None is true.
132. Which of the following plates is placed immediately above Plate R?
- 1) P
  - 2) Q
  - 3) V
  - 4) W
  - 5) No such place
- Directions (Q. 133-136):** In the following questions, the symbols #, \*, \$, @ and © are used with the following meaning as illustrated below:
- 'A # B' means 'A is smaller than B'
  - 'A \* B' means 'A is not smaller than B'
  - 'A \$ B' means 'A is neither smaller than nor equal to B'
  - 'A @ B' means 'A is not greater than B'
  - 'A © B' means 'A is neither smaller than nor greater than B'
- Give answer
- 1) if only Conclusion I is true
  - 2) if only Conclusion II is true
  - 3) if either Conclusion I or II is true
  - 4) if neither Conclusion I nor II is true
  - 5) if both Conclusion I and II are true
133. Statement: A # B @ C © D \* E  
 Conclusions: I. D \$ A      II. C \* E
134. Statements: L @ M, N # O, O \$ P, M © N  
 Conclusions: I. P \$ N      II. N \* L
135. Statements: P # Q, R © S, Q \$ R, S # T  
 Conclusions: I. Q \$ S      II. P # T
136. Statements: U \* V, V © W, W \* X, X # Y  
 Conclusions: I. W © Y      II. Y \$ V
137. Statement: Debit cards continued to be the most preferred payment instrument for shoppers on ecommerce websites, according to a report by payment

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technology and transaction processing company Financial Software and Systems (FSS). There were 589 million debit card transactions reported on the FSS gateway compared with 201.4 million credit card transactions last year, according to the FSS Payments Trend Report 2018. In terms of value, credit cards were ahead at more than \$10 billion compared with slightly less than \$8 billion for debit cards.

*Which of the following among (A), (B), (C), (D) and (E) can be inferred from the above given information? (An inference is something that is not directly stated but can be inferred from the given information.)*

- 1) Most of the people are using debit card for shopping on the e-commerce website.
- 2) People purchasing on the e-commerce website have enough money to pay instantly.
- 3) Paying with the credit card on the e-commerce website has become riskier nowadays.
- 4) Credit card companies are charging extra if customer fails to make the payment timely after the purchasing.
- 5) People use credit for the purchasing of high-value items on the e-commerce website.

**Directions (Q. 138-140):** Study the following information carefully and answer the questions given below:

© — Either the hour or minute hand of clock on 10  
 % — Either the hour or minute hand of clock on 8.  
 \* — Either the hour or minute hand of clock on 6.  
 \$ — Either the hour or minute hand of clock on 4.  
 @ — Either the hour or minute hand of clock on 5.  
 # — Either the hour or minute hand of clock on 2.

**Note:** All the times are in PM. The first symbol represents hours and the second symbol represents minutes

For example: #\\$—4 : 10 pm

138. Ajay needs to catch a train scheduled to depart at '©#'. He will take 1 hour to reach the station from his home. At what time should he leave the home to arrive at the station at least 20 minutes before the scheduled departure?

- 1) \*@ 2) %\* 3) %© 4) %@ 5) None of these

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139. Suman started cycling to the playground at \*\$ and reached at \*©. If the distance between his home and play ground is 6km, at what speed did he reach the playground?

- 1) 13 km/hr 2) 18 km/hr 3) 9 km/hr
- 4) 12 km/hr 5) None of these

140. A flight departs at ©\* from the airport. The travel time from Kunal's home to airport is 2 hours and 10 minutes. If he missed the flight by 10 minutes at what time did he leave his home?

- 1) 5 : 15 pm 2) 8 : 10 pm 3) 6 : 20 pm
- 4) 5 : 20 am 5) None of these

## Test-IV: Quantitative Aptitude

141. Ghaseeta Singh is a wealthy man who gifts 2505 gold coins to his three children, namely Sonu, Titu and Sweety, in a certain ratio. Sonu sells 30 out of the total he received to buy a horse. Titu donates his 30 to an old-age home and Sweety, being a bit careless, loses 25. Now, the ratio of left with Sonu, Titu and Sweety is gold coins 46 : 41 : 34. How many gold coins did Titu receive from his father?

- 1) 889 2) 920 3) 850 4) 410 5) 1024

**Directions (Q. 142-147):** In each of the following questions, two quantities I and II are given. Compare both the quantities in terms of value and choose the correct option and give answer accordingly.

142. **Quantity I:** Alloys S and T are mixed in quantities of 60 kg and 100 kg respectively. If S comprises lead and tin in the ratio 3 : 2 and alloy T has tin and copper in the ratio 1 : 4, then what will be the amount of tin in the new alloy?

**Quantity II:** 105 men are set to work on a contract and complete it in 50 days, working 8 hours per day. 25

days later, it was found that only  $\frac{2}{5}$  of the work is finished. How many additional men must be employed so that the work may be completed on time, each man now working 9 hours a day?

- 1) Quantity I > Quantity II
- 2) Quantity I < Quantity II
- 3) Quantity I = Quantity II or No relation can be established
- 4) Quantity I  $\leq$  Quantity II
- 5) Quantity I  $\geq$  Quantity II

143. **Quantity I:** Sabu and Babu can do a piece of work in 15 days and 25 days respectively, working alone separately. They started the work together but Babu left after some time and Sabu finished the remaining work in 7 days. After how many days did Babu leave?

**Quantity II:** The least number of complete years in which a certain sum of money invested at 20% per

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- annum compound interest will become twice of itself
- 1) Quantity I  $\geq$  Quantity II
  - 2) Quantity I  $<$  Quantity II
  - 3) Quantity I = Quantity II or No relation can be established
  - 4) Quantity I  $\leq$  Quantity II
  - 5) Quantity I  $>$  Quantity II

144. Dheeraj and Neeraj can complete a given work together in  $28\frac{2}{3}$  days. It is known to us that Dheeraj is twice as efficient as Neeraj.

**Quantity I:** Time taken by Samira and Neeraj to complete the same piece of work together if it is given that Dheeraj is thrice as efficient as Samira

**Quantity II:** Time taken by Neeraj alone to complete the work

- 1) Quantity I  $\geq$  Quantity II
- 2) Quantity I  $\leq$  Quantity II
- 3) Quantity I = Quantity II or No relation can be established
- 4) Quantity I  $<$  Quantity II
- 5) Quantity I  $>$  Quantity II

145. One of the roots of the quadratic equation

$$15x^2 + (23-d)x - 8 = 0 \text{ is } \frac{1}{3}$$

**Quantity I:** Value of d.

**Quantity II:** 4

- 1) Quantity I  $\geq$  Quantity II
- 2) Quantity I  $\leq$  Quantity II
- 3) Quantity I = Quantity II or No relation can be established
- 4) Quantity I  $<$  Quantity II
- 5) Quantity I  $>$  Quantity II

146. **Quantity I:** The side of a small square is 10 cm. If these squares are to be accommodated in a bigger square of side 4 m, then how many of the smaller squares can be accommodated?

**Quantity II:** The volume of a right circular cylinder is  $103488 \text{ cm}^3$ . What would be its curved surface area (in  $\text{cm}^2$ ) if it is given that the ratio of height to diameter of the cylinder is 3 : 4?

- 1) Quantity I  $<$  Quantity II
- 2) Quantity I  $\geq$  Quantity II
- 3) Quantity I = Quantity II or No relation can be established
- 4) Quantity I  $\leq$  Quantity II
- 5) Quantity I  $>$  Quantity II

147. Two unbiased dices are rolled simultaneously.

**Quantity I:** The probability that the product of the numbers that appeared on the dice is a multiple of 8

$$\text{Quantity II: } \pm \frac{7}{36}$$

- 1) Quantity I  $<$  Quantity II
- 2) Quantity I  $\leq$  Quantity II
- 3) Quantity I = Quantity II or No relation can be established
- 4) Quantity I  $\geq$  Quantity II
- 5) Quantity I  $>$  Quantity II

**Directions (Q. 148-153):** The information regarding a banking examination conducted in 2018 and 2019 is given below. Study the given information and answer the questions that follow:

The table given below shows information regarding different subjects in banking examination in 2018

Sections	Subjects	Marks per question	Total number of questions	Ratio of questions in different sections
1 to 3	Reasoning Ability	2	60	5 : 2 : 3
4 to 5	Quantitative Aptitude	4	50	7 : 3
6	English Language & Comprehension	3	45	-
7 to 9	General Awareness	2	80	7 : 10 : 3

In the same examination in the year 2019, the board makes a few changes in the exam pattern. 10 questions are added in the second section of Quantitative Aptitude. One more section of 20 questions is added in English Language & Comprehension. In General Awareness section, the third section is removed and 10 questions are added in the remaining two sections each. Everything else is kept unchanged in the examination in 2019.

148. What is the total maximum marks in Reasoning Ability in the year 2018?

- 1) 60
- 2) 120
- 3) 150
- 4) 100
- 5) 180

149. What is the difference between the total maximum marks in 2018 and the total maximum marks in 2019?

- 1) 96
- 2) 635
- 3) 731
- 4) 120
- 5) 116

150. What is the per cent increase/decrease in the marks of General Awareness section in the year 2019 from the year 2018?

- 1) 10% increase
- 2) 12.5% decrease
- 3) 10% decrease
- 4) 15% increase
- 5) Remains the same

151. Under the new pattern in the year 2019, which topic carries the second maximum marks in the examination?

- 1) Quantitative Aptitude
- 2) Reasoning Ability
- 3) General Awareness
- 4) English Language & comprehension
- 5) Reasoning Ability and Quantitative Aptitude

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152. Which of the following sections has the lowest average number of questions per section under the new pattern in 2019?

- 1) 8 to 9      2) 4 to 5      3) 1 to 3  
4) 6 to 7      5) Can't be determined

153. Samrat took the examination in the year 2018. The ratio of right answers to wrong answers attempted by him per subject is given in the table below:

Subjects	Ratio of answers (Right : Wrong)
Reasoning Ability	3 : 2
Quantitative Aptitude	9 : 1
English Language & Comprehension	2 : 1
General Awareness	5 : 3

What would be the marks obtained by Samrat in the examination if it is given that attempting all questions is necessary in the examination and there is deduction

of  $\frac{1}{3}$  rd of the marks assigned for a certain question in the examination?

- 1) 454.33      2) 384.33      3) 356.66  
4) 325      5) None of the above

154. Ashish and Balwinder can complete a work assigned to them in 8 days. If Ashish can alone finish the work in 15 days and it is given that Chinmay is 50% more efficient than Ashish, then in how many days twice of the work will be completed if all three of them started working together?

- 1)  $8\frac{8}{9}$  days      2)  $7\frac{2}{9}$  days      3)  $8\frac{1}{9}$  days  
4)  $6\frac{2}{9}$  days      5)  $5\frac{4}{9}$  days

155. Newton marked an article at ₹2200. He gives two discounts of n% and m% on the article. If Newton sold the article at ₹1881 and it is given that m is twice of n, then what is the value of n?

- 1) 6      2) 5      3) 7  
4) 4      5) Cannot be determined

**Directions (Q. 156-161):** What should come in place of question mark (?) in the following questions? (You do not have to calculate the exact value.)

156.  $11\frac{3}{4} \times 171.9009 + (\sqrt{1295.88} + 4.12) = ?$   
1) 1092      2) 2021      3) 2030  
4) 1350      5) 2420

157.  $(4694.98 - 2091.02 - 1920.12) \text{ of } 34.995 + (?) = 32999.95 + 499.92$

- 1) 8760      2) 8160      3) 9560      4) 9060      5) 8260

158.  $\frac{680.001 \times \sqrt[3]{6859.10}}{17.21} = (?) - (15.0009)^4$

- 1) 52835      2) 51385  
3) 49438      4) None of the given options  
5) 64352

159.  $2543.925 \div 424.054 \times \sqrt{143} + 4521.021 \div 2.89 = ?$

- 1) 1579      2) 1550  
3) None of the given options      4) 1679  
5) 2079

160.  $\sqrt{1520.998} + 25.829 \times 17.9921 = ? - 517.16$   
1) 464      2) 455      3) 544      4) 545      5) 454

161.  $(2398.894 + 451.021 - 325.045) \div \sqrt{626} \times (14.95)^2 = ?$   
1) 24875      2) 22725      3) 23775  
4) 32725      5) None of the given options

162. Two friends, Vedika and Zil, are N metres apart from each other. It is given that they are approaching each other and the initial speeds of Vedika and Zil are 2 m/s and 5 m/s respectively. If Vedika's speed increases by 2 m/s every second, then find the value of N, if they both meet each other after an interval of 14 seconds.

- 1) 225      2) 320      3) 380  
4) 240      5) 280

163. Shatrughan owns a grocery store. He had a sale of ₹325, ₹295.5, ₹368.2 and ₹494.3 respectively on the first four days of the week starting Monday. In the entire week, he had an average sale of ₹309.6. If it is given that his sale on Friday, which is also equal to his sale on Sunday, is half the sale on Saturday, then what is the difference between his sale on Tuesday and that on Saturday?

- 1) ₹47.20      2) ₹45.54      3) ₹64.28  
4) ₹46.60      5) None of these

164. There are three pipes – A, B and C – which are used to fill a tank. Each of the three pipes can be used either as an inlet pipe or as an outlet pipe. Each of the pipes A, B and C can individually fill/empty the tank in 12 hours, 18 hours and 20 hours respectively. On a given day, one pipe becomes outlet pipe and the remaining pipes become inlet and this continues alternately. If on first day pipe A becomes outlet pipe, next day pipe B and pipe C the following day, then in how many days will the tank be filled?

- 1)  $10\frac{2}{7}$  days      2)  $14\frac{2}{7}$  days      3)  $12\frac{3}{7}$  days  
4)  $16\frac{3}{7}$  days      5)  $17\frac{1}{7}$  days

165. Ram Bahadur has ₹1665 with him. He invests his money in two schemes the first offering 20% simple interest per annum and the second offering 15% simple interest per annum. If at the end of three years, simple interest earned by both the schemes are equal, then

## SBI Junior Associate (Main)-I

how much sum did Ram Bahadur invest in the first scheme?

- 1) ₹714      2) ₹728      3) ₹615  
 4) ₹952      5) None of the given options
166. Roshan sold a book and found that in the whole process, he made a loss of 10%. He also found that if he had sold it for ₹78 more, he would have made 10% profit. The initial loss would be what per cent of the profit earned by Roshan if he had sold the book for 12% profit?
- 1) 88.66      2) 72.65      3) 83.33  
 4) 66.33      5) Cannot be determined

**Directions (Q. 167-171):** Read the given information carefully and answer the questions given below:

There are five students who appeared in an examination of four different subjects (ie History, English, Hindi and Political Science). The maximum marks in each subject is 100. Nobita scored 92 marks in English. The ratio of marks scored by him in History to that in Hindi is 5 : 6. He scored 6 marks more in Political Science as compared to Hattori in the same subject.

Hattori scored 45 marks in English. The ratio of marks scored by him in Hindi to that in History is 8 : 7. Marks scored by Shinchan in Hindi and English are equal. He scored full marks in History, and in Political Science, he scored 10 marks more than English. Kiteretsu scored full marks in Political Science and the ratio of marks scored by him in History to that in English is 10 : 9. He scored 10 marks less in Hindi as compared to Doraemon in the same subject.

Doraemon scored equal marks in Hindi and Political Science. He scored 50 and 60 marks in History and English respectively. It is given that the percentage of marks scored by Hattori, Nobita, Shin Chan, Doraemon and Kiteretsu in all the subjects are 65, 82, 80, 75 and 70 respectively. Marks scored by Hattori in Political science is 65.

167. If the marks scored by Nobita and Shin Chan in Hindi are increased by 10% each, then the marks scored by Nobita, Hattori and Shinchan in Hindi is what per cent of the marks scored by Doraemon in Hindi and Political science?

- 1) None of the given options      2) 121.26  
 3) 143.48      4) 134.73  
 5) 156.54

168. What is the average marks scored by all the students in English?

- 1) 62.4      2) 71.8      3) 64.2  
 4) 65.6      5) None of the given options

169. What is the ratio of marks scored by Kiteretsu, Doraemon and Shinchan in Hindi and English to the marks scored by Hattori, Nobita and Doraemon in History and Political Science?

- 1) 426 : 425      2) 430 : 419      3) 425 : 426  
 4) 425 : 417      5) None of the given options.

170. What is the difference between the percentage marks scored by Nobita in History, Hindi and Political science and the percentage marks scored by Doraemon in the same subjects?

- 1) 2.89      2) 3.68      3) 2.34      4) 1.46      5) 1.34

171. How many of the given students scored more than 80% marks in History and English together?

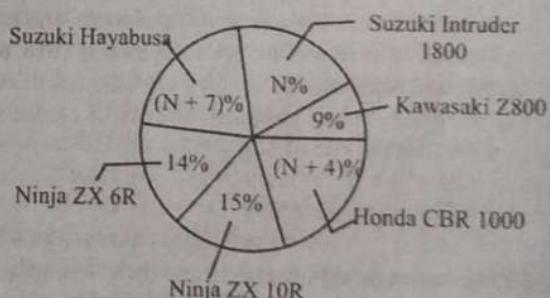
- 1) None      2) Four      3) One  
 4) Two      5) All of them

172. Two vessels P and Q contain mixture of HCl and  $\text{H}_2\text{SO}_4$  in the ratio of 7 : 2 and 3 : 4 respectively. If mixtures from both the vessels are mixed together in a certain ratio and the final mixture obtained contains ratio of HCl to the total mixture as 23 : 39, then find the ratio of the quantity of mixture of vessel P to the quantity of mixture of vessel Q in the final mixture.

- 1) 5 : 7      2) 7 : 9      3) 6 : 7      4) 4 : 7      5) 7 : 6

**Directions (Q. 173-177):** Study the following information carefully and answer the questions given below.

Gifty Singh is a bike dealer of second-hand superbikes. He has six models of second-hand superbikes with him. The pie-chart given below shows the percentage distribution of the cost price of different models of superbikes with respect to the total cost price of all the superbikes together.



It is known to us that Gifty marks Ninja ZX10R at ₹864000, which is 20% above its cost price.

173. Gifty sold Hayabusa after giving discount of 20% on marked price and still earned ₹48000 on the cost price. What was the marked price of Hayabusa?

- 1) ₹1125000      2) ₹1250000      3) ₹1200000  
 4) ₹1500000      5) None of the given options

174. What is the ratio of the cost price of Ninja ZX6R to that of Ninja ZX10R?

- 1) 15 : 14      2) 11 : 14      3) 13 : 15      4) 14 : 15      5) 19 : 11

175. Gifty sold Kawasaki Z800 and Honda CBR1000 to Navjot at a profit of 15% and 12% respectively. Navjot marked both the bikes 20% above the cost at which he purchased it, and gave a discount of 10% on both the bikes and sold it to Hansraj Mehta. What will be the total amount spent by Hansraj Mehta?

- 1) ₹1656559.2      2) ₹1755820.8      3) ₹1126589.4  
 4) ₹1755000      5) None of these

176. What is the difference between the average cost price of Intruder 1800, Ninja ZX10R and Ninja ZX6R together and that of Honda CBR 1000 and Suzuki Hayabusa together?

- 1) ₹868400      2) ₹645450      3) ₹34400  
4) ₹386400      5) None of the given options

177. The cost price of how many bikes is less than the average cost price of all the bikes together?

- 1) Two      2) Four      3) Three  
4) One      5) Five

**Directions (Q. 178-182):** The table given below shows the number of students who joined (at the beginning of the year) and left (at the end of the year) in four schools P, Q, R and S in three years (2016, 2017 and 2018). Read the data carefully and answer the questions. (Some data are missing.)

	School P		School Q		School R		School S	
	Joined	Left	Joined	Left	Joined	Left	Joined	Left
2016	150	—	96	13	85	38	110	50
2017	73	29	172	—	165	—	123	—
2018	112	—	244	—	132	29	81	6

178. In year 2015, total students who joined Q is 66, which is 10% of the total students studying in Q that year and the total students who left Q in year 2015 and 2017 are 20 and 32 respectively. If students who left P in year 2016 are 6 and this school started in 2016, then total number of students in school P at the end of 2017 is what per cent of the total number of students in school Q at the end of 2017?

- 1) 22.22      2) 15.39      3) 19.87  
4) 20.23      5) 25.23

179. The ratio of the total number of students who left R and S in the year 2017 is 5 : 4 and the total number of students studying in R and S at the end of 2015 are 445 and 340 respectively. If the total students studying at the end of 2018 in R is 685, then find the total number of students studying in S at the end of 2017.

- 1) 538      2) 550      3) 578      4) 436      5) 963

180. The total number of students studying in school Q at the end of 2014 is 186 and, in 2015, 53 students left the school, while 82 new students joined the school. If the ratio of students who left the school Q in year 2017 to those in 2018 is 2 : 5 and total students studying in Q at the end of 2018 is 595, then find the total number of students who left Q in 2017 and 2018 together.

- 1) 154      2) 119      3) 85      4) 123      5) 34

181. Each school started in 2016 and the ratio of the total students who left P in 2017 to that of the total students who left R and S together in 2017 is 1 : 5. If the total no. of students who left P in 2016 and that who left R and S together in 2017 is 208 and total no. of students who

left R in 2017 is 66% of the no. of students who left S in the same year, then find the difference between total no. of students studying in S at the end of 2018 and the total no. of students studying in P at the end of 2017.

- 1) 29      2) 45      3) 40      4) 131      5) 56

182. The average of the total no. of students who left school P in the given three years is 41 and ratio of the no. of students who left in 2016 to that of those who left in 2018 is 23 : 24. If school P started in 2016, then find that the total number of students studying in P at the end of 2017 is approximately what per cent more or less than the total no. of students who joined school Q in the year 2017.

- 1) 14      2) 16      3) 12      4) 9      5) 21

183. What is the marks scored by Dhawan in Reasoning?

- (I) The marks scored by Dhawan in Maths, Reasoning and English is 217.  
(II) The marks scored by Dhawan in English is more than his marks in Maths by 12.  
(III) The marks scored by Dhawan in Maths is more than his marks in Reasoning by 20.

The abovementioned question can be answered using which of the above statements?

- 1) Only I      2) Only II  
3) All I, II and III together      4) Only I and II  
5) None of these

184. The sum of a set of 9 consecutive odd integers is 261. What will be the sum of a set of 8 even consecutive integers whose lowest number is 31 more than the mean of the set of consecutive odd integers mentioned?

- 1) None of the given options      2) 430  
3) 554      4) 536  
5) 612

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185. Raghu and Ram are two milkmen. Raghu has a container of 8 litres capacity which contains milk and water in the ratio of 80 : 99. Ram has a 16-litre container which contains water and milk in the ratio of 25 : 23. Raghu takes M litres of mixture out of his container and transfers it to the container of Ram. Now, Ram reciprocates this action. If it is given that the ratio of milk and water now becomes the same in containers of both Raghu and Ram, then what will be the value of M?

- 1) 6      2)  $5\frac{1}{3}$       3) 8      4)  $3\frac{2}{3}$       5) 7

186. Two friends Animesh and Shikhar have of equal quantities two solutions of wine and water with them. In both the solutions, concentration of wine is 30%. Animesh and Shikhar changed the concentration of mixture to 40% and 50% respectively. Animesh did so by adding extra wine in the solution, while Shikhar changed the concentration by replacing a certain quantity of the solution with wine. By what per cent is the quantity replaced by Shikhar more than that of the quantity of wine added by Animesh?

- 1)  $71\frac{3}{7}$       2)  $66\frac{2}{7}$       3) 140  
4) 83      5) 178

187. If 8 years is subtracted from the present age of Nirav, then 40% of that difference is exactly equal to the present age of his only daughter. 5 years ago, his daughter's age was 3 years more than her brother's age at that time. The sum of Nirav's son's present age and Nirav's wife's present age is 6 years more than Nirav's present age. If the average age of the family of four persons is 26.5 years, then what is the present age of Nirav?

- 1) 36 years      2) 43 years      3) 41 years  
4) 34 years      5) 48 years

188. Rashika, Kritika and Tulika started a business together by investing ₹56000, ₹26000 and ₹M respectively in the business. After four months, Rashika invested an

additional amount, which is half of the amount invested by Tulika initially, in her existing invested amount. Tulika left the business after investing for initial 6 months, whereas Rashika and Kritika invested for the entire year. If Kritika earned a profit of ₹741 out of a total annual profit of ₹3382, then what is the value of M?

- 1) ₹42000      2) ₹44000      3) ₹58000  
4) ₹22000      5) ₹39000

**Directions (Q. 189-190):** Mridul, a cricketer, plays for the Indian cricket team. The information given below is regarding the runs scored by him against three teams in three years, i.e. 2016, 2017 and 2018. It is given that he has played only against the given three nations i.e. South Africa, England and Australia. Study the information carefully and answer the questions that follow:

Total runs scored by Mridul in the year 2018 and 2016 are in the ratio of 669 : 550. In 2017, Mridul scored 20 more runs against England as compared to runs scored against Australia in the same year. The average of runs scored by Mridul against South Africa in all three years given is 410, which is equal to runs scored by him against the same team in 2017. Runs scored by Mridul in 2017 is 30 more than runs scored by him in 2016. In 2016, runs scored by him against Australia and England are in the ratio of 11 : 15. He scored 320 runs against South Africa in 2016. He scored the same runs against Australia and South Africa in 2018. The difference between the total runs scored by Mridul in 2016 and 2018 is 238.

189. What is the ratio of runs scored by Mridul against Australia and South Africa in 2016 to that scored against England in 2018?

- 1) 13 : 10      2) 10 : 13      3) 12 : 7  
4) 9 : 4      5) None of these

190. What is the percentage of the total runs scored by Mridul in three years is against South Africa with respect to the total runs score again all the three teams in all the three years?

- 1) 41.50      2) 29.98      3) 36.89  
4) 34.47      5) 38.38

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**Answers**

1. 4    2. 5    3. 5    4. 3    5. 2  
 6. 1    7. 4    8. 3    9. 4    10. 4  
 11. 5    12. 4    13. 1    14. 2    15. 1  
 16. 2    17. 4    18. 3    19. 5    20. 4  
 21. 1    22. 2    23. 4    24. 1    25. 1  
 26. 3    27. 3    28. 5    29. 2    30. 5  
 31. 5    32. 5    33. 4    34. 2    35. 4  
 36. 5    37. 4    38. 4    39. 4    40. 4  
 41. 3    42. 1    43. 1    44. 2    45. 5  
 46. 3    47. 1    48. 2    49. 5    50. 2  
 51. 2    52. 2    53. 4    54. 5    55. 3  
 56. 4    57. 3    58. 2    59. 1  
 60. 4; Replace 'does' with 'did'.  
 61. 5    62. 3    63. 5    64. 1  
 65. 4; Replace 'resolves' with 'resolve'.  
 66. 3    67. 4    68. 4    69. 3    70. 5  
 71. 4    72. 3    73. 5    74. 5    75. 3  
 76. 3    77. 5    78. 1    79. 4    80. 2  
 81. 2    82. 4    83. 1    84. 4    85. 3  
 86. 3    87. 5    88. 2    89. 1    90. 5  
 (91-95):

Days	Persons	Chocolates
Monday	Q	5
Tuesday	T	11
Wednesday	V	3
Thursday	R	29
Friday	P	19
Saturday	U	17
Sunday	S	7

91. 5    92. 4    93. 3    94. 2    95. 4  
 (96-98):

In the given machine arrangement a number and a word are arranged in each step. The numbers are arranged in descending order and words in alphabetical order. In the first step the second highest number is placed at extreme right end per English alphabetical order. In second step the second highest number is placed at extreme right and the second word in alphabetical order at extreme left end. This process continues alternately till all the elements get arranged.

Input: various 16 temporal 48 dockyard 75 floor 23 yard 41 notebook 53 high 32  
 Step I: 75 various 16 temporal 48 floor 23 yard 41 notebook 53 high 32 dockyard  
 Step II: floor 75 various 16 temporal 48 23 yard 41 notebook high 32 dockyard 53  
 Step III: 48 floor 75 various 16 temporal 23 yard 41 notebook 32 dockyard 53 high  
 Step IV: notebook 48 floor 75 various 16 temporal 23 yard 32 dockyard 53 high 41  
 Step V: 32 notebook 48 floor 75 various 16 23 yard dockyard 53 high 41 temporal  
 Step VI: various 32 notebook 48 floor 75 16 yard dockyard 53 high 41 temporal 23  
 Step VII: 16 various 32 notebook 48 floor 75 dockyard 53 high 41 temporal 23 yard  
 96, 4

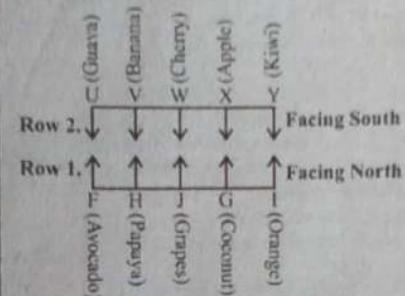
97. 1; Third to the right of fifth from the left =  $(3 + 5 =) 8^{\text{th}}$  from the left end in step VI, ie 'yard'

98, 4

99. 3; The government must come with action plan to improve the shortage of water in the city. So 3) is a valid answer.

100. 4; The rise of population in the city has led to an increase in construction of new houses. For this people have cut down several trees due to which water level has gone down. So 4) is a valid answer.

(101-105):



101. 2

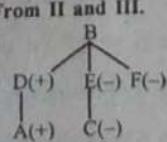
102. 5; H

103. 2    104. 4    105. 2

106. 3; Some buses are trains (I) + No train is a car (E) = I + E = O = Some buses are not cars. Hence conclusion I does not follow. Again, Some buses are not cars (O) + All cars are bikes (A) = O + A = No conclusion. Hence conclusion II does not follow. Again, No train is a car (E) → conversion → E = No car is a train (E). Hence conclusion III follows.

107. 2; No book is a copy (E) + Some copies are papers (I) = E + I = O\* = Some papers are not books. Hence conclusion I follows. Again, No paper is a board (E) → conversion → No board is a paper (E) + Some papers are not books (O) = E + O = No conclusion. Hence conclusion II does not follow. Now, Some copies are papers (I) + No paper is a board (E) = I + E = O = Some copies are not boards. Hence conclusion III follows.

108. 2; From II and III.



Thus, E is sister of F.

109. 1; From I. S > T > V

From II. S > R > U

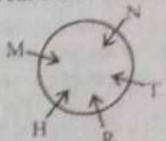
(i)

From I and II.

(ii)

Hence, S is the tallest.

110. 4; From I and III.



Thus, H sits on the immediate right of M.

(111-115):

Days	Person	State	Sports
Monday	D	Haryana	Volleyball
Tuesday	E	Punjab	Badminton
Wednesday	A	Manipur	Hockey
Thursday	B	Rajasthan	Tennis
Friday	C	Jharkhand	Cricket
Saturday	G	Bihar	Football
Sunday	F	Odisha	Kabaddi

111. 3    112. 2    113. 1    114. 4    115. 2

(116-119):

Family tree

S(-) ↔ V(+)

R(+) — U(+) ↔ T(-)

Q(-) — P

Decreasing order of their ages

V > S > U > R > T > P > Q  
 ↓      ↓      ↓      ↓      ↓  
 67    34    32    31

116. 1; Q's age = 83 - 67 = 16

117. 3    118. 2

119. 4

120. 2; Each letter has been coded as reverse letter of that letter.

121. 5; Each letter has been coded as three places forward according to its position in English alphabetical order.

122. 1; Each letter has been coded as two places backward according to its position in English alphabetical order.

123. 4; Each letter has been coded as one place forward and one place backward alternately.

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124. 2; Each letter has been coded as one, two, three, four and five places forward respectively according to its position in English alphabet.

125. 5; A lot of people wait for tax rebate in new budget after the formation of new government, so 5) is a valid answer.

126. 2; The fall in the sale of vehicles may decrease the profit margin of two-and four-wheeler companies. So, 2) is a valid answer.

127. 4; Note the election aspect mentioned in the passage.

(128-132):

Position	Plate	Material	Colour
1	P	Steel	Red
2	S	Silver	Green
3	U	Plastic	Orange
4	Q	Silver	White
5	V	Wood	Blue
6	R	Wood	Yellow
7	T	Steel	Pink
8	W	Plastic	Black

128. 4 129. 2 130. 4 131. 2 132. 3  
(133-136):

# → <, \* → ≥, \$ → >, @ → ≤ and © → =

133. 5; Given statements:

$$A < B \leq C = D \geq E \quad \dots (i)$$

Check for conclusion I.

$$D \$ A \rightarrow D > A$$

From (i), A < D or D > A is true.

Check for conclusion II.

$$C * E \rightarrow C \geq E$$

From (i), C ≥ E is true.

134. 2; Given statements:

$$L @ M \rightarrow L \leq M \quad \dots (i)$$

$$N # O \rightarrow N < O \quad \dots (ii)$$

$$O \$ P \rightarrow O > P \quad \dots (iii)$$

$$M © N \rightarrow M = N \quad \dots (iv)$$

Combining (i), (ii), (iii) and (iv), we get  
L ≤ M = N < O > P  $\quad \dots (v)$

Check for conclusion I.

$$P \$ N \rightarrow P > N$$

From (v), we can't compare P and N. Hence, I (P > N) is not true.

Check for conclusion II.

$$N * L \rightarrow N \geq L$$

From (v), L ≤ N or N ≥ L is true.

135. 1; Given statements:

$$P \# Q \rightarrow P < Q \quad \dots (i)$$

$$R © S \rightarrow R = S \quad \dots (ii)$$

$$Q \$ R \rightarrow Q > R \quad \dots (iii)$$

$$S \# T \rightarrow S < T \quad \dots (iv)$$

Combining (i), (ii), (iii) and (iv), we get  
P < Q > R = S < T  $\quad \dots (v)$

Check for conclusion I.

$$Q \$ S \rightarrow Q > S$$

From (v), Q > S is true.

Check for conclusion II.

$$P \# T \rightarrow P < T$$

From (v), we can't compare P and T. Thus, (P < T) is not true.

136. 4; Given statements:

$$U * V \rightarrow U \geq V \quad \dots (i)$$

$$V © W \rightarrow V = W \quad \dots (ii)$$

$$W * X \rightarrow W \geq X \quad \dots (iii)$$

$$X \# Y \rightarrow X < Y \quad \dots (iv)$$

Combining (i), (ii), (iii) and (iv), we get  
U ≥ V = W ≥ X < Y  $\quad \dots (v)$

Check for conclusion I.

$$W © Y \rightarrow W = Y$$

From (v), we can't compare W and Y.

Thus, W = Y is not true.

Check for conclusion II.

$$Y \$ V \rightarrow Y > V$$

From (v), we can't compare Y and V.

Thus, conclusion II (Y > V) is not true.

137. 5; This can be inferred mathematically.

Credit Card transactions are fewer in number but higher in value.

138. 3; ©# → 10:10 pm

So, Ajay leaves the home at (10 : 10 - 1 : 20) = 8 : 50 pm → %©

139. 4; Started at \*\$ → 6 : 20 pm

Reached at \*#© → 6 : 50 pm

∴ Time taken to reach the playground = 30

$$\text{minutes} = \frac{1}{2} \text{ hour}$$

∴ Speed =  $6 \times 2 = 12 \text{ kmph}$

140. 5; Flight departs at ©\* → 10 : 30 pm

So, he leaves home at (10 : 30 + 0 : 10 - 2 : 10) = 8 : 30 pm

141. 3; According to the question,

$$(46 + 41 + 34) = 121$$

$$= 2505 - (30 + 30 + 25)$$

$$\text{So, } 41 = \frac{2420}{121} \times 41 = 20 \times 41 = 820$$

∴ Titu received 820 + 30 = 850

142. 1; Quantity I. In 60 kg of alloy S,

$$\text{quantity of tin} = \frac{60}{3+2} \times 2 = 24 \text{ kg}$$

In 100 kg of alloy T,

$$\text{quantity of tin} = \frac{100}{1+4} \times 1 = 20 \text{ kg}$$

Thus, in the final mixture, quantity of tin =  $20 + 24 = 44 \text{ kg}$

Quantity II. Let N additional men be employed.

According to the given information,

only  $\frac{2}{5}$  of the work is completed in 25 days.

$$\therefore \text{Remaining work} = 1 - \frac{2}{5} = \frac{3}{5}$$

Now,  $M_1 D_1 H_1 W_1 = M_2 D_2 H_2 W_2$

$$\Rightarrow 25 \times 8 \times \frac{3}{5} \times 105$$

$$= 25 \times 9 \times \frac{2}{5} \times (105 + N)$$

$$\Rightarrow N = 35$$

Hence, Quantity I > Quantity II

143. 5; Quantity I. Suppose Babu left the work after t days.

Then,  $\frac{t}{25} + \frac{t+7}{15} = 1$

$$\Rightarrow \frac{6t+10t+70}{150} = 1$$

$$\Rightarrow 16t = 150 - 70 = 80$$

$$\Rightarrow t = 5$$

Another Method:

LCM of 15 and 25 = 150 units (Total work)

Sabu can do  $\left(\frac{150}{15}\right) = 10$  units per day.

Babu can do  $\left(\frac{150}{25}\right) = 6$  units/day

Now, in 7 days Sabu can do  $10 \times 7 = 70$  units

∴ Remaining work =  $150 - 70 = 80$  units

∴ 80 units work is completed by Sabu and

$$\text{Babu in } \left(\frac{80}{10+6}\right) = 5 \text{ days}$$

Hence Babu left the work after 5 day

Quantity II. Let P = principal, t = time period.

$$\text{Then, } P \left(1 + \frac{20}{100}\right)^t = 2P$$

$$\Rightarrow \left(\frac{6}{5}\right)^t = 2$$

$$\Rightarrow (1.2)^t = 2$$

By trial and error method, we get to know that  $(1.2)^4 = 2.0736$ . Hence, the least natural value of t = 4 years

Hence Quantity I > Quantity II

144. 4; Quantity II. Let Dheeraj take D days to complete the work alone. Then, Neeraj will take 2D days. As per the given information.

$$\frac{1}{D} + \frac{1}{2D} = \frac{3}{86}$$

$$\Rightarrow \frac{2+1}{2D} = \frac{3}{86}$$

$$\Rightarrow \frac{1}{2D} = \frac{1}{86}$$

∴ D = 43 days

∴ Neeraj completes the work in 86 days

Quantity I. Dheeraj is thrice as efficient as Samira. Neeraj can do the work in 86 days. Samira takes 129 days to complete the work

$$\therefore \text{Reqd time} = \frac{86 \times 129}{86+129} = \frac{86 \times 129}{215} = \frac{258}{5} = 51.6 \text{ days}$$

Hence Quantity I < Quantity II

Another Method:

Neeraj      Dheeraj      Samira

$$\begin{array}{ccc} \text{Efficiency} & N & 2N \\ & 3 & 3 \end{array}$$

$$\begin{array}{ccc} \text{Ratio of efficiency} & 3N & : 6N : 2N \\ & 3 & : 6 & : 2 \end{array}$$

Now,

$$3 + 6 = 9 \text{ Efficiency} = \frac{86}{3} \text{ days}$$

Quantity I

$$S + N = 5 \text{ Efficiency} = \frac{86}{3} \times \frac{9}{5} = 51.6 \text{ days}$$

Quantity II

$$3 \text{ Efficiency} = \frac{86}{3} \times \frac{9}{3} = 86 \text{ days}$$

Note: We do not need to solve this question. Clearly, Neeraj + Samira will take less time than Neeraj alone  $\Rightarrow Q_1 < Q_{II}$

145. 3; Quantity I. It is given that one root of the equation  $15x^2 + (23 - d)x - 8 = 0$  is  $\frac{1}{3}$

$$\text{Now, } 15\left(\frac{1}{3}\right)^2 + (23 - d)\left(\frac{1}{3}\right) - 8 = 0$$

$$\frac{15 + 23 - d}{9} - 8 = 0$$

$$\Rightarrow \frac{23 - d}{3} = 8 - \frac{5}{3} = \frac{24 - 5}{3} = \frac{19}{3}$$

$$\Rightarrow 23 - d = 19$$

$$\Rightarrow d = 4$$

Quantity II. 4

Hence Quantity I = Quantity II

146. 1; Quantity I.

Reqd no. of smaller squares

$$= \frac{4 \times 4 \times 100 \times 100}{10 \times 10} = 1600$$

Quantity II. Let height of right circular cylinder =  $3x$  and diameter of right circular cylinder =  $4x$

Then, radius of right circular cylinder =  $2x$

It is given that

$$\pi(2x)^2(3x) = 103488$$

$$\Rightarrow \frac{22}{7} \times 4x^2 \times 3x = 103488$$

$$\Rightarrow x^3 = \frac{103488}{12} \times \frac{7}{22}$$

$$\Rightarrow x^3 = 2744$$

$$\therefore x = 14$$

$\therefore$  Radius =  $14 \times 2 = 28$  cm and height

$$= 3 \times 14 = 42$$
 cm

Now, curved surface area =  $2\pi rh$

$$= 2 \times \frac{22}{7} \times 28 \times 42 = 22 \times 8 \times 42 = 7392 \text{ cm}^2$$

Hence Quantity I < Quantity II

147. 3; Quantity I. Maximum possible product is 36 (ie  $6 \times 6$ ).

So, possible multiples of 8 less than 36 are 8, 16, 24, 32.

Thus, possible outcomes for

(i)  $8 = (2, 4) (4, 2)$

(ii)  $16 = (4, 4)$

(iii)  $24 = (6, 4) (4, 6)$

(iv)  $32 = \text{None}$

$$\therefore \text{Reqd probability} = \frac{5}{36}$$

Quantity II.  $\pm \frac{7}{36}$

Hence no relationship can be established.

(148-153):

As per the given information about 2019, the following table can be made:

In Quantitative Aptitude total no. of questions =  $50 + 10 = 60$

In English Language and Comprehension

$$= 45 + 20 = 65$$

Now, ratio of section 6 to 7

$$\therefore 45 : 20 = 9 : 4$$

In GA, ratio of section 8 to 9  
 $= 28 + 10 : 40 + 10 = 38 : 50 = 19 : 25$

Section	Subject	Marks per question	Total questions	Ratio of questions in different section
1 to 3	Reasoning Ability	2	60	5 : 2 : 3
4 to 5	Quantitative Aptitude	4	60	7 : 5
6 to 7	English Language and Comprehension	3	65	9 : 4
8 to 9	General Awareness	2	88	19 : 25

148. 2; In 2018, maximum marks in section

$$1 (\text{Reasoning}) = \frac{60}{10} \times 5 \times 2 = 60$$

Maximum marks in section 2 (Reasoning)

$$= \frac{60}{10} \times 2 \times 2 = 24$$

Maximum marks in section 3 (Reasoning)

$$= \frac{60}{10} \times 3 \times 2 = 36$$

$\therefore$  Total maximum marks =  $60 + 24 + 36 = 120$

Note: Each question carries 2 marks in Reasoning Ability.

$\therefore$  Maximum marks in Reasoning Ability =  $60 \times 2 = 120$

149. 5; In 2018, maximum marks in Reasoning Ability =  $60 \times 2 = 120$

Maximum marks in Quantitative Aptitude =  $50 \times 4 = 200$

Maximum marks in section 6 (English) =  $45 \times 3 = 135$

Maximum marks in GA =  $80 \times 2 = 160$

Total maximum marks in 2018 examination =  $120 + 200 + 135 + 160 = 615$

In 2019,

Maximum marks in Reasoning = 120

Maximum marks in Quantitative Aptitude = 4(QA)

$$60 \times 4 = 240$$

Maximum marks in English =  $65 \times 3 = 195$

Maximum marks in GA =  $88 \times 2 = 176$

Thus, the total maximum marks in 2019 examination =  $120 + 240 + 195 + 176 = 731$

So, reqd difference =  $731 - 615 = 116$

Logical Approach:

Reqd difference = Total no. of questions added is multiplied by marks per question.

$$= (60 - 50) \times 4 + (65 - 45) \times 3 + (88 - 80) \times 2 = 10 \times 4 + 20 \times 3 + 8 \times 2 = 40 + 60 + 16 = 116$$

150. 1; Maximum marks in GA section 2018

$$= 80 \times 2 = 160$$

Maximum marks in GA section in 2019

$$= 88 \times 2 = 176$$

Increase in marks =  $176 - 160 = 16$

Thus, reqd % increase

$$= \frac{16}{160} \times 100 = \frac{16}{160} \times 100 = 10\%$$

151. 4; Maximum marks in Reasoning section in 2019 =  $60 \times 20 = 120$

Maximum marks in QA section in 2019 =  $140 + 100 = 240$

Maximum marks in English section in 2019 =  $65 \times 3 = 195$

Maximum marks in GA section in 2019 =  $88 \times 2 = 176$

Hence the second highest marks is in English section.

152. 3; From the above table

153. 2; In Reasoning Ability correct answers =  $\frac{60}{2+3} \times 3 = 36$

$$\text{Marks} = 36 \times 2 = 72$$

$$\text{Incorrect answers} = \frac{60}{2+3} \times 2 = 24$$

$$\text{Marks deducted} = 24 \times \frac{2}{3} = 16$$

$\therefore$  Total marks in Reasoning ability =  $72 - 16 = 56$

In Quantitative Aptitude

$$\text{correct answers} = \frac{50}{9+1} \times 9 = 45$$

$$\text{Marks} = 45 \times 4 = 180$$

$$\text{Incorrect answers} = \frac{50}{9+1} \times 1 = 5$$

$$\text{Marks deducted} = 5 \times \frac{4}{3} = 6.66$$

$$\text{Thus, the total score in QA} = 180 - 6.66 = 173.33$$

$$\text{In English correct answers} = \frac{45}{2+1} \times 2 = 30$$

$$\text{Marks} = 30 \times 3 = 90$$

$$\text{Incorrect answers} = \frac{45}{2+1} \times 1 = 15$$

$$\text{Marks deducted} = 15 \times \frac{3}{3} = 15$$

$$\text{Thus, total score in English} = 90 - 15 = 75$$

In General Awareness correct answers

$$= \frac{80}{5+3} \times 5 = 50$$

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Marks =  $50 \times 2 = 100$

Incorrect answers =  $\frac{80}{5+3} \times 3 = 30$

Marks deducted =  $30 \times \frac{2}{3} = 20$

Thus, total score in GA =  $100 - 20 = 80$   
Hence score of Samrat =  $56 + 173.33 + 75 + 80 = 384.33$

154. 1; Ashish can alone do the work in 15 days and Chinmay is 50% more efficient than Ashish.

Thus, Chimmay can do work in  $\frac{15}{150} \times 100 = 10$  days

Now, B can alone do the work =  $\frac{15 \times 8}{15 - 8} = \frac{120}{7}$

If T days are required by them in completing the same piece of work together then

$$\frac{1}{T} = \frac{1}{15} + \frac{1}{10} + \frac{7}{120} = \frac{8+12+7}{120} = \frac{27}{120}$$

$$\Rightarrow T = \frac{120}{27}$$

So, twice the work will be completed in

$$\frac{120}{27} \times 2 = \frac{240}{27} \text{ days} = 8\frac{8}{9} \text{ days}$$

155. 2; It is given to us that  $m = 2n$ . According to the given information,

$$2200 \left( \frac{100-n}{100} \right) \left( \frac{100-2n}{100} \right) = 1881$$

$$\Rightarrow (100-n)(100-2n) = 8550 \\ \Rightarrow 10000 - 100n - 200n + 2n^2 = 8550 \\ \Rightarrow n^2 - 150n + 725 = 0 \\ \Rightarrow n^2 - 5n - 145n + 725 = 0 \\ \Rightarrow n(n-5) - 145(n-5) = 0 \\ \Rightarrow n = 145, 5$$

Here we consider 5% as the discount value of n because discount can't be more than 100%. So, 145 is omitted.

156. 3;

$$? = 11\frac{3}{4} \times 171.9009 + (\sqrt{1295.88} + 4.12)$$

$$\approx \frac{47}{4} \times 172 + (\sqrt{1296} + 4) \approx 47 \times 43 + \left( \frac{36}{4} \right)$$

$$\approx 2021 + 9 = 2030$$

$$157. 3; (4694.98 - 2091.02 - 1920.12) \text{ of } 34.995 + ? = 32999.95 + 499.92$$

$$\Rightarrow (4695 - 2091 - 1920) \text{ of } 35 + ?$$

$$= 33000 + 500$$

$$\Rightarrow 684 \times 35 + ? = 33500$$

$$\therefore ? = 33500 - 23940 = 9560$$

$$158. 2; \frac{680.001 \times \sqrt[3]{6859.10}}{17.21}$$

$$= (?) - (15.0009)^4$$

$$\text{or, } \frac{680 \times \sqrt[3]{6859}}{17} \approx ? - (15)^4$$

$$\text{or, } \frac{680 \times 19}{17} \approx ? - 50625$$

$$\therefore ? \approx 760 + 50625 = 51385$$

$$159. 1; ? = 2543.925 + 424.054 \times \sqrt{143} + 4521.021 + 2.89$$

$$\approx 2544 + 424 \times \sqrt{144} + 4521 + 3$$

$$= 6 \times 12 + 1507$$

$$= 72 + 1507$$

$$\therefore ? \approx 1579$$

160. 3;

$$\sqrt{1520.998} + 25.829 \times 17.9921 = ? - 517.16$$

$$\text{or, } \frac{39}{26} \times 18 \approx ? - 517$$

$$\text{or, } 27 \approx ? - 517$$

$$\text{or, } ? \approx 544$$

161. 2;

$$? = (2398.894 + 451.021 - 325.045) + \sqrt{626} \times (14.95)^2$$

$$\approx (2399 + 451 - 325) + \sqrt{625} \times (15)^2$$

$$= \frac{2525}{25} \times 225 = 22725$$

162. 5; Relative speed of Vedika and Zil =  $2 + 5 = 7 \text{ m/s}$

Relative speed of Vedika and Zil next second =  $2 + 2 + 5 = 9 \text{ m/s}$

Thus, relative speed of Zil and Vedika each second forms a sequence 7, 9, 11, 13, 15, 17, ...

This forms an AP with  $a = 7$ ,  $d = 2$  and  $n = 14$

$$\text{Now, } S_n = \frac{n}{2} (2a + (n-1)d)$$

$$\text{So, } N = \frac{14}{2} [2(7) + (14-1)2] = 280 \text{ metres}$$

163. 4; As per the given information;  
Let N be the sale on Friday = sale on Sunday  
 $\Rightarrow 2N$  will be the sale on Saturday.

Sale from Monday to Thursday =  $325 + 295.5 + 368.2 + 494.3 = 1483$

Total sale in the week =  $309.6 \times 7 = 2167.2$

Sale from Friday to Sunday =  $2167.2 - 1483 = ₹684.2$

Now,  $N + 2N + N = 684.2$

$$\Rightarrow N = \frac{684.2}{4} = 171.05$$

Sale on Tuesday = 295.5

Sale on Saturday =  $171.05 \times 2 = 342.1$

$\therefore$  Reqd difference =  $₹(342.1 - 295.5) = ₹46.6$

164. 4; Pipe A, B and C can fill/empty the tank in 12, 18 and 20 hours respectively.  
Let total capacity of the tank = 180 units  
(LCM of 12, 18 and 20)

Pipe A can fill/empty  $\left( \frac{180}{12} = \right)$  15 units per hour

Pipe B can fill/empty  $\left( \frac{180}{18} = \right)$  10 units per hour

Pipe C can fill/empty  $\left( \frac{180}{20} = \right)$  9 units per hour

Total work done on Day 1

$$= -15 + 10 + 9 = +4 \text{ units}$$

Total work done on Day 2 =  $15 - 10 + 9$

$$= +14 \text{ units}$$

Total work done on Day 3 =  $15 + 10 - 9$

$$= +16 \text{ units}$$

In 3 days,  $(4 + 14 + 16 =) 34$  units work is done.

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In  $3 \times 5 = 15$  days,  $(34 \times 5) = 170$  units work is done.

On 16th day, Pipe A works as outlet.

$\therefore$  In 16 days,  $170 + 4 = 174$  units work is done.

Remaining work  $= (180 - 174) = 6$  units

On 17th day, B works as outlet pipe

$$\Rightarrow \text{Time taken on that day} = \frac{6}{\frac{1}{14}} = \frac{3}{7} \text{ day}$$

$$\therefore \text{Total time taken} = 16 \frac{3}{7} \text{ days}$$

165. 1; Let Ram Bahadur invest ₹N in first scheme.

Then, as per the given information,

$$\frac{N \times 20 \times 3}{100} = \frac{(1666 - N) \times 15 \times 3}{100}$$

$$\Rightarrow 4N = 3(1666 - N)$$

$$\Rightarrow 7N = 4998$$

$$\Rightarrow N = 714$$

**Logical Approach:**

Interest earned in both the schemes in the same time period is the same. But rate of interest is different. So, lesser amount will be invested at higher rate of interest and *vice versa*.

As ratio of rate of interest in first scheme to second is  $20 : 15 = 4 : 3$

$\Rightarrow$  Ratio of investment  $= 3 : 4$  in the two schemes.

$$\therefore \text{Investment in first scheme} = \frac{1666}{7} \times 3$$

$$= 238 \times 3 = ₹714$$

CP	SP
100	90
110	

$$\text{Now, } (110 - 90) = 20 = 78$$

$$\therefore 100 = \frac{78}{20} \times 100 = ₹390$$

$$\therefore \text{Initial loss} = \frac{10}{100} \times 390 = ₹39$$

$$\therefore \text{Reqd \%} = \frac{39}{\frac{12}{100} \times 390} \times 100$$

$$= \frac{39 \times 100 \times 10}{46.8} = 83.33\%$$

Note: 10% loss initially and if he had sold for ₹78 more he would have made 10% profit. It means 20% of CP  $= 78$

$$\therefore CP = \frac{78}{20} \times 100 = ₹390$$

**Quicker method:**

Loss = 10% of CP

Profit = 12% of CP

$$\therefore \text{Required \%} = \frac{10\% \text{ of CP}}{12\% \text{ of CP}} \times 100$$

$$= \frac{10}{12} \times 100 = 83.33\%$$

(167-171):

The given information can be tabularised as follows:

	Hattori	Nobita	Shin Chan	Doraemon	Kiteretsu
History	7y	5x	100	50	10z
Hindi	8y	6x	p	t	t - 10
English	45	92	p	60	9z
Political Science	65	$65+6 = 71$	$p + 10$	t	100

Where  $8y$  and  $7y$  = Marks scored by Hattori in Hindi and History respectively.

$5x$  and  $6x$  = Marks scored by Nobita in History and Hindi respectively.

$p$  = Marks scored by Shinchan in Hindi and English each

$t$  = Marks scored by Doraemon in Hindi and Political Science each.

$10z$  and  $9z$  = Marks scored by Kiteretsu in History and English respectively.

Total marks scored by Hattori  $= 65 \times 4 = 260$

Nobita  $= 82 \times 4 = 328$

Shin Chan  $= 80 \times 4 = 320$

Doraemon  $= 75 \times 4 = 300$

Kiteretsu  $= 70 \times 4 = 280$

Now,  $50 + 60 + 2t = 300$

$$\therefore t = \frac{190}{2} = 95$$

Again,  $10z + 9z + (95 - 10) + 100 = 280$

$$\Rightarrow 19z = 280 - 185 = 95$$

$$\therefore z = 5$$

Again,  $100 + p + p + p + 10 = 320$

$$\Rightarrow 3p = 210$$

$$\therefore p = 70$$

Again,  $5x + 6x + 92 + 71 = 328$

$$\Rightarrow 11x = 328 - 163 = 165$$

$$\therefore x = 15$$

and  $7y + 8y + 45 + 65 = 260$

$$\Rightarrow 15y = 260 - 110 = 150$$

$$\Rightarrow y = 10$$

Thus, the given table becomes:

	Hattori	Nobita	Shin Chan	Doraemon	Kiteretsu
History	70	75	100	50	50
Hindi	80	90	70	95	85
English	45	92	70	60	45
Political Science	65	71	80	95	100

167. 4; Marks scored by Nobita in Hindi

$$= \frac{110}{100} \times 90 = 99$$

Marks scored by Shin Chan in Hindi

$$= \frac{110}{100} \times 70 = 77$$

$$\therefore \text{Reqd \%} = \frac{99 + 77 + 80}{95 + 95} \times 100 = \frac{256}{190} \times 100$$

$$= 134.73$$

168. 1; Reqd average

$$= \frac{45 + 92 + 70 + 60 + 45}{5} = \frac{312}{5} = 62.4$$

169. 3; Reqd ratio  $= (70 + 70 + 95 + 60 + 85 + 45) : (70 + 65 + 75 + 71 + 50 + 95) = 425 : 426$

170. 5; Per cent marks scored by Nobita in all the three subjects  $= \frac{75 + 90 + 71}{300} \times 100$

$$= \frac{236}{300} \times 100 = 78.66\%$$

Per cent marks scored by Doraemon in all the three subjects  $= \frac{50 + 95 + 95}{300} \times 100$

$$= \frac{240}{300} \times 100 = 80\%$$

$\therefore$  Reqd difference  $= 80 - 78.66 = 1.34$

171. 4; % Marks scored by Hattori in both subjects

$$= \frac{75 + 92}{200} \times 100 = 83.5$$

Reqd % marks scored by Shin Chan in both subjects

$$= \frac{100 + 70}{200} \times 100 = 85$$

Reqd % marks scored by Doraemon in both subjects

$$= \frac{50 + 60}{200} \times 100 = 55$$

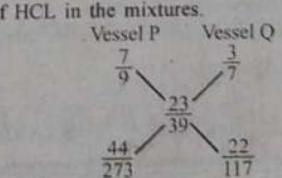
Reqd % marks scored by Kiteretsu in both subjects

$$= \frac{50 + 45}{200} \times 100 = 47.5$$

Hence only two students scored more than 80%.

Note: From the given table in solution, we see that only two students Nobita and Shin Chan scored more than 160, ie 80% marks.

172. 3; As per the given information, this problem can be solved by the method of alligation. Apply alligation on fractional parts of HCL in the mixtures.



$$= 6 : 7$$

(173-177):

It is given that MP of Ninja ZX 10R = ₹864000

$$CP \text{ of Ninja ZX 10R} = \frac{864000}{120} \times 100 = ₹720000$$

From this, we get 15% = 720000

$$\therefore 100\% = \frac{720000}{15} = 48 \text{ lacks}$$

## SBI Junior Associate (Main)-I

Now,  $N + (N+4) + 15 + 14 + N + 7 + 9 = 100$   
 $\Rightarrow 3N = 100 - 49 = 51$

$$\therefore N = \frac{51}{3} = 17$$

Thus, CP of Intruder  $1800 = \frac{17}{100} \times 4800000 = 816000$

Kawasaki Z800  $= \frac{9}{100} \times 4800000 = 432000$

Honda CBR1000  $= \frac{21}{100} \times 4800000 = 1008000$

Ninja ZX6R  $= \frac{14}{100} \times 4800000 = 672000$

Hayabusa  $= \frac{24}{100} \times 480000 = 1152000$

173. 4; MP of Hayabusa

$$= \frac{(1152000 + 4800)}{80} \times 100$$

$$= \frac{1200000 \times 100}{80} = 1500000$$

174. 1; Reqd ratio  $= 720000 : 672000 = 720 : 672 = 15 : 14$

175. 2; CP of Kawasaki Z800 for Navjot

$$= 432000 \times \frac{115}{100} = ₹496800$$

CP of Honda CBR 1000 for Navjot

$$= 1008000 \times \frac{112}{100} = ₹1128960$$

Total CP for Navjot  $= 496800 + 1128960 = 1625760$

CP for Hansraj Mehta  $= 1625760 \times \frac{120}{100} \times \frac{90}{100} = ₹1755820.8$

176. 5; Reqd difference

$$= \left( \frac{1080000 + 1152000}{2} \right) - \left( \frac{816000 + 720000 + 672000}{3} \right)$$

$$= 1080000 - 736000 = 344000$$

177. 3; Average cost price of all the bikes

$$\text{together} = \frac{4800000}{6} = 800000$$

Hence, CP of Kawasaki Z800, Ninja ZX10R

and NinjaZX6R is less than the average CP.  
 178. 4; Total students in school Q at the end

$$\text{of 2014} = \frac{66}{10} \times 100 = 660$$

At the end of 2015, total students in Q  
 $= 660 + 66 - 20 = 706$

At the end of 2016  $= 706 + 96 - 13 = 789$

At the end of 2017  $= 789 + 172 - 32 = 929$   
 In school P, students at the end of 2016  
 $= 150 - 6 = 144$

Students at the end of 2017  $= 144 + 73 - 29 = 188$

$$\therefore \text{Reqd \%} = \frac{188}{929} \times 100 = 20.23\%$$

179. 1; Let total students who left schools R and S at the end of 2017 be  $5x$  and  $4x$  respectively. Then, according to the given information.

$$445 + 85 - 38 + 165 - 5x + 132 - 29 = 685 \\ \Rightarrow 827 - 67 - 5x = 685$$

$$\Rightarrow x = 15$$

Thus, students who left school S in 2017  $= 4x = 4 \times 15 = 60$

$\therefore$  At the end of 2017, students studying in S  $= 340 + 110 - 50 + 123 - 60 + 81 - 6 = 538$

180. 2; Let students who left school Q in 2017 and 2018 be  $2x$  and  $5x$  respectively. Then, as per provided information,  $186 - 53 + 82 + 96 - 13 + 172 - 2x + 244 - 5x = 595$

$$\Rightarrow 780 - 66 - 7x = 595$$

$$\Rightarrow 7x = 119$$

$\therefore$  Total no. of students who left Q in 2017 and 2018 is 119.

181. 3; Total number of students who left school R and S in 2017  $= 5 \times 29 = 145$

Students who left P in 2016  $= 208 - 145 = 63$

Now, it is given that students who left R

in 2017  $= 66\frac{2}{3}\%$  (students who left S in 2017)

Let students who left R in 2017  $= n$

$$\text{Thus, } n = 66\frac{2}{3}\% (145 - x)$$

$$\Rightarrow n = 58$$

Thus, students who left R in 2017  $= 58$

Students who left S in 2017  $= 87$

Total students studying in P at the end of 2017  $= 150 - 63 + 73 - 29 = 131$

Total students studying in S at the end of 2018  $= 110 - 50 + 123 - 87 + 81 - 6 = 171$

$\therefore$  Reqd difference  $= 171 - 131 = 40$

182. 1; Total students who left school P in all three years  $= 3 \times 41 = 123$

Let the no. of students who left school P in 2016 and 2018 be  $23n$  and  $24n$  respectively.

Then, as per given information,

$$23n + 29 + 24n = 123$$

$$\Rightarrow 47n = 94$$

$$\Rightarrow n = 2$$

So, the no. of students who left P in 2016  $= 46$

The no. of students who left P in 2017  $= 48$

Total no. of students in P at the end of 2017  $= 150 - 46 + 73 - 29 = 223 - 75 = 148$

$$\therefore \text{Reqd \%} = \frac{172 - 148}{172} \times 100 = \frac{24}{172} \times 100$$

$$= 13.95\% \approx 14\%$$

183. 5; From I. M + R + E = 217

From II. E = M + 12

From III. M = R + 20

Now, From I, II and III.

$$R + 20 + R + R + 20 + 12 = 217$$

$$3R = 217 - 52 = 165$$

Hence all statements together are neccarry to answer question.

184. 4; Let the lowest integer of a set of 9 consecutive odd integers be  $a$ . Then numbers are  $a, a+2, a+4, a+6, a+8, a+10, a+12, a+14$  and  $a+16$

As per given information,

$$a + a + 2 + a + 4 + a + 6 + a + 8 + a + 10 + a + 12 + a + 14 + a + 16 = 261$$

$$\Rightarrow 9a + 72 = 261$$

$$\Rightarrow 9a = 189$$

$$\Rightarrow a = 21$$

Mean of this set  $= a + 8 = 21 + 8 = 29$

The lowest number of the second set

$$= 29 + 31 = 60$$

$$\therefore \text{Reqd sum} = 60 + 62 + 64 + 66 + 68 + 70 + 72 + 74 = 536$$

185. 2; It is given that the ratio of milk and water in both the containers becomes the same. This can only happen when

$$\frac{\text{Quantity withdrawn from Raghu's container}}{\text{Quantity left in Raghu's container}} = \frac{\text{Quantity left in Ram's container}}{\text{Quantity withdrawn from Ram's container}}$$

$$= \frac{M}{8-M} = \frac{16-M}{M}$$

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$$\Rightarrow M^2 = 128 - 8M - 16M + M^2$$

$$\Rightarrow 24M = 128$$

$$\Rightarrow M = \frac{1}{3} \text{ litres}$$

186. 1; Let initial total quantity of solution they had with them be  $100l$  each.

For Animesh, wine =  $30l$  in  $100l$  of solution

Let  $n$  litres of wine is added in solution,

$$\Rightarrow \frac{30+n}{100+n} = \frac{40}{100}$$

$$\Rightarrow \frac{30+n}{100+n} = \frac{2}{5}$$

$$\Rightarrow 150 + 5n = 200 + 2n$$

$$\Rightarrow 3n = 50$$

$$\Rightarrow n = \frac{50}{3} \text{ litres}$$

For Shikhar, let  $m$  ml of solution is replaced by

$$\text{wine. Then, } \frac{30 - \frac{3m}{10} + m}{70 - \frac{7m}{10}} = \frac{1}{1}$$

$$\Rightarrow 14m = 400$$

$$\Rightarrow m = \frac{200}{7}$$

$$\therefore \text{Reqd \%} = \frac{\left[ \frac{200}{7} - \frac{50}{3} \right]}{\frac{50}{3}} \times 100 = 71\frac{3}{7}$$

Hence  $71\frac{3}{7}$  % more

187. 2; Let present age of Nirav be  $N$  years.  
Then, present age of his daughter

$$= (N-8) \frac{40}{100} = (N-8) \frac{2}{5}$$

$$\text{Present age of his son} = \frac{2}{5}(N-8) - 3$$

$$\text{Present age of his wife} = N + 6 - \frac{2}{5}(N-8) + 3$$

As per given information;

$$N + \frac{2}{5}(N-8) + \frac{2}{5}(N-8) - 3 + N + 6 - \frac{2}{5}(N-8)$$

$$+ 3 = 26.5 \times 4 = 106$$

$$\frac{2N}{5} - \frac{16}{5} + \frac{2N}{5} - \frac{16}{5} - 3 + N + 6 - \frac{2N}{5} + \frac{16}{5} + 3$$

$$= 106$$

$$\Rightarrow N + \frac{2N}{5} + N + 6 - 3 - \frac{16}{5} + 3 = 106$$

$$\Rightarrow \frac{12N}{5} + \frac{14}{5} = 106$$

$$\Rightarrow \frac{12N}{5} = 106 - \frac{14}{5}$$

$$\Rightarrow \frac{12N}{5} = \frac{516}{5}$$

$$\Rightarrow N = 43 \text{ years}$$

188. 2; Ratio of profits shared by them will be

Rashika	Kritika	Tulika
$56000 \times 4$ $= 224000$ $(56000+M/2) \times 8$ $= 448000 + 4M$	$26000 \times 12$ $= 312000$	$M \times 6 = 6M$
224000 + 448000 + 4M	312000	6M

As per given information:

$$\frac{312000}{672000+4M+312000+6M} = \frac{741}{3382}$$

$$\Rightarrow \frac{8000}{984000+10M} = \frac{741}{3382}$$

$$\Rightarrow 1424000 = 984000 + 10M$$

$$= 440000$$

$$M = ₹44000$$

(189-190);

The given information can be tabulated as

	Aus	Eng	SA	Total
2016	11y	15y	320	550x
2017	n	n + 20	410	550x + 30
2018	500	t	1230 -730 -500	669x
Total			410 × 3 = 1230	

It is given that:

$$669x - 550x = 238$$

$$\Rightarrow 119x = 238$$

$$\Rightarrow x = 2$$

$$\text{Also, } 11y + 15y = (550 \times 2) - 320$$

$$\Rightarrow 26y = 780$$

$$\Rightarrow y = 30$$

$$\text{and, } 500 + t + 500 = 669 \times 2$$

$$\Rightarrow t = 338$$

$$\text{So, } n + n + 20 + 410 = 275(2) + 30$$

$$\Rightarrow 2n = 1130 - 430 = 700$$

$$\Rightarrow n = 350$$

From this, the table becomes:

	Aus	Eng	SA	Total
2016	330	450	320	1100
2017	350	370	410	1130
2018	338	500	500	1338
Total	1018	1320	1230	

$$189. 1; \text{Reqd ratio} = (330 + 320) : 500$$

$$= 650 : 500 = 13 : 10$$

$$190. 4; \text{Reqd \%} = \frac{1230}{1100 + 1130 + 1338} \times 100$$

$$= \frac{1230}{3568} \times 100 = 34.47\%$$

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# SBI Junior Associate (Main)-II

## Test-I: General/Financial Awareness

1. Chandrani Murmu has become the youngest (25 years and 11 months) Member of Parliament (MP) in 17th Lok Sabha. She is MP from Keonjhar in
 

1) Maharashtra	2) Andhra Pradesh
3) Chhattisgarh	4) Odisha
5) Madhya Pradesh	
2. Who among the following has won the "International Woman Cricketer of the Year" award at the CEAT Cricket Rating Awards 2019?
 

1) Meg Lanning	2) Smriti Mandhana
3) Bismah Maroof	4) Mithali Raj
5) Harmanpreet Kaur	
3. Nirmala Sitharaman is the only woman full-time Union Minister of Finance after
 

1) Indira Gandhi	2) Sucheta Kriplani
3) Amrit Kaur	4) Aruna Asaf Ali
5) Vijaya Lakshmi Pandit	
4. For small finance banks, 75% of their ANBC should be advanced to the priority sector as categorised by RBI. In the term ANBC, the letter 'A' denotes
 

1) Advance	2) Aggregate	3) Adjusted
4) Accrued	5) Approved	
5. The monetary policy committee of the RBI reduced repo rate in the second bi-monthly monetary policy review of 2019-20. The new repo rate is
 

1) 5.50 per cent	2) 5.75 per cent	3) 6 per cent
4) 6.25 per cent	5) 6.50 per cent	
6. Which state will host the 10th National Science Film Festival of India in 2020?
 

1) Odisha	2) Tripura	3) Kerala
4) Haryana	5) Uttarakhand	
7. The UN Office for Disaster Risk Reduction (UNDRR) conferred Sasakawa Award 2019 for Disaster Risk Reduction to
 

1) Sajid Javid	2) Ajay Bhushan Pandey
3) Pramod Kumar Mishra	4) Subhash Chandra Garg
5) Anup Wadhawan	
8. DV Sadananda Gowda holds which of the following ministries in the present Union Cabinet?
 

1) Skill Development and Entrepreneurship
2) New and Renewable Energy
3) Ministry of Civil Aviation
4) Housing and Urban Affairs
5) Chemicals and Fertilizers
9. State Bank of India (SBI) has started linking the pricing of its home-financing products to RBI's repo rate. The chairman of SBI is
 

1) Rajiv Kumar	2) Rajnish Kumar
3) Hemant Bhargava	4) MR Kumar
5) Ajit Seth	
10. The Reserve Bank of India has appointed a six-member panel for housing loan securitisation. The panel is headed by
 

1) Harsh Vardhan	2) Malvika Sinha
3) M Rajeshwar Rao	4) MD Patra
5) Deepak Mohanty	
11. The comptroller and auditor general (CAG) of India is the External Auditor of Food and Agriculture Organisation (FAO). The FAO is based in
 

1) Rome	2) Madrid	3) New York
4) Paris	5) Geneva	
12. The Indian Air Force has signed a ₹300cr deal with which country to procure a batch of SPICE 2000 guided bombs?
 

1) Israel	2) Sweden	3) Russia
4) Norway	5) Italy	
13. FIDE is the world body which regulates the game of
 

1) Fencing	2) Snooker	3) Chess
4) Golf	5) Polo	
14. The RBI, in its second bi-monthly monetary policy review of 2019-20, cut the GDP growth forecast for 2019-20 to
 

1) 7 per cent	2) 7.2 per cent	3) 7.4 per cent
4) 7.6 per cent	5) 7.8 per cent	
15. The National People's Party (NPP) has become a national party (the first party from the North East) as per the Election Commission. The NPP is ruling in
 

1) Tripura	2) Meghalaya	3) Mizoram
4) Manipur	5) Arunachal Pradesh	
16. What is India's ranking on Sustainable Development Goals Gender Index 2019?
 

1) 55th	2) 65th	3) 75th	4) 85th	5) 95th
---------	---------	---------	---------	---------
17. The International Everest Day was observed recently on which date?
 

1) 02 May	2) 09 May	3) 19 May
4) 29 May	5) 31 May	
18. The govt has merged National Sample Survey Office (NSSO) with the Central Statistics Office (CSO) to form a new entity named
 

1) Indian Statistical Office
2) Central Statistical Office
3) National Statistical Office

## SBI Junior Associates (Main)-II

- 4) Central Data Office  
5) None of these
19. The Reserve Bank of India (RBI) recently approved the appointment of Rakesh Makhija as the new chairman of which bank?  
1) Axis Bank 2) YES Bank 3) Federal Bank  
4) IndusInd Bank 5) IDBI Bank
20. \_\_\_\_\_ has become the first-ever project in the country to receive power generated from a waste-to-energy plant.  
1) Jaipur Metro 2) Noida Metro 3) Kolkata Metro  
4) Namma Metro 5) Delhi Metro
21. Indian Oil, BPCL and HPCL have inked a pact to form a joint venture for the country's largest (2,757 km) LPG pipeline project from Kandla in Gujarat to  
1) Gorakhpur, Uttar Pradesh 2) Patna, Bihar  
3) Ranchi, Jharkhand 4) Bhubaneswar, Odisha  
5) Bengaluru, Karnataka
22. In the ICC Cricket World Cup 2019, India won its first match on 5 Jun defeating which country by 6 wickets?  
1) England 2) South Africa 3) Bangladesh  
4) Sri Lanka 5) West Indies
23. The Cabinet Secretary was given further three months' extension recently. The present Cabinet Secretary is  
1) Rajiv Gauba  
2) Subhash Chandra Garg  
3) Pradeep Kumar Sinha  
4) Ajay Bhushan Pandey  
5) Sudhir Bhargava
24. The RBI has removed charges for NEFT payments. In the term NEFT, letter 'E' stands for  
1) Efficient 2) Effective 3) Estimated  
4) Electronic 5) Expert
25. The present Union Minister for Environment, Forests and Climate Change is  
1) Thawar Chand Gehlot 2) Smriti Irani  
3) Prakash Jayadekar 4) Ravi Shankar Prasad  
5) Harsh Vardhan
26. The World Health Organization (WHO) has selected the Medical & Health Department of which state for its award in the field of tobacco control?  
1) Bihar 2) Rajasthan 3) Gujarat  
4) Kerala 5) West Bengal
27. India plans to conduct its first-ever simulated space warfare exercise in Jul 2019 named IndSpaceEx. India had conducted anti-satellite test (ASAT) in Mar under  
1) Mission Gagan 2) Mission Aakash  
3) Mission Aarohan 4) Mission Shakti  
5) Mission Kawach
28. India's MA Yusuffali (LuLu Group chairman) became the first expat to get the exclusive Permanent Residence 'Golden Card' in which country recently?  
1) Iran 2) Bahrain 3) Qatar  
4) Kuwait 5) UAE
29. The RBI has relaxed the leverage ratio (LR) for banks. The LR for Domestic Systemically Important Banks stands reduced to  
1) 3 per cent 2) 3.5 per cent 3) 4 per cent  
4) 4.5 per cent 5) 5 per cent
30. The RBI has announced a committee to review the ATM interchange fee structure. The committee will be headed by the CEO of the Indian Banks' Association  
1) Subhash Chandra Garg 2) Arundhati Bhattacharya  
3) Shaktikanta Das 4) VG Kannan  
5) Shikha Sharma
31. World Environment Day is observed every year on 5 Jun. What was the theme of this year's World Environment Day?  
1) Water pollution 2) Soil pollution  
3) Air pollution 4) Noise pollution  
5) Vehicular pollution
32. Britain is scheduled to exit from the European Union (EU) on October 31. The headquarters of the EU is located in  
1) Brussels 2) Berlin 3) Rome  
4) Madrid 5) Athens
33. Former President Pratibha Patil was awarded "Order of the Aztec Eagle", the highest order awarded to foreigners by  
1) Canada 2) Mexico 3) Australia  
4) New Zealand 5) Norway
34. The RBI has slapped a penalty of ₹2 cr on which bank for the failure to adhere to the regulator's diktat on promoter shareholding?  
1) IndusInd Bank 2) Bandhan Bank  
3) IDFC First Bank 4) IDBI Bank  
5) Kotak Mahindra Bank
35. The RBI issued its second bi-monthly monetary policy review of FY20 on 6 Jun. Now, the marginal standing facility (MSF) rate and the bank rate stand at  
1) 6 per cent 2) 6.25 per cent 3) 6.50 per cent  
4) 6.75 per cent 5) 7 per cent
36. The RBI has proposed to extend facility for buying foreign exchange at market prices for individuals and others to SDLs. Here, the term SDLs stands for  
1) Standard Development Loans  
2) Structured Development Loans  
3) Subsidised Development Loans

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- 4) State Development Loans  
5) None of these
37. President Martin Vizcarra won a confidence vote in the Congress in which country recently?  
1) Colombia      2) Mexico      3) Chile  
4) Peru      5) Chad
38. S Jaishankar visited Bhutan in his first overseas trip after assuming charge of the External Affairs Minister. The currency of Bhutan is  
1) Kona      2) Rufiyaa      3) Rupiah  
4) Ngultrum      5) Kyat
39. \_\_\_\_\_ has been re-appointed as the National Security Adviser (NSA) in Prime Minister's office for a second five-year term.  
1) PS Raghavan      2) S Jaishankar  
3) Ajit Doval      4) Shivshankar Menon  
5) Brajesh Mishra
40. PM Narendra Modi visited which country in his first visit abroad after his re-election?  
1) Bangladesh      2) Maldives      3) Afghanistan  
4) Japan      5) Kyrgyzstan
41. \_\_\_\_\_ has passed a resolution to increase reservation quota for Other Backward Classes (OBC) from existing 14 per cent to 27 per cent.  
1) Rajasthan      2) Maharashtra  
3) Madhya Pradesh      4) Bihar  
5) Uttar Pradesh
42. Which of the following is correct about the term "Mospi"? It is a/an  
1) stealth technology      2) programming language  
3) Union Ministry      4) UN programme  
5) city in Lakshadweep
43. Khangchendzonga National Park is located in  
1) Assam      2) Tripura      3) Nagaland  
4) Manipur      5) Sikkim
44. The RBI observed Financial Literacy Week 2019 Jun 3-7 on the theme of  
1) Students      2) Farmers      3) Employees  
4) Travellers      5) Ladies
45. The RBI has issued revised norms to deal with stressed assets. It gives lenders how many days to review the borrower's account on default?  
1) 15 days      2) 30 days      3) 45 days  
4) 60 days      5) 75 days
46. The Comptroller and Auditor General (CAG) of India has been elected External Auditor of the World Health Organisation (WHO). The present CAG of India is  
1) Rajiv Gauba      2) Achal Kumar Jyoti  
3) Sunil Arora      4) Rajiv Mehrishi  
5) Shashi Kant Sharma
47. Who among the following won the inaugural George HW Bush Award for Statesmanship in the US recently?  
1) Jimmy Carter      2) Bill Clinton      3) Barack Obama  
4) Donald Trump      5) Nancy Pelosi
48. Greta Thunberg won the Amnesty International's "Ambassador of Conscience Award" recently for her initiative "Fridays for Future". She is from  
1) Sweden      2) France      3) Germany  
4) Spain      5) Norway
49. India's foreign exchange reserves increased by USD 1.875 bn to USD 421.867 bn in the week ending May 31. Which of the following is NOT a component of foreign exchange?  
1) Gold reserves  
2) Foreign currency assets  
3) Reserve Tranche Position  
4) Special drawing rights with the IMF  
5) None of these
50. The Govt has reconstituted eight Cabinet Committees. Who will head the new Cabinet Committee on Security?  
1) S Jaishankar      2) Nirmala Sitharaman  
3) Amit Shah      4) Rajnath Singh  
5) Narendra Modi

## Test-II: Reasoning Ability and Computer Aptitude

**Directions (Q. 51-55):** Each of the questions below consists of a question and two statements numbered I and II given below it. You have to decide whether the data provided in the statements are sufficient to answer the question. Read the question and both the statements and give answer

- I) if the data in statement I alone are sufficient to answer the question, while the data in statement II alone are not sufficient to answer the question.
  - II) if the data in statement II alone are sufficient to answer the question, while the data in statement I alone are not sufficient to answer the question.
  - III) if the data either in statement I alone or in statement II alone are sufficient to answer the question.
  - IV) if the data in both statement I and II together are not sufficient to answer the question.
  - V) if the data in both statement I and II together are necessary to answer the question.
51. What is the code for 'exclusive' in a code language?  
**I** In that language 'jo ko ni pa' means 'exclusive class session here' and 'ta ni zu' means 'now exclusive showroom'.  
**II** In the same language 'pa fu ni go' means 'exclusive collection coming soon' and 'vi fu go pa' means 'winter collection coming soon'.
52. Six persons Amit, Sumit, Vinit, Shikhar, Gulshan and Rajan are sitting around a circular table. Are they all facing the centre?  
**I** Amit sits second to the left of Rajan. Shikhar sits

## SBI Junior Associates (Main)-II

second to the right of Rajan. Both Gulshan and Vinit are immediate neighbours of Amit. Rajan is facing the centre.

**II.** Sumit sits second to the left of Gulshan. Only Shikhar sits between Sumit and Gulshan. Vinit sits on the immediate left of Rajan. Sumit sits opposite Amit. Vinit sits third to the left of Shikhar. Gulshan sits second to the right of Sumit and second to the left of Vinit.

**53.** Six persons G, H, I, J, K and L have different heights. Who among them is the second tallest?

**L** L is taller than only one person. I is taller than G but shorter than K.

**II.** G is taller than both L and H. K is not the tallest.

**54.** Five flowers Lotus, Rose, Marigold, Lily and Sunflower are arranged in a row facing north. Which flower is placed second to the left of Sunflower?

**L** Lotus is placed at one of the extreme end Rose is placed exactly between Lotus and Marigold.

**II.** Only one flower is placed between Marigold and Sunflower. Sunflower is not placed to the left of Rose.

**55.** Five persons A, B, C, D and E live in a building but not necessarily in the same order. There are five floors in that building and only one person lives on each floor. The ground floor of the building is numbered one and the floor above it is numbered two and so on. The topmost floor of the building is numbered five. Who lives on the fourth floor?

**L** Only three persons live between the floors on which B and E live. C lives on the third floor.

**II.** Only one person lives between the floors on which A and D live. E does not live above C.

**Directions (Q. 56-60):** Study the following information carefully and answer the questions given below:

Seven persons H, I, J, K, L, M and N work in seven different banks, viz PNB, SBI, BOB, BOM, BOI, CBI and IOB but not necessarily in the same order. Each of them likes different flowers, viz Lily, Rose, Lotus, Sunflower, Marigold, Daisy and Anemone but not necessarily in the same order. Each of them is going to visit seven different cities, viz Manali, Mysore, Shimla, Amritsar, Dehradun, Haridwar and Puri but not necessarily in the same order.

N works in BOI and he is going to visit Mysore. M likes Marigold and he works in PNB. The one who works in BOB is going to visit Puri. H does not work in BOB. The one who works in CBI is going to visit Haridwar. K likes Rose. J is going to visit Amritsar. The one who works in BOM likes Anemone and he is not going to visit Shimla. The one who likes Lotus and the one who likes Daisy are not going to visit Puri. K works either in CBI or in SBI. The one who likes Lily is going to visit Manali and the one who works in IOB likes Lotus. Neither H nor I works either in BOM or in IOB. The one who works in IOB is not going

to visit Dehradun and J does not work in BOM.

**56.** Which of the following flowers does J like?

- 1) Sunflower      2) Lily      3) Rose
- 4) Marigold      5) None of these

**57.** Which of the following combinations is/are not correct?

- 1) N – BOI – Daisy – Mysore
- 2) K – CBI – Rose – Amritsar
- 3) M – PNB – Anemone – Shimla
- 4) Both 2) and 3)
- 5) None of these

**58.** Who among the following is going to visit Dehradun?

- 1) M      2) L      3) J      4) I      5) None of these

**59.** Which of the following statements is true?

- 1) K works in CBI and does not like Rose.
- 2) H is going to visit Manali.
- 3) The one who likes Lotus is not going to visit Amritsar.
- 4) Both 2) and 3)
- 5) None of these

**60.** Who among the following works in BOM?

- 1) M      2) N      3) L      4) I      5) None of these

**Directions (Q. 61-65):** Study the following information carefully and answer the questions given below:

Below are given some words. Under each word a code is written following some pattern.

Words	PRAISE	ROTATE	EXAM
Code	65	76	41

In each of the following questions, a word is given and its equivalent code is given somewhere in the columns (1), (2), (3), (4) or (5). Study the word in each question and with the help of the codes given above choose the code equivalent from one of the five columns. The number of column (1), (2), (3), (4) or (5) is your answer.

(1)	(2)	(3)	(4)	(5)
64	58	82	46	92
35	68	49	101	120
98	89	62	105	73
59	61	45	67	145
46	130	70	94	66

**61. ARROW**

**62. DEFINITE**

**63. ENTIRELY**

**64. STEP**

**65. GUEST**

**Directions (Q. 66-70):** Study the following information carefully and answer the questions given below:

## SBI Junior Associates (Main)-II

Eight teachers J, K, L, M, N, O, P and Q live on different floors in a building but not necessarily in the same order. The ground floor is numbered one, the one above it is numbered two and so on. The topmost floor is numbered eight. Each of them teaches different subjects, viz Biology, Maths, Physics, Chemistry, History, Civics, Economics and English but not necessarily in the same order.

Only four persons live between the floors on which N and J live. N lives on an odd-numbered floor. J teaches Economics. Only two persons live between the floors on which K and N live. The one who teaches History lives immediately above the floor on which J lives. L lives immediately above P. The one who teaches Biology lives on the floor numbered one. There is no floor between K's floor and Q's floor. M lives neither immediately above nor immediately below the floor on which N lives. Only one person lives between the floors on which the one who teaches Economics and the one who teaches English live. The one who teaches Maths lives immediately above the floor on which the one who teaches History lives. Q teaches Chemistry but does not live below the floor on which K lives. O teaches Civics.

66. Who among the following lives on the second floor?  
1) O      2) M      3) P      4) L      5) J

67. Which of the following statements is true regarding K?  
1) K teaches Physics and lives on fourth floor.  
2) K teaches Maths and lives on eighth floor.  
3) K teaches English and lives on fourth floor.  
4) K teaches History and lives on sixth floor.  
5) K teaches Biology and lives on seventh floor.

68. Which of the following subjects is taught by M?  
1) Maths      2) History      3) English  
4) Civics      5) None of these

69. How many floors are there below the floor on which J lives?  
1) None      2) Two      3) Six  
4) Four      5) Five

70. If all the teachers are made to sit in alphabetical order from the top then who among the following teaches English?  
1) J      2) N      3) L      4) K      5) None of these

**Directions (Q. 71-72): Study the following information and answer the following questions.**

The Ministry of Civil Aviation has decided that the operation of Air India flight AI 433, the only one flying from Gaya to New Delhi via Varanasi, will be suspended for nearly three months – from July 4 to August 5 and again from August 17 to September 15. During the three-month period, Air India will use Airbus 320, which operates on the Gaya-Delhi route, to ferry Haj pilgrims to Saudi Arabia. The airline is likely to suspend operations on other less important routes to use its flights for ferrying Haj pilgrims. Bodh Gaya is one of the four holy sites related to the life of

the Lord Buddha, and the holiest place of Buddhist pilgrimage in the world.

- (A) Government should allow other private airlines to operate during these period to Gaya.
- (B) International tourist inflow to Bodh Gaya will decrease in the coming days.
- (C) Government must find some alternative instead of closing the flights between Gaya and New Delhi.
- (D) The decision taken by the government will hamper local business in the city.
- (E) Most people will have to travel by trains to reach the destination.

71. Which of the following among (A), (B), (C), (D) and (E) will be valid effects of the above decision taken by the Government of India?

- 1) Only (B) and (C)
- 2) Only (D) and (C)
- 3) Only (A) and (B)
- 4) Only (B) and (D)
- 5) Only (C) and (E)

72. Which of the following among (A), (B), (C), (D) and (E) will be a valid course of action to be taken by the Ministry of Civil Aviation so that there will be continuation of flight at the Gaya airport?

- 1) Only (E)
- 2) Only (D)
- 3) Only (C)
- 4) Only (A)
- 5) Only (B)

**Directions (Q. 73-77): Study the following information carefully and answer the questions given below:**

Seven persons P, Q, R, S, T, U and V visit seven different tourist places, viz Gangtok, Haridwar, Mysore, Shimla, Jaipur, Dehradun and Goa, in seven different months of the same year, viz February, April, May, June, August, September and November but not necessarily in the same order.

More than three persons visit between the one who visits Shimla and the one who visits Haridwar. No one visits between Q and the one who visits Jaipur. Only three persons visit between U and R. R visits in one of the months before U visits. Only one person visits between S and the one who visits Goa. S visits in one of the months before June. The one who visits Gangtok visits in the month immediately before the one who visits Mysore. Only two persons visit between V and the one who visits Shimla. V visits in a month having 31 days. Only two persons visit between T and the one who visits Dehradun. Only three persons visit between the one who visits Haridwar and Q.

73. How many persons visit between S and the one who visits Mysore?

- 1) Three
- 2) One
- 3) More than three
- 4) Two
- 5) None

74. R is related to the one who visits Goa and T is related to the one who visits Gangtok in a certain way. Following the same pattern, who among the following is U related to?

- 1) The one who visits Dehradun

- 2) The one who visits Haridwar  
 3) The one who visits Jaipur  
 4) The one who visits Shimla  
 5) The one who visits Mysore
75. Which of the following combinations is correct?  
 1) P-Goa      2) R-May      3) T-Gangtok  
 4) S-Dehradun      5) U-November
76. In which of the following months is Jaipur visited?  
 1) June      2) September      3) May  
 4) April      5) August
77. Who among the following visits in the month of April?  
 1) The one who visits Gangtok  
 2) T  
 3) P  
 4) The one who visits Shimla  
 5) S

**Directions (Q. 78-82):** In the following questions, the symbols \$, @, ©, # and % are used with the following meanings as illustrated:

'P \$ Q' means 'P is not smaller than Q.'

'P @ Q' means 'P is not greater than Q.'

'P © Q' means 'P is neither smaller than nor equal to Q.'

'P # Q' means 'P is neither greater than nor equal to Q.'

'P % Q' means 'P is neither smaller than nor greater than Q.'

In each of the following questions assuming the given statements to be true, find out which of the two conclusions I and II given below them is/are definitely true. Give answer

- 1) if only conclusion I is true.
- 2) if only conclusion II is true.
- 3) if either conclusion I or II is true.
- 4) if neither conclusion I nor II is true.
- 5) if both conclusion I and II are true.

78. Statements: Q @ S, S \$ M, V © M  
 Conclusions: I. Q \$ M      II. V % M

79. Statements: A \$ E, E © G, G % I  
 Conclusions: I. A % I      II. E © I

80. Statements: R # S, S % T, L @ T  
 Conclusions: I. L @ S      II. R # T

81. Statements: H © M, H # O, O \$ F  
 Conclusions: I. O © H      II. M © F

82. Statements: Q \$ H, J @ H, J \$ Y  
 Conclusions: I. Y % Q      II. Q © Y

**Directions (Q. 83-87):** Study the following information carefully and answer the questions given below:

Ten persons R, S, T, U, V, F, G, H, I and J are seated in two parallel rows. Each row consists of six chairs. One seat is vacant in each row. In row-1 R, S, T, U and V are seated and all are facing south and in row-2 F, G, H, I and J are seated and all are facing north. Each person seated in

a row faces another person of the other row. Each of them has birthday in different months, viz February, April, May, June, July, August, September, October, November and December but not necessarily in the same order.

The one whose birthday is in July sits opposite J. The one whose birthday is in February has seat third to the right of F. T does not sit at either extreme end of the line. The one whose birthday is in April sits second from the left end of row-2. V faces the vacant seat while S faces I. Only three seats are there between G and I, who does not face the one whose birthday in May. F sits opposite the one whose birthday is in August. F sits at one of the extreme ends of the line. R sits on the immediate left of the vacant seat. H faces the vacant seat that is second to the left of V. The one whose birthday is in May faces the one who has seat fourth to the right of the one whose birthday is in April. There is only one seat between the one whose birthday is in July and the one whose birthday is in May. The one whose birthday is in December sits on the immediate left of the one whose birthday is in October. The one whose birthday is in October is an immediate neighbour of U. The one whose birthday is in September faces the one who sits adjacent to the vacant seat. The one whose birthday is in June sits adjacent to the one who faces the one whose birthday is in July. One seat is vacant between I and J.

83. Which of the following statements is not true?

- 1) J faces one of the immediate neighbours of V.
- 2) I faces the one whose birthday is in August.
- 3) Only one person sits between T and R.
- 4) F sits on the immediate left of I.
- 5) All are true

84. How many persons (excluding the vacant seat) sit between U and R?

- 1) None      2) One      3) Two
- 4) Three      5) More than three

85. Four of the following five are alike in a certain way and so form a group. Which one does not belong to that group?

- 1) U – April      2) T – June      3) J – December
- 4) H – May      5) I – August

86. What is the position of the seat of T with respect to that of S?

- 1) Second to the left      2) Second to the right
- 3) Third to the left      4) Third to the right
- 5) None of these

87. Who among the following has seat second to the left of the one whose birthday is in February?

- 1) F      2) H      3) G      4) T      5) None of these

**Directions (Q. 88-89):** Study the following information carefully and answer the questions given below:

H is B's father. U is B's paternal grandmother. T is H's sister. Q is H's wife. X is daughter of U.

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88. How is Q related to T?  
 1) Sister      2) Niece      3) Sister-in-law  
 4) Maternal uncle      5) None of these
89. How is U's daughter X related to B?  
 1) Mother      2) Paternal aunt  
 3) Maternal aunt      4) Can't be determined  
 5) None of these

**Directions (Q. 90-91): Study the following information and answer the following questions.**

According to the Periodic Labour Force Survey (PLFS) released by the National Statistical Office (NSO) it has been found that only 2.1% of illiterate urban men were unemployed in 2017-18 but 9.2% of men with at least secondary education didn't have a job. The gap was even wider among urban women – 0.8% of those uneducated were jobless whereas 20% women with secondary or higher education were not employed. The percentage of labour force unemployed rose by up to 4 times between urban women who have only middle-school education and those educated up to secondary-school or more. Unemployment in rural areas shows a similar pattern, though the degree of skewness is less.

- (A) Unemployment rises with rise in education level of individuals in the country.
  - (B) There are a lot of job opportunities in the country for the unemployed people.
  - (C) With the rise in education level of the individual, aspiration of higher-level jobs comes in one's mind.
  - (D) The government must provide skill training to graduate and postgraduate students, so that they can be suitable for job in the market.
  - (E) Agriculture is one of the important activities providing employment in the country but nobody wants to do farming in the country.
90. Which of the following among (A), (B), (C), (D) and (E) has been assumed in the given information? (An assumption is something that is supposed or taken for granted.)  
 1) Only (B)      2) Only (C)      3) Only (A)  
 4) Only (E)      5) Only (D)
91. Which of the following among (A), (B), (C), (D) and (E) will be a valid course of action to be taken by the government to increase employment opportunities in the country?  
 1) Only (E)      2) Only (D)      3) Only (C)  
 4) Only (A)      5) Only (B)

**Directions (Q. 92-94): Study the following information carefully and answer the questions given below:**

Five girls Neelam, Nitu, Nisha, Neha and Nivedita get different marks in an examination. Only two girls get more marks than Nivedita. Nitu gets more marks than Neha but less marks than Neelam. Neelam does not get the highest

marks. The one who gets second lowest marks, gets 90 marks.

92. If the difference between the marks of Nitu and Neelam is 20, then which of the following may possibly be the marks of Nivedita?  
 1) 110      2) 115      3) 117      4) 103      5) 112
93. Who among the following gets the second highest marks ?  
 1) Nisha      2) Nivedita      3) Neha  
 4) Nitu      5) Neelam
94. Which of the following statements is true?  
 1) Nisha gets the third highest marks.  
 2) Neha definitely gets more than 90 marks.  
 3) Neelam gets less marks than only two girls.  
 4) Nitu gets second lowest marks.  
 5) None is true

**Directions (Q. 95-98):** In each question below is given a group of letters followed by four combinations of digits/symbols numbered (1), (2), (3) and (4). You have to find out which of the four combinations correctly represents the group of letters based on the following coding system and the conditions that follow and mark the number of that combination as your answer. If none of the four combinations correctly represents the group of letters, mark 5, ie 'None of these', as your answer.

Letter	N	K	G	P	V	Z	E	W	O	F	S	Y	I	X
Symbol / Number	1	2	\$	4	@	%	9	#	7	&	6	*	5	8

**Conditions:**

- (i) If the first letter is a vowel and the last letter is a consonant, both are to be coded as the code for the vowel.
- (ii) If the first letter is a consonant and the last letter is a vowel, their codes are to be interchanged.
- (iii) If both the first and the last letter are consonants, both are to be coded as 1.
- (iv) If both the first and the last letter are vowels, both are to be coded as ₹.

**Note:** All the elements have to be counted from left to right to fulfil the conditions.

95. IKGWYV  
 1) 32#\*5      2) 52#\*5      3) 52\$#\*5  
 4) 52&#\*4      5) None of these
96. NEIVPK  
 1) 195@41      2) 195@21      3) 175@41  
 4) 395@41      5) None of these
97. OXZFSÅ  
 1) ₹2%\$9₹      2) ₹6&#₹      3) ₹8%&6₹  
 4) ₹\*1&7₹      5) None of these
98. ZEIVKI  
 1) 395@2%      2) 195@4%      3) 575@2%  
 4) 595@2%      5) None of these
99. Statement: According to global adult tobacco survey

2016-17, known as GATS-2, 23.5% people used smokeless tobacco and 5.1% in smoking form in Bihar. However, overall consumption of tobacco dropped by 22.6% from 2009-10 to 2016-17. Though there has been fall in the consumption of tobacco in the state, a lot more is needed to be done to control it and focus should be given on smokeless form of tobacco.

*Which of the following will not be a probable reason for the decrease in the Consumption of tobacco products in Bihar?*

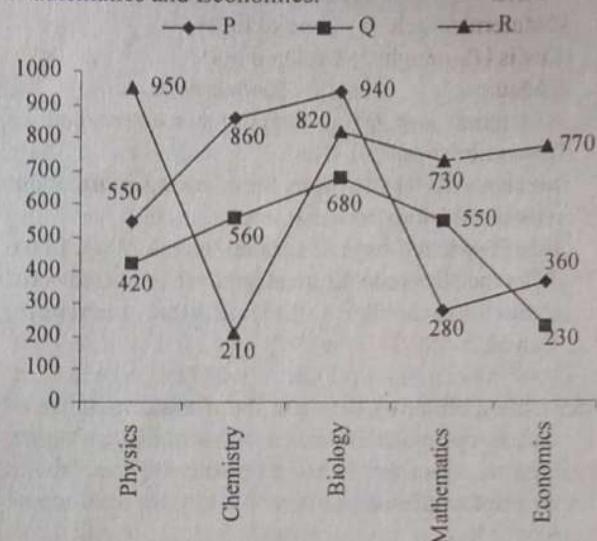
- 1) Paying little heed to warning signs on the tobacco products
- 2) Several awareness programmes run by the Bihar Government regarding bad effect of consuming tobacco products
- 3) People getting cancer at early stage with the consumption of tobacco products
- 4) Government banning selling of tobacco products in public places
- 5) Increase in taxes on tobacco products by the state government

100. **Statement:** In the recently concluded 2019 Lok Sabha election the number of women voters has increased from 47% to 48.13%. As per the Election Commission's voter enrolment figures, women constituted more than half the increase in the number of voters, with 4.35 crore registrations. The 2019 Lok Sabha election earned the distinction of recording the highest voter turnout ever at 66.4%. This surpassed the 64% polling witnessed in the 1984 polls, held in extraordinary circumstances following the assassination of then Prime Minister Indira Gandhi, and made the 58.2% turnout of 2009 pale in comparison.

*Which of the following has been assumed in the given information? (An assumption is something that is supposed or taken for granted.)*

- 1) Women came out in large numbers from their homes in 2019 Lok Sabha election.
- 2) Women have been coming in large numbers to exercise their votes in panchayat level elections also.
- 3) The number of voters has increased in 2019 from the previous Lok Sabha election.
- 4) Gone are the days when women were not interested in casting their votes in the country; they have equal participation in society.
- 5) The recent government has done a lot of work to uplift the life of poor women in the country.

students of three different schools P, Q and R who like five different subjects, ie Physics, Chemistry, Biology, Mathematics and Economics.



The table given below gives the information of the number of students of three other schools, ie S, T and U, who like the five different subjects mentioned above. Some columns are kept blank. You are required to calculate those values as and when required.

Schools	Phys- ics	Che- mistry	Bio- logy	Mathem- atics	Econo- mics	Total
S	—	—	420	840	—	2900
T	340	940	—	740	—	3220
U	390	—	—	180	350	—

**NOTE:** Each student from each school likes only one subject and all the students from all the schools like one subject or the other.

101. If the number of students who like Physics in school S exceeds the number of students who like Biology in the same school by 80, then what is the average number of students from all the schools who like Physics?

- 1) 655                  2) 580                  3) 475  
 4) 530                  5) 525

102. If the number of students who like Biology and Economics in school T are in the ratio 13 : 11, then the number of students who like Biology in school T is what per cent of the number of students who like Biology in school S?

- 1)  $154\frac{16}{21}$                   2)  $168\frac{19}{21}$                   3)  $82\frac{13}{21}$   
 4)  $136\frac{1}{5}$                   5) None of these

103. The number of students who like Chemistry in schools S and U are in the ratio of 25 : 48 and the total number of students who like Chemistry from all the schools is

### Test-III: Quantitative Aptitude

**Directions (Q. 101-105): Study the information given below carefully and answer the questions that follow.**  
 The line graph gives the information of the number of

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4030. Find the number of students who like Economics in school S if it is given that the number of students who like Physics and Chemistry in school S is the same.
- 500
  - 860
  - 550
  - 640
  - Cannot be determined
104. It is given that the number of students who like Chemistry in school U is 20 more than that of those who like the same subject from school T and those who like Biology from U are 140 less than those who like Chemistry from the same school. What is the difference between the average of the total number of students in schools P, Q and R and that in schools S, T and U?
- 40
  - 30
  - 60
  - 120
  - 50
105. If the difference between the average number of students who like Physics and that of those who like Mathematics from all the schools is 85, then what is the number of students who like Physics from school S?
- 500
  - 160
  - 260
  - 360
  - 460
- Directions (Q. 106-110):** In each of the following questions given below, two quantities are given. Find out the quantities by solving the question. Compare the quantities and mark the most appropriate option as your answer.
106. **Quantity I:** Rajat, travelling in a car, covers a distance between stations P and S in 45 minutes. If he reduces the speed of his car by 5 km/hr while returning from S to P, he reaches station P late by 3 minutes. What is the distance between the two stations P and S (in km)?
- Quantity II:** A tank can be filled by three pipes A, B and C in 60, 90 and 100 minutes respectively. There is another pipe P, which can empty the tank in an hour. If all the four pipes are opened together simultaneously and after 30 minutes, pipe P is closed, then in how many minutes will the tank be filled completely?
- Quantity I < Quantity II
  - Quantity I > Quantity II
  - Quantity I = Quantity II
  - Quantity I ≥ Quantity II
  - Quantity I ≤ Quantity II
107. **Quantity I:** What is the present age of S if eleven years ago the ratio of the age of S to that of P was 1 : 3 and eleven years hence the ratio will become 1 : 2?
- Quantity II:** What is present age of D if three years ago the ratio of the age of D to that of E was 5 : 6? Three years hence this ratio will become 6 : 7.
- Quantity I < Quantity II
  - Quantity I > Quantity II
  - Quantity I ≥ Quantity II
  - Quantity I = Quantity II
  - Quantity I ≤ Quantity II
108. **Quantity I:** There is a certain quantity of a mixture of wine and water in a bucket. Due to a leak in the bottom of the bucket 8 litres of mixture is drained out and the bucket is filled with the same quantity of water. Now, the ratio of wine to water in the mixture left is 13 : 9, which earlier 13 : 7. What was the initial quantity of mixture (in litres) in the bucket?
- Quantity II:** The value of m, if  $\frac{3m+21}{5m-3} = \frac{47}{72}$
- Quantity I < Quantity II
  - Quantity I = Quantity II
  - Quantity I ≥ Quantity II
  - Quantity I > Quantity II
  - Quantity I ≤ Quantity II
109. **Quantity I:** Ramadheer Singh buys a chair and a table for ₹750. Out of the two, he sells the chair at a profit of 16% and the table at a loss of 14%. If in the entire transaction he makes neither any profit nor loss then, what is the difference between the cost price of table and the chair?
- Quantity II:** The cost price of article M is ₹20 more than the cost price of article P. If M was sold at 31.25% loss and P was sold at 100% profit, then the overall profit percentage after selling both the articles would be 25%. What is the cost price of article P?
- Quantity I ≤ Quantity II
  - Quantity I = Quantity II
  - Quantity I ≥ Quantity II
  - Quantity I > Quantity II
  - Quantity I < Quantity II
110. **Quantity I:** The ratio of the speed of Arun to that of Abhishek is 7 : 8. If they both travel from M to N (which are 560km apart), then the difference between the time taken by them is 2 hours. What is the speed of Arun (in km/hr)?
- Quantity II:** A shopkeeper bought 30 kg rice at the rate of ₹50 per kg. He sold 50% of the total quantity at the rate of ₹70 per kg. To gain overall profit of 30%, what should be the per kg price of the remaining quantity of rice?
- Quantity I > Quantity II
  - Quantity I < Quantity II
  - Quantity I ≥ Quantity II
  - Quantity I = Quantity II
  - Quantity I ≤ Quantity II
- Directions (Q. 111-115):** Study the following information carefully and answer the questions given below.
- A race started between two points P and Q. Three participants viz Rishab, Rupesh and Rangesh. Rishab started on his bike at the speed of 60 km/hr, Rangesh started travelling in bus at the speed of N km/hr and Rupesh started in his car at the speed of 80 km/hr. All of them started from

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point P and headed towards point Q. After travelling for  $3\frac{1}{2}$  hours, Rupesh detected a puncture in his car's tyre. As a result, he reduced his speed to half of his earlier speed and travel for another  $5\frac{1}{2}$  hours.

After seeing the condition get serious, he tried to change the punctured tyre. He spent 45 minutes in changing the tyre of his car, but all in vain. Then he decided to leave his car there itself and take lift. After another 15 minutes, he got lift in a truck which was moving at the speed of 45 km/hr. For the next 450 km, he travelled in the truck. After that he sat in a vehicle which was running at the speed of 100 km/hr. After travelling for 2 hours in that vehicle, he got down and found that the destination was 250 km away from that point. But he took a shortcut which was 145 km shorter than the original route. He started running at the speed of 35 km/hr on the shorter route.

111. If Rishab and Rangesh travel at their uniform speeds from P to Q, then Rangesh beats Rishab by 200 km. If Rupesh had travelled the entire journey on road by his car with a uniform speed then by how much time would he have defeated Rangesh? (Given that all of them travel by the original route and not by the short route.)

- 1) 2 hr 40 minutes      2) 3 hr 20 minutes
- 3) 1 hr 15 minutes      4) 2 hr 30 minutes
- 5) 1 hr 30 minutes

112. If Rupesh's car's tyre had not been punctured then by what distance would he have defeated Rishab, given the fact that both complete the race by normal route?

- 1) 310 km      2) 280 km      3) 350 km
- 4) 360 km      5) 240 km

113. If it is given that Rangesh's average speed was 45 km/hr, then who would have been the winner between Rupesh and Rangesh, and by what distance would the winner have defeated the loser?

- 1) Rupesh, 275 km      2) Rangesh, 265 km
- 3) Rupesh, 245 km      4) Rangesh, 235 km
- 5) Rupesh, 295 km

114. It is given that even Rishab's bike's tyre got punctured after travelling 30% of the total distance and so he started pulling his bike at the rate of 10 km/hr. After pulling for half an hour, he got a puncture shop and the mechanics took another 30 minutes to repair the bike. From there, Rishab started at 25% more than his initial speed. In this way, by what distance did he defeat Rupesh if it is known that Rishab goes by the normal route and not by short route?

- 1) 325 km      2) Can't be determined
- 3) 450 km      4) 350 km
- 5) None of these

115. If Rupesh's car's tyre had not been punctured and he had followed the normal route, then the time taken by

him would have been how much per cent less than the time taken by him actually (according to the conditions given in the question information)?

- 1) 10      2) 30      3) 20      4) 25      5) None of these

**Directions (Q. 116-120):** What approximate value should come in place of question mark (?) in the following questions. You are not expected to calculate the exact value.

116.  $35\% \text{ of } \sqrt{2200} + 13.998\% \text{ of } 160.02 \times 25\% \text{ of } 2001.95 = ?$

- 1) 428      2) 430      3) 548
- 4) 528      5) None of the above

117.  $\sqrt[3]{175620} - \sqrt[3]{39304} - \sqrt[4]{20735} = ?$

- 1) 12      2) 10      3) 15      4) 8      5) None of these
- 1) 1445      2) 1386      3) 720
- 4) 920      5) None of these

118.  $(28.002)^2 \times 4.996 + 6.8998 + (7.003)^3 + 45.99 = ? - 228.88$

- 1) 1445      2) 1386      3) 720
- 4) 920      5) None of these
- 1) 24.89\% \text{ of } 551.92 + 19.79\% \text{ of } 860 - 66.59\% \text{ of } 389.95 = ?
- 1) 10      2) 12      3) 45      4) 50      5) 35

120.  $88.95 \times 93.001 + 72.021 + 2.897 + 120.996 \times 55.037 - 249.96 \times 26.88 = ? - 779.89$

- 1) 8986      2) 9658      3) 5689      4) 7849      5) 6686

121. A five-digit number is chosen at random from all five-digit numbers. What is the probability that all the digits are distinct, the digits at even places are odd and the digits at odd places are even?

- 1)  $\frac{1}{375}$
- 2)  $\frac{1}{35}$
- 3)  $\frac{7}{275}$
- 4)  $\frac{4}{375}$
- 5) None of the above

122. There are three persons Pinku, Banku and Chintu who are assigned the task of building a tower. Each of the three persons can either build or destroy the tower. Pinku, Banku and Chintu can build or destroy the tower in 24, 36 and 72 days respectively if they work alone. On a given day, one person becomes destroyer and the remaining two persons build the tower. And this continues alternately. If on first day, Pinku becomes the destroyer, next day Banku becomes the destroyer and Chintu the following day, then in how many days

will  $\frac{5}{6}$  of the tower be built?

- 1) 36 days      2) 24 days      3) 30 days
- 4) Cannot be determined      5) 48 days

123. From a container X containing 115 litres of mixture of milk and water in the ratio of 2 : 3, 45 litres of the mixture is taken out and poured into container Y, in which the ratio of milk to water is 5 : 2. If the difference between total milk and total water in container Y is 36 litres, then what is the quantity of the initial mixture in container Y?

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- 1) 105 litres      2) 75 litres      3) 135 litres  
 4) 110 litres      5) 115 litres

124. India and Australia played a T20 international match, in which Team India batted first. In the first 15 overs India scored at the run rate of 7.4 runs per over. After that, India's best finisher MS Loni arrives at the crease, as a result of which in the final five overs of the innings, India scored at the rate of 11.2 runs per over. If it is given that Australia lost the match by 24 runs, then what is the run rate at which Australia scored throughout their innings?

- 1) 8.24      2) 7.15      3) 6.62  
 4) 7.45      5) None of these

125. Anshul is one-third more efficient than Ankur. When they started working on an assignment together,  $\frac{5}{12}$  of the work was left after 18 days. What time will Ankur take to complete the work alone?

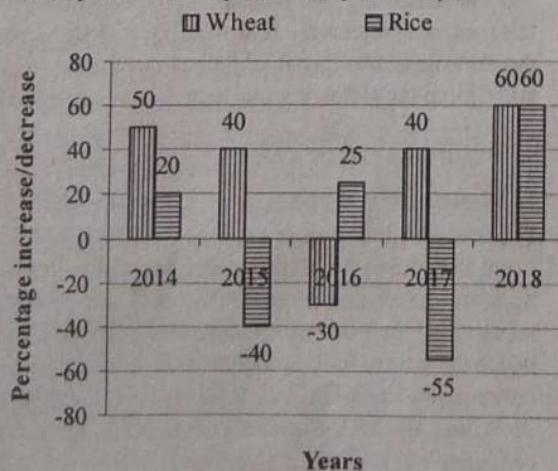
- 1) 84 days      2) 45 days      3) 54 days  
 4) 72 days      5) 36 days

**Directions (Q. 126-130):** In the following number series only one number is wrong. Find out the wrong number.

126. 12 87 601 3599 17995 71951  
 1) 12      2) 71951      3) 17995      4) 87      5) 601  
 127. 12800 9600 7200 5400 4500 3037.5  
 1) 4500      2) 3037.5      3) 5400  
 4) 9600      5) 12800  
 128. 11000 10488 10158 9947 9826 9765  
 1) 9826      2) 10158      3) 11000      4) 9947      5) 10488  
 129. 41 328 2952 29520 324720 3896645  
 1) 328      2) 29520      3) 41      4) 2952      5) 3896645  
 130. 22 61 147 317 596 1027  
 1) 596      2) 61      3) 1027      4) 317      5) 147

**Directions (Q. 131-136):** Study the information given below carefully and answer the questions that follow.

The bar graph given below shows the per cent increase or decrease in production of Wheat and Rice in five different years with respect to the previous year.



### Note:

1. Positive per cent shows increase in production while negative per cent shows decrease in production.

2. Production of rice in 2013 was  $33\frac{1}{3}\%$  more than the production of wheat in the same year.

131. If the production of wheat in 2015 was 31500 kg, then what was the production of rice in the same year?

- 1) 20000 kg      2) 14400 kg      3) 1440 kg  
 4) 18000 kg      5) None of these

132. The average production of wheat in 2016 and 2017 is what per cent of the average production of rice in 2016 and 2017?

- 1) 102.75      2) 245.54      3) 202.75  
 4) 183.60      5) 220.55

133. Production of wheat in 2015 is what per cent more or less than the production of rice in 2016?

- 1) 175      2) 50      3) 25      4) 75      5) None of these

134. The ratio of production of wheat in 2018 to that of rice in the same year is

- 1) 343 : 90      2) 361 : 17      3) 343 : 97  
 4) 90 : 343      5) None of these

135. If the difference between production of wheat in 2015 and 2016 is 9450 quintals, then what is the production of rice (in quintals) in 2015?

- 1) 24000      2) 20000      3) 14400  
 4) 22050      5) Cannot be determined

136. If the average production of wheat and rice in the year 2015 was 4590 quintals then what was the sum of total production of wheat and rice (in quintals) in 2013?

- 1) 35000      2) 18000      3) 5000  
 4) 7000      5) Cannot be determined

137. Twenty workers are employed to do a work in a certain

number of days. It is noticed that when  $\frac{1}{3}$  of the

scheduled time is over only  $\frac{1}{4}$  of the work is completed. How many more workers must be employed

to complete the total work in  $\frac{3}{4}$  of the time scheduled earlier?

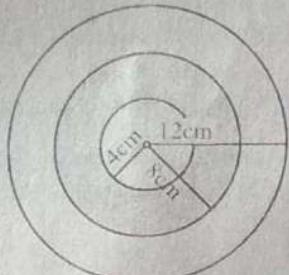
- 1) 40      2) 28  
 3) Cannot be determined      4) 48  
 5) 25

138. Aarush takes  $\frac{9}{4}$  times more time to travel 50% more

distance upstream with double the speed of the stream than he does to travel the original distance at the original speed of the stream. What is the ratio of the speed of Aarush's boat in still water to the original speed of the stream?

- 1) 13 : 2      2) 4 : 21  
 3) 21 : 4      4) Cannot be determined  
 5) 20 : 7

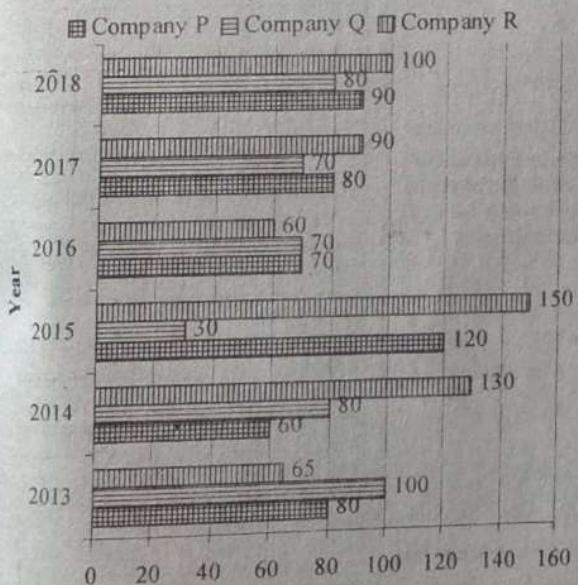
139. In the figure given below, the area of the shaded portion is what per cent of the area of the non-shaded portion?



- 1) 50      2) 75      3) 25      4) 33.33      5) None of these

**Directions (Q. 140-145):** Study the given information carefully and answer the questions given below.

The bar graph given below shows the number of employees joining three different companies, viz Company P, Company Q and Company R, in six consecutive years (2013-2018).



## हिन्दी माध्यम में विवर सैक्षण्य

पूर्णतया संशोधित संस्करण

- १) सैकड़ों दुन विधियाँ
  - २) हजारों साथित प्रश्न
  - ३) सभी अध्याय जो प्रतियोगिता परीक्षाओं में पूछे जाते हैं
  - ४) एकमात्र पुस्तक जिस पर आप दुन हल के लिए भरोसा कर सकते हैं।
  - ५) एप टायरा एवं के कुन्दन
- मूल्य: ₹300

140. Total number of employees who joined company R from 2014 to 2017 is what per cent more than the number of employees who joined company Q in the year 2017 and 2018?

- 1)  $133\frac{1}{3}$       2)  $186\frac{2}{3}$       3)  $166\frac{2}{3}$

- 4) 185      5) None of these

141. What is the difference between the average number of joinees in company Q from 2013 to 2016 and in company P in the same period?

- 1) 23.5      2) 17.5      3) 12.5      4) 10      5) None of these

142. What is the approximate per cent increase in the number of new joinees in company R from 2013 to 2018?

- 1) 45      2) 54      3) 63      4) 51      5) None of these

143. If 60% of the employees who joined all the given three companies in 2017 are females, then the number of male employees who joined these three companies in 2017 is how much less than the number of employees who joined company R in 2014?

- 1) 34      2) 36  
 3) None of the given options      4) 53  
 5) 40

144. What is the ratio of the sum of all the new joinees in the year 2013 and 2014 to that in the year 2017 and 2018 in all the given companies together?

- 1) 102 : 103      2) 101 : 100      3) 51 : 50  
 4) 103 : 102      5) None of these

145. If it is given that company P started in the year 2013 and the number of employees who left the company every year is 20% of the number of employees who joined in that year, then what would be the strength of company P at the end of 2018?

- 1) 360  
 2) 420  
 3) 400  
 4) None of the given options  
 5) 450

146. The sum of the ages of Nakul, Sahdev and Bhim is 92 years. Four years hence, the ratio of the age of Nakul to that of Sahdev will be 14 : 15 and the ratio of Bhim's age two years before to Sahdev's age after two years will be 10 : 7. Find Bhim's age after 8 years.

- 1) 24 years      2) 42 years      3) 56 years  
 4) 50 years      5) None of these

147. Anurag buys N kg of groundnuts and their seeds weigh 80% of their total weight. When the seeds are crushed for the first time, they yield oil, which is 40% of the weight of seeds. While the crushed waste material is treated once again, it yields oil which is 12% of the weight left. If the weight of oil obtained at second treatment is 28.8 kg, then what is the value of N?

## SBI Junior Associates (Main)-II

- 1) 500 kg      2) 1000 kg      3) 1440 kg  
 4) 250 kg      5) Cannot be determined

148. A bank has to recruit a certain number of candidates for the post of probationary officers. 25 vacancies are to be filled through this recruitment process. Out of 10 are reserved for the candidates who have done JAIIB course from IIBF. A total of 50 candidates have applied for the post, out of which 15 have done JAIIB course. In how many ways can the recruitment process be carried out?

- 1)  ${}^{25}C_{15} \times {}^{25}C_{10}$       2)  ${}^{35}C_{15} \times {}^{15}C_{10}$       3)  ${}^{35}C_{25} \times {}^{15}C_{10}$   
 4)  ${}^{35}C_{15} \times {}^{15}C_{15}$       5) None of these

149. Rupal and Priyal entered into a business by investing ₹22000 and ₹25000 respectively. After 6 months, Rupal withdrew ₹7000 and Priyal withdrew ₹5000 from their earlier investments and Reet joined the business by investing ₹7T. If at the end of the year, Reet received

### Answers

1. 4      2. 2      3. 1      4. 3      5. 2  
 6. 2      7. 3      8. 5      9. 2      10. 1  
 11. 1      12. 1      13. 3      14. 1      15. 2  
 16. 5      17. 4      18. 3      19. 1      20. 5  
 21. 1      22. 2      23. 3      24. 4      25. 3  
 26. 2      27. 4      28. 5      29. 3      30. 4  
 31. 3      32. 1      33. 2      34. 5      35. 1  
 36. 4      37. 4      38. 4      39. 3      40. 2  
 41. 3      42. 3      43. 5      44. 2      45. 2  
 46. 4      47. 1      48. 1      49. 5      50. 5

#### 51. 3; From I:

jo ko ni pa → exclusive class session here ...  
 (i)

ta ni zu → now exclusive showroom ... (ii)  
 From (i) and (ii) exclusive → ni ... (iii)

#### From II:

pa fu ni go → exclusive collection coming  
 soon ... (i)

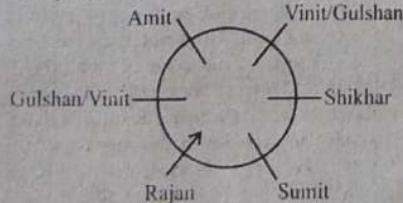
vi fu go pa → winter collection coming soon  
 ... (ii)

From (i) and (ii), we get

exclusive → ni

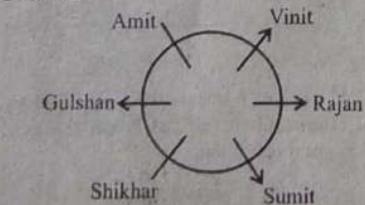
Hence, either I or II alone is sufficient to answer the question.

#### 52. 4; From I:



Thus, I alone is not sufficient to answer.

#### From II:



Thus, I alone is not sufficient to answer.

149. Rupal and Priyal entered into a business by investing ₹22000 and ₹25000 respectively. After 6 months, Rupal withdrew ₹7000 and Priyal withdrew ₹5000 from their earlier investments and Reet joined the business by investing ₹7T. If at the end of the year, Reet received

a total profit of ₹12740 out of a total profit of ₹23400, then what is the value of T?

- 1) ₹54000      2) ₹7000      3) ₹12000  
 4) ₹98000      5) ₹14000

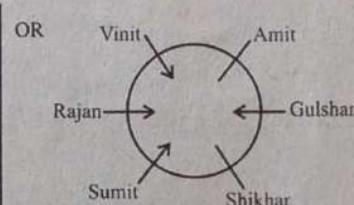
150. Aarzoo invested a certain sum at a certain rate of simple interest for a period of 9 years and earned some interest. The total interest earned by her would have

been  $33\frac{1}{3}\%$  more than this interest if the principal

had been invested for 12 years. What is the rate of interest per cent per annum at which Aarzoo invested her principal?

- 1) 15%      2) 10%      3) 8%  
 4) Cannot be determined      5) 12%

*Note: We have not published one of the four sections, viz English Language, due to space constraint. Inconvenience is regretted.*



Hence, II alone is not sufficient to answer.

**From I and II:** We can't find the answer because nothing is clear about the direction of Shikhar or Amit. Hence, both I and II together are not sufficient to answer.

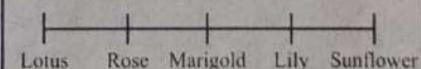
#### 53. 5; From I and II:

$J > K > I > G > L > H$

Thus, K is the second tallest.

Hence, both I and II together sufficient to answer.

#### 54. 5; From I and II:



Thus, Marigold is placed second to the left of Sunflower.

Hence, both I and II together are necessary to answer.

#### 55. 4; From I and II:

Floor	Person
5	B
4	A/D
3	C
2	D/A
1	E

Thus, either A or D lives on the fourth floor  
 Hence, both I and II together are not sufficient to answer.

#### (56-60):

Person	Bank	City	Flower
H	SBI	Manali	Lily
I	BOB	Puri	Sunflower
J	IOB	Amritsar	Lotus
K	CBI	Haridwar	Rose
L	BOM	Dehradun	Anemone
M	PNB	Shimla	Marigold
N	BOI	Mysore	Daisy

#### 56. 5; Lotus

#### 57. 4      58. 2      59. 2      60. 3

#### (61-65):

**Logic:** Add the numerical value of each letter of the respective word and subtract from it the number of vowels present in that word. (ie PRAISE = 16 + 18 + 1 + 9 + 19 + 5 - 3 = 65; here number of vowels is three so we subtract 3)

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61. 5; ARROW =  $1 + 18 + 18 + 15 + 23 - 2 = 73$   
 62. 2; DEFINITE =  $4 + 5 + 6 + 9 + 14 + 9 + 20 + 5 - 4 = 68$   
 63. 4; ENTIRELY =  $5 + 14 + 20 + 9 + 18 + 5 + 12 + 25 - 3 = 105$   
 64. 1; STEP =  $19 + 20 + 5 + 16 - 1 = 59$   
 65. 3; GUEST =  $7 + 21 + 5 + 19 + 20 - 2 = 70$
- (66-70):

Floor	Teacher	Subject
8	L	Maths
7	P	History
6	J	Economics
5	Q	Chemistry
4	K	English
3	M	Physics
2	O	Civics
1	N	Biology

66. 1                    67. 3

68. 5; Physics

69. 5

70. 2;

Floor	Original Position	New Position	Subject
8	L	J	Maths
7	P	K	History
6	J	L	Economics
5	Q	M	Chemistry
4	K	N	English
3	M	O	Physics
2	O	P	Civics
1	N	Q	Biology

71. 4; The decision taken by the Ministry will impact tourism Industry of Gaya. So, 4) is a valid answer.

72. 4; The government must allow private jets to run to the Gaya airport. So 4) is a valid answer.

(73-77):

Month	Person	Place
February (28/29)	S	Dehradun
April (30)	R	Shimla
May (31)	Q	Goa
June (30)	T	Jaipur
August (31)	V	Gangtok
September (30)	U	Mysore
November (30)	P	Haridwar

73. 3      74. 2      75. 4      76. 1      77. 4  
 (78-82):

$\rightarrow \geq, @ \rightarrow \leq, \odot \rightarrow >, \# \rightarrow < \text{ and } \% \rightarrow =$

78. 4; Given statements:

$$\begin{aligned} Q @ S &\Rightarrow Q \leq S & \dots (i) \\ S \$ M &\Rightarrow S \geq M & \dots (ii) \\ V @ M &\Rightarrow V > M & \dots (iii) \end{aligned}$$

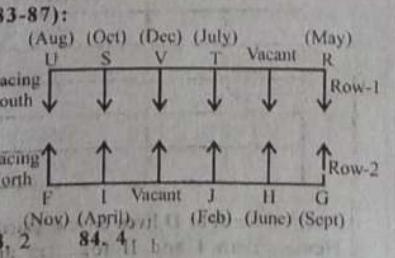
- Combining (i), (ii) and (iii), we get  $Q \leq S \geq M < V \dots (iv)$
- Check for conclusion I.**  
 $Q \$ M \Rightarrow Q \geq M$   
 From (iv), we can't compare Q and M. Thus, conclusion I ( $Q \geq M$ ) is not true.
- Check for conclusion II.**  
 $V \% M \Rightarrow V = M$   
 From (iii),  $V = M$  is not true.
79. 2; Given statements:  
 $A \$ E \Rightarrow A \geq E \dots (i)$   
 $E @ G \Rightarrow E > G \dots (ii)$   
 $G \% I \Rightarrow G = I \dots (iii)$   
 Combining (i), (ii) and (iii), we get  $A \geq E > G = I \dots (iv)$

- Check for conclusion I.**  
 $A \% I \Rightarrow A = I$   
 From (iv),  $A = I$  is not true.
- Check for conclusion II.**  
 $E @ I \Rightarrow E > I$   
 From (iv),  $E > I$  is true.
80. 5; Given statements:  
 $R \# S \Rightarrow R < S \dots (i)$   
 $S \% T \Rightarrow S = T \dots (ii)$   
 $L @ T \Rightarrow L \leq T \dots (iii)$   
 Combining (i), (ii) and (iii), we get  $R < S = T \leq L \dots (iv)$

- Check for conclusion I.**  
 $L @ S \Rightarrow L \leq S$   
 From (iv),  $S \geq L$  or  $L \leq S$  is true.
- Check for conclusion II.**  
 $R \# T \Rightarrow R < T$   
 From (iv),  $R < T$  is true.
81. 1; Given statements:  
 $H @ M \Rightarrow H > M \dots (i)$   
 $H \# O \Rightarrow H < O \dots (ii)$   
 $O \$ F \Rightarrow O \geq F \dots (iii)$   
 Combining (i), (ii) and (iii), we get  $F \leq O > H > M \dots (iv)$

- Check for conclusion I.**  
 $O @ H \Rightarrow O > H$   
 From (ii),  $O > H$  is true.
- Check for conclusion II.**  
 $M @ F \Rightarrow M > F$   
 From (iv), we can't compare M and F. Thus, conclusion I ( $M > F$ ) is not true.
82. 3; Given statements:  
 $Q \$ H \Rightarrow Q \geq H \dots (i)$   
 $J @ H \Rightarrow J \leq H \dots (ii)$   
 $J \$ Y \Rightarrow J \geq Y \dots (iii)$   
 Combining (i), (ii) and (iii), we get  $Q \geq H \geq J \geq Y \dots (iv)$

From (iv),  $Q \geq Y$ . Thus, conclusion I ( $Y \% Q \Rightarrow Y = Q$ ) and conclusion II ( $Q @ Y \Rightarrow Q > Y$ ) make a complementary pair. Hence, either I or II is true.

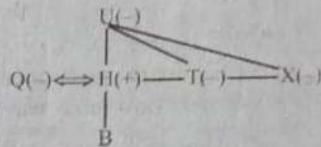


83. 2      84. 4      85. 1      86. 3      87. 2

85. 4; In all other options the given months faces the left of the given person.

86. 1  
 87. 5, 1  
 (88-89):

**Family Tree**



88. 3

89. 2

90. 3; (A) is the idea in the written's mind throughout the passage while elaborating it statistically.

91. 2; The government must provide skill training to students so that they can find suitable job in the market. So, 2) is a valid course of action.

(92-94):

Nisha > Neelam > Nivedita > Nitu > Neha  
 ↓  
 90

92. 4;

∴ Neelam's marks — Nitu's marks = 20  
 So, Neelam's marks =  $20 + 90 = 110$   
 Thus, the possible marks of Nivedita is greater than 90 but less than 110.

93. 5

94. 4

95. 3; Apply (i)

I	K	G	W	Y	V
↓	↓	↓	↓	↓	↓
5	2	S	#	*	5

96. 1; Apply (iii)

N	E	I	V	P	K
↓	↓	↓	↓	↓	↓
1	9	5	@	4	1

97. 3; Apply (iv)

O	X	Z	F	S	A
↓	↓	↓	↓	↓	↓
₹	8	%	&	6	₹

98. 4; Apply (ii)

Z	E	I	V	K	I
↓	↓	↓	↓	↓	↓
5	9	5	@	2	%

99. 1; If people do not pay attention to warning signs, it is not likely to lead to a decrease in consumption of tobacco products.

100. 3; This has been assumed clearly in the sentence "... women constituted more than half the increase in the number of voters."

101. 5; Number of students who like Physics in school S =  $80 + 420 = 500$

∴ Required average

$$= \frac{950 + 550 + 420 + 500 + 340 + 390}{6} = \frac{3150}{6} = 525$$

102. 1; Let students who like Biology and Economics in school T be  $13n$  and  $11n$  respectively. Then,  
 $340 + 940 + 13n + 740 + 11n = 3220$   
 $\Rightarrow 2020 + 24n = 3220$

## SBI Junior Associates (Main)-II

$$\Rightarrow 24n = 1200$$

$$\therefore n = \frac{1200}{24} = 50$$

So, students who like Biology in school T  
 $= 13n = 13 \times 50 = 650$

Required %

$$= \frac{650}{420} \times 100 = \frac{3250}{21} = 154\frac{16}{21}\%$$

103. 4; Let the no. of students who like Chemistry in schools S and U be  $25n$  and  $48n$  respectively. As per information,  
 $860 + 560 + 210 + 25n + 940 + 48n = 4030$   
 $\Rightarrow 2570 + 73n = 4030$

$$\Rightarrow 73n = 460$$

$$\therefore n = 20$$

So, the no. of students who like Chemistry in school S  $= 25 \times 20 = 500$

This is equal to the no. of students who like Physics in school S.

Let N be the no. of Students from school S who like Economics.

$$\text{Then, } 500 + 500 + 420 + 840 + N = 2900$$

$$\therefore N = 2900 - 2260 = 640$$

104. 2; The no. of Students who like Chemistry in school U  $= 940 + 20 = 960$

Students who like Biology in school U  
 $= 960 - 140 = 820$

Total no. of students in school U  
 $= 390 + 960$

The average no. of students in P, Q and R

$$(550+860+940+280+360)+\\(420+560+680+550+230)+\\(950+210+820+730+770)=\frac{8910}{3}=2970$$

Average number of students in school S, T and U

$$=\frac{2900+3220+(390+960+820+180+350)}{3}\\=\frac{8820}{3}=2940$$

So, required difference  $= 2970 - 2940 = 30$

105. 2; Let the no. of students who like Physics from school S be P.

$$\text{Then, } \frac{1}{6} \{(280 - 420) + (550 - 550) +$$

$$(730 - 950) + (840 - P) + (740 - 340) + (180 - 390)\} = 85$$

$$= \frac{1}{6} \{(-140 + 0 - 220 + (840 - P) + 400 - 210\} = 85$$

$$= \frac{1}{6} \{670 - P\} = 85$$

$$\Rightarrow 670 - P = 85 \times 6$$

$$\Rightarrow P = 670 - 510 = 160$$

106. 2; Quantity I: 

Distance = Speed  $\times$  Time

$$= S \times \frac{45}{60} = S \times \frac{3}{4} = \frac{3S}{4}$$

$$\text{Again, Distance} = \frac{(S-5) \times 48}{60} = \frac{(S-5) \times 4}{5}$$

$$\text{Now, } \frac{3S}{4} = \frac{(S-5) \times 4}{5}$$

$$\Rightarrow 15S = 16S - 80 \Rightarrow S = 80$$

$$\therefore D = \frac{3 \times 80}{4} = 60 \text{ km}$$

Quantity II: Let the capacity of the tank be 900 units = LCM of 60, 90 and 100. Then, A, B and C can fill 15, 10 and 9 units respectively per hour.

And pipe P can empty 15 units per hour. For 30 minutes,  $30 \times (15 + 10 + 9 - 15) = 570$  units are filled.

Remaining units  $= 900 - 570 = 330$

Which will be filled in

$$\frac{330}{15+10+9} = 9 \frac{24}{34} = 9 \frac{12}{17} \text{ minutes.}$$

$\therefore$  Total time taken

$$= 30 + 9 \frac{12}{17} = 39 \frac{12}{17} \text{ minutes.}$$

Hence, Quantity I > Quantity II

107. 4; Quantity I:

$$\begin{array}{c} S \quad P \\ 11 \text{ years ago} \quad 1 : 3 \times (2-1) \end{array}$$

$$11 \text{ years hence } 1 : 2 \times (3-1) + 1 : 1 : 3 + 1 : 2 : 4$$

$$\text{Now, } 1 = (11 + 11) = 22$$

$$\therefore \text{Present age} = 22 + 11 = 33 \text{ years}$$

Quantity II:  $D : E$

$$3 \text{ years before } + \left[ \begin{matrix} 5 & : & 6 \\ 6 & : & 7 \end{matrix} \right] + 1$$

3 years hence,

$$\text{Now, } 1 = 3 + 3 = 6$$

$$\therefore 5 = 5 \times 6 = 30$$

$$\therefore \text{Present age of } D = 30 + 3 = 33 \text{ years}$$

Hence QI = QII

108. 4; Quantity I: Let initial quantity of water and wine in mixture be  $7x$  and  $13x$  respectively.

Then,

After 8 litres is drained out and replaced with water:

Quantity of wine

$$= 13x - \frac{8}{13+7} \times 13 = 13x - \frac{26}{5}$$

Quantity of water

$$= 7x - \frac{8}{13+7} \times 7 + 8 = 7x + \frac{26}{5}$$

As per information,

$$\frac{13x - \frac{26}{5}}{7x + \frac{26}{5}} = \frac{13}{9}$$

$$\Rightarrow \frac{65x - 26}{35x + 26} = \frac{13}{9}$$

$$\Rightarrow 585x - 234 = 455x + 338$$

$$\Rightarrow 130x = 572$$

$$\therefore x = \frac{572}{130}$$

So, initial quantity of mixture

$$= 20 \times \frac{572}{130} = 2 \times 44 = 88 \text{ litres}$$

Quicker Method:

$$\because 2 \equiv 8 \text{ litres}$$

$$\therefore 22 \equiv 88 \text{ litres}$$

$$\text{Quantity II: } \frac{3m+21}{5m-3} = \frac{47}{72}$$

$$\Rightarrow 216m + 1512 = 235m - 141$$

$$\Rightarrow 1653 = 19m$$

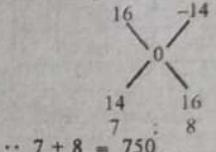
$$\therefore m = 87$$

Hence, Quantity I > Quantity II.

109. 5; Quantity I:

By Alligation Method:

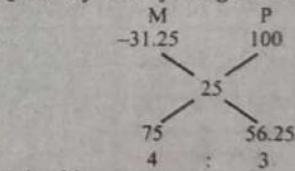
Ratio of profit



$$(8 - 7) = 1 = \frac{750}{15} = ₹50$$

$\therefore$  Difference = ₹50

Quantity II: By alligation method:



$$\therefore 1 = 20$$

$$\therefore 3 = 60$$

Hence, Quantity I < Quantity II.

110. 2; Quantity I: Let the speed of Arun and Abhishek be  $7x$  and  $8x$  respectively. Then, for the same distance, the ratio of time taken by them will be  $8 : 7$ . If the time taken by them is  $8t$  and  $7t$  respectively, then as per given information

$$8t - 7t = 2 \text{ hours}$$

$$\Rightarrow t = 2 \text{ hours}$$

So, time taken by Arun = 16 hours and, time taken by Abhishek = 14 hours

$$\text{Now, speed of Arun} = \frac{560}{16} = 35 \text{ km/hr}$$

Quantity II:

$$\text{CP of 30 kg rice} = 30 \times 50 = ₹1500$$

$$\text{SP of total quantity} = \frac{130}{100} \times 30 \times 50 = ₹1950$$

$$\text{SP of 50% (ie 15 kg rice)} = 15 \times 70 = ₹1050$$

$$\text{SP of remaining rice} = 1950 - 1050 = ₹900$$

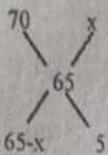
Per kg of price of remaining rice

$$= \frac{900}{15} = ₹60$$

Another Method:

$$\text{SP} = \frac{50 \times 130}{100} = ₹65$$

Now, using alligation method



Ratio of rice is given  $15 : 15 = 1 : 1$

$$\text{Now, } \frac{65-x}{5} = \frac{1}{1}$$

$$\Rightarrow 65 - x = 5$$

$$\therefore x = ₹60$$

Hence, Quantity I < Quantity II.

(111-115):

Distance travelled by Rupesh in  $\left(3\frac{1}{2}\right) \frac{7}{2}$

$$\text{hours} = \frac{7}{2} \times 80 = 280 \text{ km}$$

Now, speed of car is reduced to  $\frac{80}{2}$

$$= 40 \text{ km/hr}$$

Distance travelled at that speed in

$$\left(5\frac{1}{2}\right) \frac{11}{2} \text{ hours} = \frac{11}{2} \times 40 = 220 \text{ km}$$

Time taken to get lift from truck =  $(45 + 15)$  minutes = 60 minutes = 1 hour

Time taken in travelling by truck

$$= \frac{450}{45} = 10 \text{ hours}$$

Distance travelled in another vehicle =  $100 \times 2 = 200 \text{ km}$

So, total distance between P and Q =  $280 + 220 + 450 + 200 + 250 = 1400 \text{ km}$

Distance travelled by short route

$$= 1400 - 145 = 1255 \text{ km}$$

Total time taken by Rupesh in reaching Q from P.

$$= \frac{7}{2} + \frac{11}{2} + 1 + 10 + 2 + \left(\frac{250-145}{35}\right)$$

$$= 3.5 + 5.5 + 1 + 10 + 2 + 3 = 25 \text{ hours}$$

111. 4; It is given that Rangesh beats Rishab by 200 km. So, when Rangesh travels 1400 km, Rishab travels 1200 km; so

$$\frac{1400}{N} = \frac{1200}{60}$$

$$\Rightarrow N = \frac{1400 \times 60}{1200} = 70 \text{ km/hr}$$

$$\text{Now, required time} = \frac{1400}{70} - \frac{1400}{80}$$

$$= 20 - 17.5 = 2 \text{ hours } 30 \text{ minutes}$$

112. 3; Time taken by Rupesh to complete

$$\text{the race} = \frac{1400}{80} = 17.5 \text{ hours}$$

Distance covered by Rishab in this time

$$= 17.5 \times 60 = 1050 \text{ km}$$

Required distance

$$= 1400 - 1050 = 350 \text{ km}$$

113. 1; Total time taken by Rupesh in reaching point Q from point P = 25 hours

Distance travelled by Rangesh in 25 hours

$$= 45 \times 25 = 1125 \text{ km}$$

Thus, Rupesh wins the race.

$$\text{Required distance} = 1400 - 1125 = 275 \text{ km}$$

114. 4; Rishab's bike's tyre got punctured

$$\text{after travelling } \frac{30}{100} \times 1400 = 420 \text{ km}$$

Time taken in travelling this distance =  $\frac{420}{60}$

$$= 7 \text{ hours}$$

For next half an hour he travels

$$= 10 \times \frac{1}{2} = 5 \text{ km}$$

And then 30 minutes repair work. Now total time =  $7 + 1/2 + 1/2 = 8 \text{ hours}$

So, in  $\left(7 + \frac{1}{2} + \frac{1}{2}\right)$  8 hours he travels

$$= 420 + 5 = 425 \text{ km}$$

∴ Remaining distance

$$= (1400 - 425) = 975 \text{ km}$$

∴ Speed after repairing

$$= \frac{60 \times 125}{100} = 75 \text{ km/hr}$$

Now time taken to reach the destination

$$= \frac{975}{75} = 13 \text{ hours}$$

So, total time taken =  $8 + 13 = 21 \text{ hours}$

Distance travelled by Rupesh in 21 hours

$$= \left(80 \times \frac{7}{2}\right) + \left(40 \times \frac{11}{2}\right) + (0 \times 1) + (45 \times 10) + (100 \times 1)$$

$$= 280 + 220 + 0 + 450 + 100 = 1050 \text{ km}$$

∴ Rishab defeated Rupesh by  $(1400 - 1050)$

$$= 350 \text{ km}$$

115. 2; Time taken by Rupesh actually = 25 hours

If the car's tyre had not been punctured,

$$\text{then time taken} = \frac{1400}{80} = 17.5 \text{ hours}$$

So, required per cent

$$= \frac{25 - 17.5}{25} \times 100 = 30\%$$

116. 4; ? =  $35\% \text{ of } \sqrt[3]{2200} + 13.998\% \text{ of } 160.02 \times 25\% \text{ of } 2001.95$

$$\approx 13 \times \frac{35}{100} + 160 \times \frac{14}{100} + 2002 \times \frac{25}{100}$$

$$= 4.55 + 22.4 + 500.5 = 527.45 \approx 528$$

117. 2; We have,

$$? = \sqrt[3]{175620} - \sqrt[3]{39304} - \sqrt[4]{20735}$$

$$\approx 56 - 34 - 12 = 10$$

$$118. 5; ? = (28.002)^2 \times 4.896 + 6.8998 + (7.003)^3 + 45.99 = ? - 228.88$$

$$\Rightarrow ? \approx (28)^2 \times 5 + 7 + 7^3 + 46 = ? - 229$$

$$\Rightarrow ? \approx 784 \times \frac{5}{7} + 343 + 46 + 229$$

$$\Rightarrow ? \approx 112 \times 5 + 343 + 46 + 229 = 560 + 343 + 46 - 229 = 720$$

119. 4; ?  $\approx 24.89\% \text{ of } 551.92 + 19.79\% \text{ of } 860 - 66.59\% \text{ of } 389.95 = ?$

$$\approx 25\% \text{ of } 552 + 20\% \text{ of } 860 - \frac{66.59}{3} \% \text{ of } 390$$

$$= \frac{552}{4} + \frac{860}{5} - \frac{2}{3} \times 390$$

$$= 138 + 172 - 260 = 50$$

$$120. 1; ? = 88.95 \times 93.001 + 72.021 \times 2.897$$

$$+ 120.996 \times 55.037 - 249.96 \times 26.88 + 779.89$$

$$\approx 89 \times 93 + 72 + 3 + 121 \times 55 - 250 \times 27$$

$$+ 780 = 8277 + 24 + 6655 - 6750 + 780 = 8986$$

$$121. 4; \text{ Odd digits} = 1, 3, 5, 7, 9$$

$$\text{Even digits} = 0, 2, 4, 6, 8$$

The odd digits are at even places and even digits are at odd places

So, odd places = 3 and even places = 2

∴ Favourable ways =  ${}^3P_2 \times (4 \times 4 \times 3)$

[∴ 0 cannot be at 1st place]

$$= 20 \times 48 = 960 \text{ ways}$$

Total 5-digit numbers that can be formed

$$= 9 \times 10 \times 10 \times 10 \times 10 = 90000$$

$$\therefore \text{Required probability} = \frac{960}{90000} = \frac{4}{375}$$

122. 3; Let total work to be done in making tower = LCM of (24, 36, 72) = 72 units

$$\Rightarrow \text{Pinku builds or destroys } \frac{72}{24}$$

= 3 units per day

$$\text{Banku builds or destroys } \frac{72}{36}$$

= 2 units per day

$$\text{Chintu builds or destroys } \frac{72}{72}$$

= 1 unit per day

Now,

On 1st day, work done =  $2 + 1 - 3 = 0$  units

On 2nd day, work done =  $3 + 1 - 2 = 2$  units

On 3rd day, work done =  $3 + 2 - 1 = 4$  units

In 3 days, total work done =  $0 + 2 + 4$

= 6 units

$$\text{Work to be done} = \frac{5}{6} \times 72 = 60 \text{ units}$$

$$\text{No. of days required} = \frac{60}{6} \times 3 = 30 \text{ days}$$

123. 1; In container X,

$$\text{milk} = \frac{115}{5} \times 2 = 46l$$

$$\text{and water} = \frac{115}{5} \times 3 = 69l$$

$$\text{Milk taken out} = \frac{45}{5} \times 2 = 18 \text{ litres}$$

$$\text{Water taken out} = \frac{45}{5} \times 3 = 27 \text{ litres}$$

Let the quantities of milk and water in container Y be  $5n$  and  $2n$  respectively.

Then, as per information given,

$$(5n + 18) - (2n - 27) = 36$$

$$\Rightarrow 3n - 9 = 36$$

## SBI Junior Associates (Main)-II

$$\Rightarrow n = \frac{45}{3} = 15$$

$\therefore$  Required quantity =  $5n + 2n = 7n = 7 \times 15 = 105$  litres

**Quicker Method:**

Milk	Water
Container Y	$\rightarrow 5$
$2 \times 15 (+45)$	

Initial quantity  $\rightarrow 18 \left( \frac{45}{5} \times 2 \right) = 27$  (9)  
in container X  $\frac{36}{36}$  litres

$\therefore$  Required total =  $75 + 30 = 105$  litres

**124. 2;** Runs scored by India in first 15 overs =  $15 \times 7.4 = 111$

Runs scored by India in last 5 overs =  $5 \times 11.2 = 56$

Total runs scored by India =  $111 + 56 = 167$

Runs scored by Australia =  $167 - 24 = 143$

$$\therefore \text{Run rate of Australia} = \frac{143}{20} = 7.15$$

**125. 4;** Let Anshul and Ankur do  $4n$  and  $3n$  units of work daily. Total work done per day =  $7n$

Total work done in 18 days =  $7n \times 18 = 126n$  units

$\because 126n$  is  $\left(1 - \frac{5}{12}\right) \frac{7}{12}$  of the total work

$$\Rightarrow \text{Total work} = \frac{126}{7} \times 12 = 216n$$

Time required by Ankur to complete entire work alone =  $\frac{216n}{3n} = 72$  days

**126. 3;** The given series follows the pattern:

$$12 \times 8 - 9 = 87$$

$$87 \times 7 - 8 = 601$$

$$601 \times 6 - 7 = 3599$$

$$3599 \times 5 - 6 = 17989$$

$$17989 \times 4 - 5 = 71951$$

Hence, in place of 17995, there should be 17989.

**127. 1;** The given series follows the pattern:

$$12800 \times \frac{3}{4} = 9600$$

$$9600 \times \frac{3}{4} = 7200$$

$$7200 \times \frac{3}{4} = 5400$$

$$5400 \times \frac{3}{4} = 4050$$

$$4050 \times \frac{3}{4} = 3037.5$$

Hence, in place of 4500, there should be 4050.

**128. 5;** The given series follows the pattern:

$$11000 - 8^3 + 7 = 10495,$$

$$10495 - 7^3 + 6 = 10158,$$

$$10158 - 6^3 + 5 = 9947,$$

$$9947 - 5^3 + 4 = 9826,$$

$$9826 - 4^3 + 3 = 9765$$

Hence, in place of 10488, there should be 10495.

**129. 5;** The given series follows the pattern:

$$41 \times 8 = 328, 328 \times 9 = 2952,$$

$$2952 \times 10 = 29520, 29520 \times 11 = 324720,$$

$$324720 \times 12 = 3896640, \dots$$

Hence, in place of 3896645 there should be 3896640.

**130. 5;** The given series follows the pattern:

$$22 + 4^3 - 5^2 = 61, 61 + 5^3 - 6^2 = 150,$$

$$150 + 6^3 - 7^2 = 317, 317 + 7^3 - 8^2 = 596,$$

$$596 + 8^3 - 9^2 = 1027$$

Hence, in place of 147, there should be 150.

**131. 2;** Wheat production in 2015

$$= 31500 \text{ kg}$$

Wheat production in 2013

$$= 31500 \times \frac{100}{140} \times \frac{100}{150} = 15000 \text{ kg}$$

Production of rice in 2013

$$= 15000 \times \frac{4}{3} = 20000 \text{ kg}$$

Production of rice in 2015

$$= 20000 \times \frac{120}{100} \times \frac{60}{100} = 14400 \text{ kg}$$

**132. 3;** Let the production of wheat in 2013

$$= 3n$$

$\Rightarrow$  Production of rice in 2013 =  $4n$

Production of wheat in 2016

$$= 3n \times \frac{150}{100} \times \frac{140}{100} \times \frac{70}{100} = \frac{441n}{100}$$

Production of wheat in 2017

$$= \frac{441n}{100} \times \frac{140}{100} = \frac{3087n}{500}$$

Average wheat production in 2016 and 2017

$$= \frac{\frac{441n}{100} + \frac{3087n}{500}}{2}$$

$$= \frac{2205n + 3087n}{1000} = \frac{5292n}{1000}$$

Production of rice in 2016

$$= 4n \times \frac{120}{100} \times \frac{60}{100} \times \frac{125}{100} = 4n \times \frac{6}{5} \times \frac{3}{5} \times \frac{5}{4}$$

$$= \frac{18n}{5}$$

Production of rice in 2017

$$= \frac{18n}{5} \times \frac{45}{100} = \frac{81n}{50}$$

Average rice production in 2016 and 2017

$$= \frac{\frac{18n}{5} + \frac{81n}{50}}{2} = \frac{180n + 81n}{100} = \frac{261n}{100}$$

$$\therefore \text{Required \%} = \frac{\frac{5292n}{1000}}{\frac{261n}{100}} \times 100$$

$$= \frac{5292n}{1000} \times \frac{100}{261n} \times 100 = 202.75\%$$

**133. 4;** Let the production of wheat and rice in 2013 be  $3n$  and  $4n$  respectively.

Production of wheat in 2015

$$= 3n \times \frac{150}{100} \times \frac{140}{100} = \frac{63n}{10}$$

Production of rice in 2016

$$= 4n \times \frac{120}{100} \times \frac{60}{100} \times \frac{125}{100} = \frac{18n}{5}$$

$$\therefore \text{Required \%} = \frac{\frac{63n}{10} - \frac{18n}{5}}{\frac{18n}{5}} \times 100 = \frac{\frac{63n}{10} - \frac{36n}{10}}{\frac{36n}{10}} \times 100 = \frac{\frac{27n}{10}}{\frac{36n}{10}} \times 100 = \frac{27n}{36n} \times 100 = \frac{3}{4} \times 100 = 75\%$$

**134. 1;** Let the production of wheat and rice in 2013 be  $3n$  and  $4n$  respectively.

Then, production of wheat in 2018

$$= 3n \times \frac{150}{100} \times \frac{140}{100} \times \frac{70}{100} \times \frac{140}{100} \times \frac{160}{100}$$

Production of rice in 2018

$$= 4n \times \frac{120}{100} \times \frac{60}{100} \times \frac{125}{100} \times \frac{45}{100} \times \frac{160}{100}$$

$\therefore$  Required ratio

$$= (2n \times 150 \times 140 \times 70 \times 140 \times 160) : (4n \times 120 \times 160 \times 125 \times 45 \times 160) = 343 : 90$$

**135. 3;** Let the production of wheat and rice in 2013 be  $3n$  and  $4n$  respectively. Then, as per information given

$$= 3n \times \frac{150}{100} \times \frac{140}{100} - 3n \times \frac{150}{100} \times \frac{140}{100} \times \frac{70}{100} = 9450$$

$$\Rightarrow 3n \times \frac{150}{100} \times \frac{140}{100} \times \frac{30}{100} = 9450$$

$$\Rightarrow \frac{189n}{100} = 9450$$

$$\Rightarrow n = 5000$$

So, production of rice in 2013 =  $4n$  = 20000 quintals.

$\Rightarrow$  Production of rice in 2015

$$= 20000 \times \frac{120}{100} \times \frac{60}{100} = 14400 \text{ quintals}$$

**136. 4;** Let the production of wheat and rice in 2013 be  $3n$  and  $4n$  respectively.

Then,

$$= \frac{3n \times \frac{150}{100} \times \frac{140}{100} + 4n \times \frac{120}{100} \times \frac{60}{100}}{2} = 4590$$

$$\Rightarrow n = 1000$$

$\therefore$  Required sum =  $4n + 3n = 7000$  quintals

**137. 2;** Let the number of days scheduled earlier to complete the entire work be  $T$ . Total work =  $20T$  man-days.

In  $\frac{T}{3}$  days,  $\frac{20T}{4} = 5T$  man-day work is completed.

Remaining work =  $20T - 5T = 15T$  man-days

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$$\text{Remaining time} = \frac{3T}{4} - \frac{T}{3} = \frac{5T}{12}$$

∴ Number of workers required

$$= 20 \times \frac{T}{3} \times \frac{12}{5T} \times \frac{15}{5} = 48$$

[Using  $M_1 D_1 W_1 = M_2 D_2 W_2$ ]

Hence,  $48 - 20 = 28$  extra workers are required.

138. 5; Let distance to be travelled be D.

Speed of stream = S

Speed of Aarush's boat = B

$$T = \frac{D}{B-S} \text{ (upstream)} \quad \dots(1)$$

$$\text{Also, } T + \frac{9T}{4} = \frac{3D}{B-2S}$$

$$\Rightarrow \frac{13T}{4} = \frac{3D}{2B-4S} \quad \dots(2)$$

Now, (2) + (1) gives

$$\frac{13}{4} = \frac{3(B-S)}{2B-4S}$$

$$\Rightarrow 13B - 26S = 6B - 6S$$

$$\Rightarrow 7B = 20S$$

$$\therefore \frac{B}{S} = \frac{20}{7}$$

139. 1; Area of the entire figure

$$= \pi(12)^2 = 144\pi \text{ cm}^2$$

$$\text{Area of shaded portion} = 144\pi - 48\pi$$

$$= \pi(8^2 - 4^2) = \pi(64 - 16) = 48\pi \text{ cm}^2$$

$$\text{Area of non-shaded portion} = 96\pi \text{ cm}^2$$

$$\therefore \text{Required percentage} = \frac{48\pi}{96\pi} \times 100 = 50\%$$

140. 2; Number of employees who joined company R from 2014 to 2017

$$= 130 + 150 + 60 + 90 = 430$$

Number of employees who joined company Q in 2017 and 2018 =  $70 + 80 = 150$

$$\therefore \text{Reqd \%} = \frac{430-150}{150} \times 100$$

$$= \frac{280}{150} \times 100 = 186\frac{2}{3}\%$$

141. 3; Average joinees in company Q from

$$2013 \text{ to } 2016 = \frac{100+80+30+70}{4} = \frac{280}{4}$$

$$= 70$$

Average joinees in company P from 2013 to

$$2016 = \frac{80+60+120+70}{4} = \frac{330}{4} = 82.5$$

$$\therefore \text{Reqd difference} = 82.5 - 70 = 12.5$$

142. 2; Per cent increase

$$= \frac{100-65}{65} \times 100 = \frac{35}{65} \times 100 = \frac{700}{13}\%$$

$$\approx 53.84\% \approx 54\%$$

143. 1; Number of male employees who joined in the year 2017

$$= \frac{40}{100} (80+70+90) = 96$$

$$\therefore \text{Required difference} = 130 - 96 = 34$$

$$144. 4; \text{Required ratio} = (80+100+65+60+80+130) : (80+70+90+90+80+100) = 515 : 510 = 103 : 102$$

$$145. 3; 80\% \text{ of total employees} = 80\% \text{ of } 500 = 400$$

Hence, at the end of 2018, 400 employees were working in company P.

$$146. 4; \text{Present age N S B}$$

Now,  $N + S + B = 92 \quad \dots(i)$

$$\text{Again, } \frac{N+4}{S+4} = \frac{14}{15}$$

$$\Rightarrow 15N + 60 = 14S + 56$$

$$\Rightarrow 15N = -4 + 14S$$

$$\therefore N = \frac{-4+14S}{15} \quad \dots(ii)$$

$$\text{Also, } \frac{B-2}{S+2} = \frac{10}{7}$$

$$\Rightarrow 7B - 14 = 10S + 20$$

$$\Rightarrow 7B = 10S + 34$$

$$\therefore B = \frac{10S+34}{7} \quad \dots(iii)$$

Putting the value of B and N in equation (i), we get

$$\frac{-4+14S}{15} + S + \frac{34+10S}{7} = 92$$

$$\Rightarrow \frac{-28+98S+105S+510+150S}{105} = 92$$

$$\Rightarrow 353S = 92 \times 105 - 482 = 9178$$

$$\therefore S = \frac{9178}{353} = 26$$

$$\text{So, } N = 24, S = 26 \text{ and } B = 42$$

$$\therefore \text{Required age of B} = 42 + 8 = 50 \text{ years}$$

Note: Another Approach

$$\frac{B-2}{S+2} = \frac{10}{7}$$

$$\Rightarrow 7(B-2) = 10(S+2)$$

⇒ B - 2 should be multiple of 10.

Among the given choices only choice (4), ie 50 years, is a multiple of 10.

Gives  $B = 58 - 8 = 42$

and  $B - 2 = 40$ , which satisfies the condition.

To verify it we may calculate as:

$$B = 42 \text{ years} \Rightarrow S = \frac{7 \times 40}{10} - 2 = 26 \text{ years}$$

and  $N = 92 - (42 + 26) = 92 - 68 = 24$  years which further satisfies

$$\frac{N+4}{S+4} = \frac{28}{30} = \frac{14}{15}$$

So, our answer is correct.

$$147. 1; \text{Weight of seeds} = \frac{80N}{100} = \frac{4N}{5}$$

Weight of oil yield after 1st treatment

$$= \frac{40}{100} \times \frac{4N}{5} = \frac{8N}{25}$$

$$\therefore \text{Remaining weight} = \frac{4N}{5} - \frac{8N}{25} = \frac{12N}{25}$$

Weight of oil yield after 2nd treatment

$$= \frac{12}{100} \times \frac{12N}{25} = \frac{144N}{2500}$$

As per information given,

$$\frac{144N}{2500} = 28.8 \text{ kg}$$

$$\therefore N = 500 \text{ kg}$$

148. 2; Vacancies for JAIIB candidates = 10

So, they can be chosen in  ${}^{11}C_{10}$  ways.

$$\text{Remaining candidates} = 50 - 15 = 35$$

So, they can be chosen in  ${}^5C_0$  ways.

∴ Required number of ways  $= {}^{11}C_{10} \times {}^5C_0$

149. 5; Ratio of profit among them will be

Rupal	Priyal	Reet
$22000 \times 6$	$25000 \times 6$	$7T \times 6$
+ 15000 $\times 6$	+ 20000 $\times 6$	<hr/>
222000	270000	42T

As per information given,

$$\frac{42T}{222000 + 270000 + 42T} = \frac{12740}{23400}$$

$$\Rightarrow \frac{42T}{492000 + 42T} = \frac{49}{90}$$

$$\Rightarrow 3780T = 2410800 + 2058T$$

$$\Rightarrow 1722T = 2410800$$

$$\Rightarrow 1722T = 2410800$$

$$\therefore T = \frac{2410800}{1722} = 14000$$

150. 4; When the amount invested for 9 years,

$$SI = \frac{P \times R \times 9}{100} = \frac{9PR}{100}$$

(Where P = Principal, R = Rate of interest)

When the amount is invested for 12 years,

$$SI = \frac{P \times R \times 12}{100} = \frac{12PR}{100}$$

As per given information,

$$\frac{12PR}{9PR} = \frac{4}{3}$$

From the above equation, we can't determine the value of rate of interest per annum.

Note: Time of investment for 9 years to

12 years increases by  $\frac{3}{9}$  or  $\frac{1}{3}$  or  $33\frac{1}{3}\%$ .

So, for any rate of interest, the final interest

will increase by  $33\frac{1}{3}\%$ . Hence, we can't find any unique value of rate.