classrooms. They quoted that it became harmful to the institutes to maintain their peaceful environment. So the college administration should ban mobiles in the campus.

- a. Statement I is the cause and statement II is its effect
- b. Statement II is the cause and statement I is its effect
- c. Both the statements I and II are independent causes
- d. Both the statements I and II are effects of independent
- causes
- e. Both the statements I and II are effects of some common cause
- 2.

causes

cause

Statement I: Rural and semi-urban areas in the country have been suffering due to load shedding for quite some time. Load shedding is a way to distribute demand for electrical power across multiple power sources.

Statement II: If the Government is not able to overcome the power crisis, load shedding will be extended even to the urban areas. Load shedding is used to relieve stress on a primary energy source when demand for electricity is greater than the primary power source can supply. Most buildings, including data centers, purchase electrical power from a utility provider.

- a. Statement I is the cause and statement II is its effect
- b. Statement II is the cause and statement I is its effect
- c. Both the statements I and II are independent causes
- d. Both the statements I and II are effects of independent
- e. Both the statements I and II are effects of some common

3.

Statement I: There has been a high increase in the incidents of atrocities against women in the city during the past few months. Violence against women in India refers to physical or sexual violence committed against Indian women, typically by a man. Common forms of violence against women in India include acts such as domestic abuse, sexual assault, and murder.

Statement II: The police authority has been unable to nab the culprits who are committing crime against women. Most typically, these acts are committed by men as a result of the long-standing gender inequalities present in the country.

- a. Statement I is the cause and statement II is its effect
- b. Statement II is the cause and statement I is its effect
- c. Both the statements I and II are independent causes
- d. Both the statements I and II are effects of independent causes
- e. Both the statements I and II are effects of some common cause
- 4.

Statement I: The prices of vegetables have been increased considerably during this summer. At the retail level too, prices have increased sharply during the period. Prices of potatoes increased 30.5 per cent (to Rs 27.59 per kg on an average) and tomatoes increased by 32.6 per cent

Statement II: There is tremendous increase in the temperature during this summer thereby damaging crops

(to an average Rs 25.33 a kg).

greatly. The effect of temperature is enhanced under high vapor pressure deficits because pollen viability (prior to silk reception) is a function of pollen moisture content which is strongly dependent on vapor pressure deficit

- a. Statement I is the cause and statement II is its effect
- b. Statement II is the cause and statement I is its effect
- c. Both the statements I and II are independent causes
- d. Both the statements I and II are effects of independent
- e. Both the statements I and II are effects of some common
- cause 5.

causes

Statement I: There is considerable reduction in the number of people affected by water-borne diseases in City A during this rainy season. Waterborne diseases are caused by drinking contaminated or dirty water. Contaminated water can cause many types of diarrheal diseases, including Cholera, and other serious illnesses such as Guinea worm disease, Typhoid, and Dysentery Statement II: The government has opened four new civil hospitals in City A in the beginning of the year to improve the quality of life of people by providing better Health Services. These hospitals strive to help people improve their productivity and reduce risks of diseases and injury in a cost-effective way.

- a. Statement I is the cause and statement II is its effect
- b. Statement II is the cause and statement I is its effect
- c. Both the statements I and II are independent causes

- d. Both the statements I and II are effects of independent causes
- e. Both the statements I and II are effects of some common cause
- 6.

Statement I: The performance of most of the students in final exam of class X in the schools run by the Government was excellent. At a time when large number of Government schools are facing closure threat due to dwindling student enrolment, some government schools are finding favour of parents due to very good results they are producing.

Statement II: Many teachers of the Government schools left the school and joined private schools. Private schools allow for flexibility on the part of the teacher as well. Teachers in private schools are not required to adhere to strict curriculum guidelines; they have some form of control over course content and topics to be taught. These teachers have greater control over the choice of instructional materials and textbooks to be used.

- a. Statement I is the cause and statement II is its effect
- b. Statement II is the cause and statement I is its effect
- c. Both the statements I and II are independent causes
- d. Both the statements I and II are effects of independent causes
- e. Both the statements I and II are effects of some common cause
- 7.

causes

cause

Statement I: The farmers have decided against selling their kharif crops to the Government agencies. Kharif crops, monsoon crops or autumn crops are domesticated plants like rice that are cultivated and harvested in India, Pakistan and Bangladesh during the Indian subcontinent's monsoon season, which lasts from June to November depending on the area.

Statement II: The Government has reduced the procurement price of kharif crops starting from last month to the next six months. Procurement price of a commodity refers to the price at which govt. procures the commodity from producers/manufactures for maintaining the buffer stock or the public distribution system. These prices are announced by the govt. of India on the recommendations of the Commission for Agricultural Costs and Prices before the harvest season of the crop.

- a. Statement I is the cause and statement II is its effect
- b. Statement II is the cause and statement I is its effect
- c. Both the statements I and II are independent causes
- d. Both the statements I and II are effects of independent causes
- e. Both the statements I and II are effects of some common cause
- 8.

Statement I: The government has decided to make all the information related to primary education available to the general public. Primary education is typically the first stage of formal education, coming after preschool and before secondary school.

Statement II: In the past, the general public did not have access to all these information related to primary education. Primary education takes place in primary school, the elementary school or first and middle school depending on the location.

- a. Statement I is the cause and statement II is its effect
- b. Statement II is the cause and statement I is its effect
- c. Both the statements I and II are independent causes
- d. Both the statements I and II are effects of independent
- e. Both the statements I and II are effects of some common
- 9) **Statement 1:** Competition Act provides for, keeping in view of the economic development of the country, the establishment of a Commission to prevent practices having adverse effect on competition, to promote and sustain competition in markets, to protect the interests of consumers and to ensure freedom of trade carried on by other participants in markets in India.

Statement 2: Anti–competitive agreements are void.

- a) Statement 1 is the cause and statement 2 is its effect.
- b) Statement 2 is the cause and statement 1 is its effect.
- c) Statement 1 and statement 2 are independent effects of independent causes.
- d) Statement 1 and statement 2 are independent effects of a common cause.
- e) Statement 1 is the cause but statement 2 is not effect
- 10) **Statement 1:** Unregistered trademark proprietor has no legal remedy against infringement of its trademark.

Statement 2: The registered proprietor of the trademark has exclusive right to the use of the trademark in relation to the goods or service in respect of which the trade mark is registered and only registered proprietor can obtain relief in respect of infringement of the trademark.

- a) Statement 1 is the cause and statement 2 is its effect.
- b) Statement 2 is the cause and statement 1 is its effect.
- c) Statement 1 and statement 2 are independent effects of independent causes.
- d) Statement 1 and statement 2 are independent effects of a common cause.
- e) Statement 1 is the cause but statement 2 is not effect

STATEMENT AND COURSES OF ACTION

11.Statement: Garbage in this neighborhood probably will not be collected until Thursday this week. Garbage is usually collected here on Wednesdays, and the garbage collectors in this city are extremely reliable. However, Monday was a public holiday, and after a public holiday that falls on a Monday, garbage

The statement proceeds by which of the following course of actions?

later than usual.

general rule to a specific case

throughout the city is supposed to be collected one day

A. treating several pieces of irrelevant evidence as though they provide support for the conclusion

B. indirectly establishing that one thing is likely to occurby directly ruling out all of the alternative possibilitiesC. providing information that allows application of a

D. generalizing about all actions of a certain kind on the basis of a description of one such action

E. treating something that is probable as though it were inevitable

12. Statement: Studies show that repeated exposure to an allergen can trigger an allergic person's defense mechanisms to the extent that eventually, even minimal exposure to the allergen can provoke a stronger than normal, even life threatening reaction.

Which of the following is the best course of action for the process by which minimal contact with an allergen can cause a major reaction?

A. People with unhealthy diets are more susceptible to diabetes and high blood pressure.

B. Because minor earthquakes can weaken the existing infrastructure in an area, a series of minor earthquakes cansometimes lead to more damage than a single major earthquake.

C. Peanut allergy sufferers should avoid all potential contact with peanuts.

D. A student who fails a test can still earn a good grade if she works hard for the rest of the semester.

E. Drivers who speed regularly are more likely to be caught than those who speed only occasionally.

13. Statement: The importance of the ozone layer to terrestrial animals is that it entirely filters out some wavelengths of light but lets others through. Holes in

the ozone layer and the dangers associated with these holes are well documented. However, one danger that

has not been given sufficient attention is that these holes could lead to severe eye damage for animals of many species.

Which one of the following is most strongly supported course of action by the statements above, if they are true?

A. All wavelengths of sunlight that can cause eye damage are filtered out by the ozone layer where it is intact.

B. Few species of animals live on a part of the earth's surface that is not threatened by holes in the ozone layer.

C. Some species of animals have eyes that will not suffer any damage when exposed to unfiltered sunlight.

D. A single wavelength of sunlight can cause severe damage to the eyes of most species of animals.

E. Some wavelengths of sunlight that cause eye damage are more likely to reach the earth's surface where there areholes in the ozone layer than where there are not.

14. Statement: Newtonian physics dominated science for over two centuries. It found consistently successful application, becoming one of the most highly substantiated and accepted theories in the history of science. Nevertheless, Einstein's theories came to show the fundamental limits of Newtonian physics and to surpass the Newtonian view in the early 1900s, giving rise once again to a physics that has so far enjoyed wide success.

Which one of the following course of action follows from the statements above?

A. The history of physics is characterized by a pattern of one successful theory subsequently surpassed by another.

B. Long-standing success or substantiation of a theory of physics is no guarantee that the theory will continue to bedominant indefinitely.

C. Every theory of physics, no matter how successful, is eventually surpassed by one that is more successful.

D. Once a theory of physics is accepted, it will remain dominant for centuries.

E. If a long-accepted theory of physics is surpassed, it must be surpassed by a theory that is equally successful.

15. Statement :A free marketplace of ideas ensures

that all ideas get a fair hearing. Even ideas tainted with prejudice and malice can prompt beneficial outcomes.

In most countries, however, the government is

responsible for over half the information released to the public through all media. For this reason, the power of governments over information needs to be curtailed. Everyone grants that governments should not suppress free expression, yet governments continue to construct near monopolies on the publication and dissemination of enormous amounts of information.

Which one of the following most accurately expresses the course of action of the journalist's statement?

A. The freedom of the marketplace of ideas is in jeopardy.

B. Preserving a free marketplace of ideas is important.

C. The control that governments have over information needs to be reduced.

- D. Ideas that have malicious content or stem from questionable sources can be valuable.
- E. Governments have near monopolies on the dissemination of many kinds of information.
- 16. Statement :The number of North American children who are obese—that is, who have more body fat than do 85 percent of North American children their age—is steadily increasing, according to four major studies conducted over the past 15 years.
- If the finding reported above is correct, it can be properly concluded with which of the following course of action?
- A. when four major studies all produce similar results, those studies must be accurate
- B. North American children have been progressively less physically active over the past 15 years
- C. the number of North American children who are not obese increased over the past 15 years
- D. over the past 15 years, the number of North American children who are underweight has declined
- E. the incidence of obesity in North American children tends to increase as the children grow older
- 17. Statement :Most antidepressant drugs cause weight gain. While dieting can help reduce the amount of weight gained while taking such antidepressants, some weight gain is unlikely to be preventable.
- The information above most strongly supports which one of the following course of action?

- A. A physician should not prescribe any antidepressant drug for a patient if that patient is overweight.
- B. People who are trying to lose weight should not ask their doctors for an antidepressant drug.
- C. At least some patients taking antidepressant drugs gain weight as a result of taking them.
- D. The weight gain experienced by patients taking antidepressant drugs should be attributed to lack of dieting.
- E. All patients taking antidepressant drugs should diet to maintain their weight.
- 18. Statement :Emissions from automobiles that burn gasoline and automobiles that burn diesel fuel are threatening the quality of life on our planet, contaminating both urban air and global atmosphere.
- Therefore, the only effective way to reduce such emissions is to replace the conventional diesel fuel and gasoline used in automobiles with cleaner burning fuels, such as methanol, that create fewer emissions.
- Which one of the following is the course of action on which the statement depends?
- A. Reducing the use of automobiles would not be a more effective means to reduce automobile emissions than theuse of methanol.
- B. There is no fuel other than methanol that is cleaner-burning than both diesel fuel and gasoline.
- C. If given a choice of automobile fuels, automobile owners would not select gasoline over methanol.

- D. Automobile emissions constitute the most serious threat to the global environment.
- E. At any given time there is a direct correlation between the level of urban air pollution and the level of contamination present in the global atmosphere.
- 19. Statement: In humans, ingested protein is broken down into amino acids, all of which must compete to enter the brain. Subsequent ingestion of sugars leads to the production of insulin, a hormone that breaks down the sugars and also ids the bloodstream of residual amino acids, except for tryptophan.
- is transformed into the chemical serotonin, increasing the brain's serotonin level. Thus, sugars can play a major role in mood elevation, helping one to feel

Tryptophan then slips into the brain uncontested and

Which one of the following is the course of action on which the statement depends?

relaxed and anxiety-free.

- A. Elevation of mood and freedom from anxiety require increasing the level of serotonin in the brain.
- B. Failure to consume foods rich in sugars results in anxiety and a lowering of mood.
- C. Serotonin can be produced naturally only if tryptophan is present in the bloodstream.
- D. Increasing the level of serotonin in the brain promotes relaxation and freedom from anxiety.
- E. The consumption of protein-rich foods results in anxiety and a lowering of mood.

- 20. Statement :A democratic society cannot exist unless its citizens have established strong bonds of mutual trust. Such bonds are formed and strengthened only by participation in civic organizations, political parties, and other groups outside the family. It is obvious then that widespread reliance on movies and electronic media for entertainment has an inherently corrosive effect on democracy.
- Which one of the following is the course of action on which the columnist's statement depends?
- A. Anyone who relies on movies and electronic media for entertainment is unable to form a strong bond of mutualtrust with a citizen.
- B. Civic organizations cannot usefully advance their goals by using electronic media.
- C. Newspapers and other forms of print media strengthen, rather than weaken, democratic institutions.
- D. Relying on movies and electronic media for entertainment generally makes people less likely to participate ingroups outside their families.
- E. People who rely on movies and electronic media for entertainment are generally closer to their families than arethose who do not.

Statement and inferences

21. Statement: The Civil Service Act of 1889, also known as the Pendleton Act, which created a professional corps of administrators, was passed after a disappointed office-seeker assassinated President James A. Garfield. For a hundred years, this system

has anchored American government service to competence rather than corruption. The best way to preserve this state in the new millennium is to maintain the Pendleton Act as it is.

Inferences:

- (a) The methods that the Swiss and British governments have used to prevent corruption in government service for the past one hundred years.
- (b) The current level of job satisfaction among government office-seekers and office-holders
- (c) The levels of competence and corruption in American government service between 1950 and the present
- (d) The number of Presidents assassinated since the passage of the Pendleton Act
- (e) none of the above

Which of the above would be the statement's inference?

22.Statement: When Bob's Bistro opened in the town of Montrose last year, the proprietors of Andrew's Eatery, the only other restaurant in town, feared that their business would suffer. Surprisingly though, in the past year the average number of meals per day served at Andrew's Eatery has actually increased significantly.

Inferences:

(a) The meals at Andrew's Eatery are substantially lower in price than those offered at Bob's Bistro.

- (b) Bob's Bistro is closed on Sundays, and so for Sunday brunch residents of Montrose would either go to Andrew's Eatery or venture to a neighbouring town.
- (c) The profit per meal is higher, on average, at Bob's Bistro than it is at Andrew's Eatery.
- (d) Bob's Bistro attracts a large number of patrons that had never dined in Montrose before, and on many days Bob's Bistro attracts more customers than its seats.
- (e) none of the above

Which of the above, if true, provides the best inference for the given statement?

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(e) none of the above

Which of the above, if true, provides the best inference for the given statement?

23. Statement: Calorie restriction, a diet high in nutrients but low in calories, is known to prolong the life of rats and mice by preventing heart disease, cancer, diabetes, and other diseases. A six-month study of 48 moderately overweight people, who each reduced their calorie intake by at least 25 percent, demonstrated decreases in insulin levels and body temperature, with the greatest decrease observed in individuals with the greatest percentage change in their calorie intake. Low insulin level and body temperature are both considered signs of longevity, partly because an earlier study by other researchers found both traits in long-lived people.

Inferences:

- (a) Calorie restriction produces similar results in humans as it does in rats and mice.
- (b) Humans who reduce their calorie intake by at least 25 percent on a long-term basis will live longer than they wouldhave had they not done so.
- (c) Calorie intake is directly correlated to insulin level in moderately overweight individuals.
- (d) Individuals with low insulin levels are healthier than individuals with high insulin levels.
- (e) Some individuals in the study reduced their calorie intake by more than 25 percent.

If the above statements are true, they support which of the given inferences?

24. Statement: One of the most vexing problems in historiography is dating an event when the usual sources offer conflicting chronologies of the event. Historians should attempt to minimize the number of competing sources, perhaps by eliminating the less credible ones. Once this is achieved and several sources are left, as often happens, historians may try, though on occasion unsuccessfully, to determine independently of the usual sources which date is more likely to be right.

Inferences:

- A. We have no plausible chronology of most of the events for which attempts have been made by historians todetermine the right date.
- B. Some of the events for which there are conflicting chronologies and for which attempts have been made byhistorians to determine the right date cannot be dated reliably by historians.
- C. Attaching a reliable date to any event requires determining which of several conflicting chronologies is most likelyto be true.
- D. Determining independently of the usual sources which of several conflicting chronologies is more likely to be rightis an ineffective way of dating events.
- E. The soundest approach to dating an event for which the usual sources give conflicting chronologies is to

underminethe credibility of as many of these sources as possible.

Which one of the above inferences is most strongly supported by the statement given above?

25. Statement: The government is set to overhaul annual targets for public sector lenders, ending a focus on size that has long encouraged banks to initiate their loans and deposits at the year-end to hit growth objectives. Banking and government sources said that the new targets, to be discussed at meeting with top state bank officials, would focus on efficiency, with objectives set around return on assets, or return on equity, and controlling bad debts.

Inferences:

- (a) Loans and deposits of the banks will go up.
- (b) Loans on which there is maximum probability of return will be encouraged.
- (c) Number of bad debts per financial year will increase.
- (d) Financial stability of the banks will be lost.
- (e) none of the above

Which of the above points can be inferred from the given statement?

26. Statement: With the increase in the number of vehicles in the city, the government is trying hard to resolve issues related to available space for parking vehicles in public areas. Around one thousand new vehicles add to the present traffic situation daily. This causes further problems of traffic congestion. In order to resolve the issues, the government has suggested the

construction of underground and multi-level parking spaces especially in and around market areas.

Inferences:

- (a) The government hopes to meet the present demand for parking space especially in the congested areas within the city.
- (b) Some traffic from neighbouring towns is diverted to pass through the city which creates additional traffic congestion.
- (c) By providing additional parking space in areas in and around the market, the government is ignoring the greater need for parking space in residential areas.
- (d) Issues related to traffic congestion cannot be resolved unless the government ensures that all traffic rules are obediently followed by drivers and pedestrians.
- (e) none of the above

Which of the above can be inferred from the above statement?

27. Statement: It was co-incidental that two separate teams of scientists discovered the remains of tyrannosauruses on two separate locations of the same island. The first team found that the tyrannosaurus, which was a female, had developed wings; however, it was not possible for it to fly and support its weight during its flight. The other team discovered that the tyrannosaurus, which was a male, had no traces of wings and its structure was no different from what was already known to the scientists. Eventually, both the discoveries made the scientists and island dwellers

realize that the island contained many undiscovered treasures and answers.

Inferences:

- (a) There are certain islands where traces of dinosaurs and other ancient species can still be unearthed and studied to fill in the gaps.
- (b) The history of evolution provides ample evidence to justify the difference between the male and female species of a race.
- (c) It is possible that some female tyrannosauruses developed wings, but, whether this physical feature was only specific to females is open to further discovery.
- (d) The tyrannosaurus was the only species of dinosaurs that had wings but could not fly due to their humungous bodyweight.
- (e) none of the above

Assuming that the above statement is true, identify which of the above can be inferred from the statement? 28. Statement: Advani's role in the governments is unique. Whereas all other state officials are specialists in one area or another, Advani is the supreme generalist, the single person who can determine how various interrelated areas of government are likely to be affected by a particular course of action. As a consequence, Advani is the only truly indispensable person in the government

Inferences:

- I. It would be easier to replace or do without a person with general knowledge than a person withspecialized knowledge.
- II. A decision that affected only one area of government would not require Advani's expertise.
- government is as profound as that of a specialist.

 If the statements above are true, which inferences

III. Advani's knowledge of each separate area of

- If the statements above are true, which inferences must also be true?
- (a) I only
- (b) II Only
- (c) III only
- (d) II and III only
- (e) all I, II and III
- the opinion that making educational qualification mandatory for election candidates would be discriminatory since that would naturally deprive citizens of India of the right to represent their people. Institutional qualification, as they say, is different from political acumen and wisdom. In a country like India where about a quarter of 815 million eligible voters are illiterate, it would not be prudent to deny a politically aware and socially conscious individual the

29. Statement: Sociologist and political observers are of

Inferences:

minimum qualification.

I. No,mere literacy is no guarantee of political maturity of an individual.

election ticket just because he/she doesn't have a

II. Yes, Illiterate people are less likely to make politically wiser decisions of voting for a right candidate or party.

III. No, Voting is the constitutional right of every citizen.

Should "literacy" be the minimum criterion for becoming a voter in India?

- (a) Only I and II
- (b) Only III
- (c) Only II and III
- (d) Only II
- (e) All I, II and III

30. Statement: "Poor growth in corporate tax collection pulled down overall rise in gross direct tax mobilization in the first half of the current year, ruling out any pickup in growth in the first half of the year, indicating that the government will find it difficult to meet its tax target for the year."

Inferences:

- (I) Corporate tax collection rose only in the first quarter of the current year.
- (II) Industrial production slowed down in the first half of the year.
- (III) The government has achieved the target of corporate tax collection in comparison to previous year.
- (IV) Poor tax collection in the corporate pulled down the economy.
- (V) The government is likely to face difficulties in achieving the target of collection of corporate tax due to slowdown in production and the government has forecast a growth in corporate tax.

Which of the inferences numbered (I), (II), (III), (IV), and (V) can be concluded from the fact/information given in the statement?

- (a) Only II
- (b) Only II and V
- (c) Only III and IV
- (d) Only IV
- (e) Only III

Statement and Assumption

31. Statement: Publicity campaigns for endangered species are unlikely to have much impact on the most important environmental problems, for while the ease of attributing feelings to large mammals facilitates evoking sympathy for them, it is more difficult to elicit sympathy for other kinds of organisms, such as the soil microorganisms on which large ecosystems and agriculture depend.

Which one of the following is an assumption on which the argument in the given statement depends?

- A. The most important environmental problems involve endangered species other than large mammals.
- B. Microorganisms cannot experience pain or have other feelings.
- C. Publicity campaigns for the environment are the most effective when they elicit sympathy for some organism.
- D. People ignore environmental problems unless they believe the problems will affect creatures with which they sympathize.

E. An organism can be environmentally significant only if it affects large ecosystems or agriculture.

32. Statement: Leibniz, the seventeenth-century philosopher, published his version of calculus before Newton did. But then Newton revealed his private notebooks, which showed he had been using these ideas for at least a decade before Leibniz's publication.

Newton also claimed that he had disclosed these ideas to Leibniz in a letter shortly before Leibniz's

publication. Yet close examination of the letter shows

that Newton's few cryptic remarks did not reveal anything important about calculus. Thus, Leibniz and

Newton each independently discovered calculus.

Which one of the following is an assumption required

by the historian's argument in the given statement?

A. Leibniz did not tell anyone about calculus prior to publishing his version of it.

B. No third person independently discovered calculus prior to Newton and Leibniz.

C. Newton believed that Leibniz was able to learn something important about calculus from his letter to him.

D. Neither Newton nor Leibniz knew that the other had developed a version of calculus prior to Leibniz's publication.

E. Neither Newton nor Leibniz learned crucial details about calculus from some third source.

33. Statement: Haters of gay marriage argue that gay marriage harms the institution of traditional marriage since marriage has always been between a man and a

thousands of years of tradition. The purpose of marriage is to procreate, and same—sex couples can't have children. If we legalize gay marriage, it's a slippery slope to polygamy, incest, and/or bestiality. Children raised by a mother and a father are more emotionally well—adjusted than those raised by same—sex parents etc. No concrete justification has ever been presented for their claims that gay marriage is wrong. Which of the following assumptions if true, strengthens the statement above?

woman. Legalizing gay marriage would be changing

a) The legal rights and benefits of heterosexual couples are completely unaffected by the existence of gay marriage.

b) Marriage rates have been declining steadily since the 1970s, decades before any U.S. jurisdictions legalized gay marriage.

c) Long-standing tradition and unfounded fears are not good reasons to not legalize gay marriage.

d) An estimated 16,000 same—sex couples are raising more than 22,000 adopted children in the U.S., and these findings indicate that these children will likely fare no differently, as a result of their family type, than those being raised by heterosexual parents.

e) none of the above

34. Statement: Modern Medicine has extended our lifespan and we can now treat disease and illness with more ease. Traditional medicine involved herbs and

plants which were not always effective since people still

died of simple illnesses such as chickenpox or even the common cold. Nowadays, medicine cannot always cure us, but it can lessen the effectiveness of our symptoms and improve our condition. Traditional medicine is called Traditional for a Reason: it is old fashioned and outdated. It is not as effective as Modern Medicine. Some traditional treatments work well but modern medicine just takes these traditional treatments and makes them more effective. Modern medicine can have side effects, but if taken with regulation and not in overdose, modern medicine can be the most effective way to help yourself.

Which of the following assumptions if true, weakens the statement that modern medicine is a better option compared to traditional medicine?

- a) Recently there have been many law suits filed and won by consumers against modern drug manufacturers, because of harmful side effects of modern medicine.
- b) Modern medicine is recommended because there is more profit for everyone involved.
- c) Traditional medicine has been researched and has proved to work.
- d) The dangerous side effects of modern medicines have been well documented. Traditional medicines do not have any harmful side effects.
- e) none of the above
- 35. Statement: Automation, the trademark of a modern economy, is essential to maximize a country's economic production while minimizing its costs.

Health care executives want to increase revenues while reducing costs. Consequently, they propose significantly greater automation of health care. Yet, this should be rejected. Radical automation of health care would cause patients to lose trust in the system as the health care they would receive would lack the inperson care that studies show patients desire.

Which of the following assumption expresses the main point of the statement?

- a) Health care should not be heavily automated
- b) Patients desire customized in-person care
- c) Trends in the general economy do not apply to the health care industry
- d) Health care executives are becoming too greedy
- e) none of the above
- 36. Statement: From 1983 to 1999 total energy use in this country increased less than 10 percent. However, the use of electrical energy in this country during this same period grew by more than 50 percent, as did the gross national product— the total value of all goods and services produced in the nation.

If the statements above are true, which one of the following must be the assumption?

- A. Most of the energy used in this country in 1999 was electrical energy.
- B. From 1983 to 1999 there was a decline in the use of energy other than electrical energy in this country.

- C. From 1983 to 1999 there was an increase in the proportion of energy use in this country that consisted of electrical energy use.
- D. In 1999 electrical energy constituted a larger proportion of the energy used to produce the gross national product than did any other form of energy.
- E. In 1983 the electrical energy that was produced constituted a smaller proportion of the gross national product than did all other forms of energy combined.
- 37. Statement: To decrease the number of crimes in city Y, the city's Police Commissioner proposed taking some police officers from low-crime districts of the city and moving them to high-crime districts of the city. His proposal is based on city Y crime data that show that the number of crimes in any district of the city decreases when additional police officers are moved into that district.
- The Police Commissioner's proposal depends on which of the following assumptions?
- A. City X experienced a drastic reduction in crime after implementing a proposal similar to that proposed by the Police Commissioner of city Y.
- B. The severity of crimes committed in any district of the city decreases when additional police officers are moved into that district.
- C. The number of crimes committed in all high-crime districts of city Y is more than triple the number of crimes committed in all low-crime districts of city Y.

- D. There are more low-crime districts than high-crime districts in city Y.
- E. Districts of the city from which police officers are removed do not experience significant crime increases shortly after the removal of those officers.
- 38. Statement: Although there has been great scientific debate for decades over global warming, most scientists now agree that human activity is causing the Earth's temperature to rise. Though predictions vary, many global warming experts believe that average global temperatures will rise between three and eight degrees Fahrenheit during the next century. Such an increase would cause an alarming rise in sea levels, displacing millions of people by destroying major population centers along the world's coastlines.
- Which of the following is an assumption in support of the above statement?
- A. New technological developments in the next century will not divert rising seas from the world's coastal cities.
- B. Individuals will not become more aware of the steps they can take to reduce the emission of greenhouse gases.
- C. Rising sea levels similarly affect all coastal population centers.
- D. Some global warming experts predict a greater than eight degree Fahrenheit increase in global temperatures during the next century.
- E. Human activity is the sole cause of increasing global temperatures.

heat.

39. Statement: Researchers studying the spread of the Black Plague in sixteenth-century England claim that certain people survived the epidemic because they carried a genetic mutation, known as Delta-32, that is known to prevent the bacteria that causes the Plague from overtaking the immune system. To support this hypothesis, the researchers tested the direct descendants of the residents of an English town where an unusually large proportion of people survived the Plague. More than half of these descendants tested positive for the mutation Delta-32, a figure nearly three times higher than that found in other locations.

The researchers' hypothesis is based on which of the following assumptions?

A. Delta-32 does not prevent a carrier from contracting any disease other than the Plague.

B. The Plague is not similar to other diseases caused by bacteria.

C. Delta-32 did not exist in its current form until the sixteenth century.

D. No one who tested positive for Delta-32 has ever contracted a disease caused by bacteria.

E. The Plague does not cause genetic mutations such as Delta-32.

40. Statement: The popular notion that a tree's age can be determined by counting the number of internal rings in its trunk is generally true. However, to help regulate the internal temperature of the tree, the outermost layers of wood of the Brazilian ash often peel away when the temperature exceeds 95 degrees Fahrenheit, leaving the tree with fewer rings than it would otherwise have. So only if the temperature in the Brazilian ash's environment never exceeds 95 degrees Fahrenheit will its rings be a reliable measure of the tree's age.

Which of the following is an assumption on which the statement above depends?

levels of precipitation.

B. Only the Brazilian ash loses rings because of excessive

A. The growth of new rings in a tree is not a function of

C. Only one day of temperatures above 95 degrees Fahrenheit is needed to cause the Brazilian ash to lose a ring.

D. The internal rings of all trees are of uniform thickness.

E. The number of rings that will be lost when the temperature exceeds 95 degrees Fahrenheit is not predictable.

41. Statement :Due to high jet fuel costs, airline

Statement and conclusions

carriers are looking for new ways to increase revenues and thereby counteract declining profits. Airline X has proposed increasing the number of passengers that can fit on its airplanes by creating several standing rooms only "seats" in which passengers would be propped against a padded backboard and held in place with a harness. This proposal, since it relates to

passenger safety, cannot be implemented without prior approval by the Aviation Administration.

Which of the following is the exact conclusion of the above statement?

- a. The addition of standing room only "seats" will generate more revenue than the cost of ensuring that these seats meet safety standards.
- b. The Aviation Administration will approve Airline X's specific proposal.
- c. The revenue generated by the addition of standing room only "seats" is greater than the current cost of jet fuel.
- d. There are no safer ways in which Airline X can increase revenues.
- e. Passenger safety is less important than increasing revenue.
- 42. Statement: All the employees of Law Prep Tutorial must enroll in the company's medical insurance programme. Some, but not all of the employees' spouses have enrolled in the same programme. No one who is not enrolled in the company's medical insurance programme may enter the Bhopal centre.

Based on the information above, which of the following conclusions must be true?

- a. Some employees' spouses are also employees of the company.
- b. No employees' spouses are employees of the company.
- c. No employee's spouses may enter the Bhopal Centre.
- d. all the above

- e. none of the above
- 43. Statement:In a game of cricket, if a player takes a position as wicketkeeper, he must also take up the role of the first slip fielder and a motivator. If the fielder is occupying the second slip, he must occupy second slip and either the first slip or the motivator's role. If he is a motivator, he is also a second slip fielder.

If the player described above is not a motivator, which of the following conclusions can be drawn?

- a) The player occupies the wicket keeping position.
- b) The player is a motivator and first slip fielder but is not a wicket keeper.
- c) The player is not wicketkeeper.
- d) The player is a second slip and first slip fielder.
- e) none of the above
- 44) Statement: News channels rarely cover local politics thoroughly, and local political business is usually conducted secretively. These factors each tend to isolate local politicians from their electorates. This has the effect of reducing the chance that any particular act of resident participation will elicit a positive official response, which in turn discourages resident participation in local politics.

Which one of the following is the conclusion supported by the above statement?

a) If local politicians were less isolated from their electorate, acts of resident participation would be likely to elicit a positive response from them.

- b) Local political business should be conducted less secretively because this would encourage resident participation in local politics.
- c) A resident's decision as whether to participate in local politics is mostly dependent on the chance that the participation will elicit a positive official response.
- d) More–frequent thorough coverage of local politics by news channels would reduce at least one source of discouragement from resident participation in local politics.
- e) none of the above
- 45) Statement :Forester -- The recent claims that the White rhino is not extinct are false. The White rhino's natural habitat was taken over by deforestation
- natural habitat was taken over by deforestation, resulting in the animal's systematic elimination from the area. Since then naturalists working in the region have discovered no hard evidence of its survival, such as carcasses or tracks. In spite of alleged sightings of the animal, the White rhino no longer exists.
- Which one of the following is the conclusion on which the forester's statement depends?
- a) Deforestation drove the last White rhinos to starvation by chasing them from their natural habitat.
- b) Every naturalist working in the White rhino's natural habitat has looked systematically for evidence of the rhino's survival.
- c) The White rhino did not move and adapt to a different region in response to the loss of habitat.

- d) Those who have reported sightings of the White rhino are not experienced naturalists or foresters.
- e) none of the above
- 46. Statement: All the pain and suffering comes from the stupidity of humans. Their stupidity to believe nonsense and force this nonsense on others is what causes pain and suffering in the world. In the words of the great philosopher called Voltaire," If you believe in absurdities, you can commit atrocities".

What do you conclude from the author's point of view about a person who believes in ghosts?

- a) The person is absurd and should change his beliefs.
- b) The person's beliefs are dangerous to others.
- c) The author does not say anything about ghosts.
- d) Voltaire was a great philosopher.
- e) none of the above
- 47. Statement: At an enormous research cost, a leading chemical company has developed a manufacturing process for converting wood fibers into a plastic. According to the company, this new plastic can be used for, among other things, the hulls of small sailboats. But what does the company think sailboat hulls used to be made of? Surely the mania for high technology can scarcely go further than this.

The author's conclusion of the manufacturing process described in the statement is based primarily on the fact that?

(a) plastic is unlikely to be durable enough for highquality sailboat hulls

- (b) the research costs of developing the process outweigh any savings possible from the use of the plastic
- (c) a small sailboat is not normally regarded as a high-tech
- product
- (d) hulls for small sailboats can be made from wood without converting it into plastic
- e) none of the above
- 48. Statement : According to a recent study on
- financial roles, one-third of high school seniors say that they have "significant financial responsibilities."
- contributing to food, shelter, or clothing for

These responsibilities include, but are not limited to,

- themselves or their families. At the same time, a second study demonstrates that a crisis in money management
- exists for high school students. According to this study, 80% of high school seniors have never taken a personal
- finance class even though the same percentage of
- seniors has opened bank accounts and one-third of these account holders have bounced a check.
- Which of the following conclusions can be properly
- drawn from the statements above?
- a. High schools would be wise to incorporate personal finance classes into their core curricula.
- b. At least one-third of high school seniors work part-time
- jobs after school.
- c. The number of high school seniors with significant financial responsibilities is greater than the number of seniors who have bounced a check.

- d. Any high school senior who contributes to food, shelter, or clothing for himself or hisfamilyhas significant financial responsibilities.
- e. The majority of high school students have no financial responsibilities to their families.
- 49. Statement: Students who consistently receive low scores on standardized tests have also demonstrated lower than average levels of self-esteem. As a result, educators believe that lowering the requirements for success on standardized tests will increase students'
- Which of the following, if true, concludes and contradicts about the point of view of the educators in the above statement?
- a) A person's level of self-esteem is usually established by the time he or she begins attending school and does not change.
- b) The scales for standardized tests are based on a nationwide sample tests and not on any local faction.
- c) Changing the grading scale for standardized tests will have no effect on the students' ability to succeed in college or graduate school.
- d) Self-esteem is a very fragile part of a person's psychology and is highly susceptible to changes caused by the outside faction.
- e) none of the above

level of self-esteem.

50. Statement :Donors are almost never offended by being asked for too much (in fact, they are usually flattered.) And if you ask for too much, our donor can

always suggest a smaller amount. On the other hand, donors are frequently offended by being asked for too little. A common reaction is, "So, that's all they think I'm worth."

The above statement concludes that?

a) donors are usually never asked for enough.

- b) a good fund-raiser will value the worth of the donor.
- c) it is worth the gamble to ask for large donations.
- d) fund-raisers often think that donors are incapable of giving much.
- e) none of the above

Critical Reasoning – Answer and Explanation

1. Answer: B

Statement II is the cause and statement I is its effect .Clearly, the university's decision came as a sequel to the complaint received by it from the college teachers against use of mobile phones in the college premises.

2. Answer: E

Both the statements I and II are effects of some common cause

The facts given in both the statements are clearly the result of acute power shortage.

3. Answer: C

Both the statements I and II are independent causes . An increase in the cases of atrocities on women and the police being unable to nab the culprits involved in the same are independent happenings in themselves.

4. Answer: B

Statement II is the cause and statement I is its effect . Clearly, damage to crops due to high temperature may

have resulted in a short supply of vegetables and hence an increase in their prices.

5. Answer: C

Both the statements I and II are independent causes .The given statements are self-sufficient and depict independent events.

6. Answer: D

Both the statements I and II are effects of independent causes . The students of government schools performing well in the examinations and the teachers of government schools leaving their jobs to join private schools are two separate situations that must have been triggered by independent causes.

7. Answer: B

Statement II is the cause and statement I is its effect. The reduction in procurement price of crops must have instigated the farmers not to sell their produce to Government agencies.

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8. Answer: B

Statement II is the cause and statement I is its effect. The government must have seen the unawareness of the people as a strong factor in the primary education programme being not successful. The step indicated in I must, thus, have been sought for as a remedy for the same.

9. Answer: A

Since the Competition Act provides for, keeping in view of the economic development of the country, statement 2 becomes the effect of the cause mentioned in statement 1.

10. **Answer** : **B**

According to statement 2, only registered proprietors have all the rightsto use the trademark in relation to the goods or service, hence this becomes the cause and also, in statement 1 the limitations of Unregistered trademark proprietors have been mentioned, this becomes the effect.

11. **Answer : C**

Consider each piece of the statement: "providing information"—a variety of information about the garbage situation is provided. "application of a general rule"—the general rule is that "After a public holidaythat falls on a Monday, garbage throughout the city is supposed to be collected one day later than usual." "to a specific case"—the specific case is the pickup of garbage this week in this neighborhood. Given that all

elementsoccurred and the answer presents an accurate course of action of the way theauthor made his or her statement, hence this answer is correct.

12. **Answer: B**

A series of minor earthquakes (minor events) weaken the existing infrastructure. The weakened infrastructure then allows a minorearthquake to do greater damage (an extreme response) than would a single major earthquake, hence this answer is correct.

13. **Answer : E**

We can follow the chain of connections in thestimulus to prove this answer: the ozone layer filters some wavelengths oflight; holes in the ozone layer are dangerous, but one previously overlookeddanger of the holes is possible eye damage for many species. From thesetwo statements we can infer that the holes must be letting some damagingwavelengths of light through. This is essentially what answer choice (E)states.

14. Answer: B

The statement tells the story of recentphysics theories: Newtonian physics was preeminent for over two centuries, and despite widespread acknowledgment and confirmation it was surpassed by Einsteinian physics in the early 1900s. Asshown by the case of Newtonian physics, success and substantiation is noguarantee of dominance.

15. **Answer : C**

The course of action to this statement is the fourth sentence, which begins with the conclusion indicator "For this reason..." By applying the Primary Objectivesyou should have identified this course of action while reading, and then, uponclassifying the question stem you should have looked for a paraphrase of this sentence. Answer choice (C) fits the bill, and is the correct answer.

16. Answer :C

Answer choice (C) is fully supported because the Statement provides information about both the number and percentage of obese children. Asstated earlier, if the stimulus provides information about both the numbers and percentages in a situation, then you can select any supported answerchoice that contains either numbers or percentages. Note the emphasis on the word "supported."

17. **Answer : C**

This is the correct answer. Some individuals takingantidepressants that cause weight gain will gain weight even though dietingcan reduce the amount of the gain.

18. **Answer : A**

Consider the author's position that the only effective way to reduceemissions is fuel replacement. Wouldn't it be more effective to simply stopusing cars altogether? Of course this is true, but this would undermine the conditional nature of the conclusion and so the author assumes that this possibility cannot occur. This answer clearly shows that there are other, more effective ways of reducing emissions and therefore this must be the correct answer.

19. **Answer :D**

action of the sugars, more serotonin enters the brain. The author then concludes that this leads to a mood elevation. Thus, we can conclude a course of action based on the fact in the statement that serotonin has an effect on the mood level.

This is the correct answer. The author states that after the

20. **Answer** : **D**

The assumption that is neededtherefore, is to show that movies and other electronic media somehow lead toa lessening of participation in civic organizations, political parties, and othergroups outside the family. This is the connection made in answer choice (D),hence it is the correct answer.

21. Answer: C

This would confirm or deny the inference that American government service is currently not corrupt. The statement only claims that this was so for the first hundred years after the passage of the Pendleton Act. There is no

information about the level of corruption for the past twenty-some years.

22. Answer: D

This statement explains that the number of diners in the town of Montrose as a whole has increased due to the opening of Bob's Bistro, and also explains why the patronage at Andrew's Eatery has increased. Bob's Bistro has apparently brought in many out-of-towners to eat at Montrose, and many of these first-time diners, when turned away from Bob's Bistro, arrive at Andrew's Eateryas the only alternative in town.

23. **Answer** : **E**

The statement provides some specific information about the effects of calorierestriction. In rats and mice, this diet is known to prolong life by preventing diseases. In a study of moderately overweight humans, insulin levels and body temperature decreased.

- (A) The statement states that calorie restriction in mice and rats prolongs life bypreventing diseases. The human study had much more limited findings that calorie restriction in moderately overweight humans decreases insulin levels and body temperature.
- (B) While the passage indicates that certain traits known to be associated withlongevity are found in moderately overweight humans who reduce their calorieintake, this is far removed from the conclusion that calorie intake will actually increase a human's lifespan.

- (C) The study observed that individuals with the greatest percentage decrease intheir calorie intake demonstrated the greatest decrease in insulin levels and bodytemperature. This shows a strong correlation between calorie intake and insulinlevels. However, this correlation is not necessarily direct.
- (D) The study makes no reference to the health of individuals who reduce their calorie intake. It tries to draw some connection to the longevity of those individuals, but longevity is not the same as health.

(E) This choice is correct. The statement states that the

greatest decrease in insulin levelswas observed in

individuals with the greatest percentage change in their calorieintake. This means that some individuals in the study reduced their calorie intakeby a greater percentage than other individuals in the study. The statement also states that the study participants reduced their individual calorie intakes by "atleast 25 percent." Thus,

one can safely infer that there were some participantswho

reduced their calorie intake by more than 25 percent.

24. **Answer** : **B**

The stimulus is a fact set and offers asolution for dating event when the usual sources offer an conflictingchronologies: 1. Minimize the number of competing sources, possibly byeliminating the less credible of ones. 2. Independent the usual sources, determine which date is more likely to be right. By definition, historiography is the writing of history.

(A):The stimulus discusses dates where there is conflict between sources. In noway does the stimulus support answer choice (A).

(B): This is the correct answer. As stated in the last sentence, historians are on occasion unsuccessful in determining independently the date of an event. If the usual sources offered are in conflict about the date of a particular event and ananalysis independent of the usual sources fails to confirm a date, then a date cannot be reliably determined for the event.

(C): About onethirdof all test takers choose this answer. The stimulus speaks specifically ofdating an event when the usual sources offer conflicting chronologies. Thestimulus does not discuss dating an event when there is no conflict ofchronologies, and most likely many dates could be set with certainty in theabsence of any conflict.

(D): The language of the answer choice istoo strong in saying that an independent determination is an ineffective wayof dating events.

(E): This is another tricky answer, and just under aquarter of test takers incorrectly select this answer. The answer claims thatthe soundest approach to dating an event is to undermine the credibility of asmany of the competing sources as possible.

25. Answer: B

As by focusing on efficiency the changes of loan recovery will increase. So, Option (b) can be inferred from the above statement as it is given that the government is looking to overhaul yearly targets and control bad debts.

26. Answer: A

Option (a) is the best choice because it is within the purview of the statement. It is clear that the government plans to take these steps in the hope of meeting the requirement for parking space in the city. This can be inferred from the given statement as it is in sync with the government's intentions presented above.

Option (b) is incorrect because it suggests that diversion of traffic from neighboringareas creates further problem; however, this cannot be justified from the statement.

Option (c) cannot be inferred from the statement because the argument pertains to the problem of parking space in public areas within the city and not residential areas.

Hence, this is an incorrect inference.

Option (d) is incorrect because it cannot be inferred from the statement. The statement does not refer to the problems related to following traffic rules. The behavior of the drivers on the road is also not discussed in the statement which is why no inference can be drawn on this basis.

27. Answer: C

Option (a) pertains to other islands that contain traces of dinosaurs. This cannot be inferred on the basis of the given statement which refers to the discovery made on a specific island.

Option (b) is a general statement regarding the difference in the evolution of male and female species of a race. This does not specifically pertain to the subject in question – tyrannosaurus. Hence, this cannot be inferred from the statement.

Option (c) is the best choice because it refers to a possibility based on the information given in the statement. It refers to the sudden discovery of wings and leaves it open for others to discover its possibility in some male species as well.

Option (d) is incorrect because there is no evidence present in the statement that justifies this statement. In fact, wings are not a common physical feature in tyrannosaurus which is quite clear from the discovery made by the two teams.

28. Answer: B

Since Advani's speciality is that he knows how one single decision affects the working of all the departments of the government. So any decision that affects the working of only one area of the government does not require the expertise of Advani.

29. Answer: E

Clearly, illiterate people lack will power and maturity in thoughts. They may easily be misled into false convictions or lured into temptations to vote for a particular group. So, statement II holds. However, a person is literate does not mean that he is conscious of all political movements,

which requires practical awareness or everyday awareness of everyday events. Thus, I also holds strong. Besides, the Constitution has extended the right to vote equally to all its citizens. Hence, III also holds.

30. Answer: B

Only inference (II) and (V) can be concluded. Inference (III) talks about the positive aspect, which is contrary to the details given in the passage. Nothing has been directly and in detail mentioned about inference(IV). Hence option (b) is correct.

31. **Answer: A**

This is a challenging problem because two of the wrong answer choices are attractive. The argument in the given statement itself is not overly complex, but you must pay attention to the language. Consider the conclusion of the argument: "Publicity campaigns for endangered species are unlikely to have much impact on the most important environmental problems." Ask yourself, why is it that these campaigns are unlikely to have much impact on the most important problems? According to the premises, the reason is that "it is more difficult to elicit sympathy for other kinds of organisms [than large mammals]." The reasoning shows that the author believes there is a connection between the important problems organisms that are not large mammals. This Supporter connection is perfectly reflected in answer choice (A), the correct answer.

32. **Answer** : **E**

Answer choice (E): This is the correct answer. The answer can be difficult because it is somewhat similar to answer choice (B), which many people already eliminated by the time they reached this answer. Answer (E) is different from answer (B) because it involves learning details from a third source. This is important because the conclusion references the independent discovery of calculus, and so the author must believe that neither Newton nor Leibniz learned anything substantial about calculus from other sources. This elimination of an idea that weakens the argument is the essence of a Defender answer choice. To further confirm the answer, consider the negation of this answer choice ("neither...nor" becomes "either...or"): "Either Newton or Leibniz learned crucial details about calculus from some third source." This negated answer undermines the assertion that Leibniz and Newton each independently discovered calculus. Consequently, this is the correct answer.

33. Answer: C

The statement here is that homosexuals do not have the right to marry as it affects the traditional institution of straight marriage negatively. Option (a) is unrelated because it doesn't address the statement which Centre's around tradition. Option (b) does not address the statement. Option (d) only talks about the impact on children.

34. Answer: D

The statement here is that "In general, modern medicine is a better option compared to traditional medicine." Option (a) is unrelated because instead of comparing modern medicine with traditional medicine it only talks of law suits against modern medicine manufacturers. Option (b) is unrelated since it talks about profit. Profit does not mean modern medicine is not better than traditional medicine. Option (c) is unrelated because instead of comparing modern medicine with traditional medicine, it just talks about

research. Option (d) weakens the statement because it says that most modern medicines have harmful side effects whereas traditional medicines don't.

35. Answer: A

- A. This is the main point of the statement. The author indicates, "Yet, this should be rejected," where this refers to "significantly greater automation of health care."
- B. The author argues against automation since it will "lack the in-person care that studies show patients desire." The statement is against automation, not for in-person care. In other words, "patients desire customized in-person care" is used as a premise to support the rejection of automation.
- C. Although this is a possible inference that can be made by piecing together the premises, it is not the statement that is being advocated.

D. The statement says nothing about executives becoming too greedy. Automation "should be rejected" because it "would cause patients to lose trust in the system."

36. Answer: C

We are given the following facts. From 1983 to 1999 total energy use increased less than 10%. During this same period, the use of electrical energy grew by more than 50%. During this same period, the gross national product (GNP) grew by more than 50%. A careful examination of the second sentence reveals that there is no stated connection between the growth of the GNP and the increase in the use of electrical energy. If you assume that the use of electrical energy somehow caused the growth of the GNP, you are guilty of making an unwarranted causal assumption. Because there is no stated connection between the two other than the they both grew by more than 50%, any answer that attempts to connect the two is incorrect.

Answer choices (D) and (E) can both be eliminated by this reasoning.

A close analysis also reveals that answer choice (B) can be eliminated.

you should be very suspicious of answer choice (A) (which states that the number of electrical units used was greater) and answer choice (B) (which states that the use of non-electrical energy declined) since they both contain numerical information.

At the same time, you should be attracted to an answer such as (C) because it contains only percentage information, and as it turns out, answer choice (C) is correct.

37. Answer: E

The Police Commissioner's proposal hopes to decrease the number of crimes in city Y by shifting police officers from low-crime to high-crime districts. His proposal is based on data that demonstrate that crime decreases when additional police officers are moved into a district. However, the data do not mention anything about the effect on the districts from which the police officers were removed. The commissioner's plan is based on the assumption that the movement of police officers will not have any adverse effect on the low-crime districts.

- (A) While it is encouraging that a similar plan worked successfully in City X, this fact is certainly not essential for the success of the plan in City Y. The cities may be so different as to make the comparison meaningless.
- (B) The police commissioner's proposal is focused solely on decreasing the number of crimes in city Y. The severity of the crimes has no bearing on whether the commissioner's proposal will succeed or not.
- (C) The actual numerical distinction between high and low-crime areas of the city is immaterial to the commissioner's proposal.
- (D) It would be practically beneficial to the commissioner's plan if there were more low crime than

high crime districts in city Y. This would enable the movement of police officers to every high crime district. However, this is not necessary to achieve the commissioner's goal of decreasing the total number of crimes in city Y.

(E) this is the correct choice. This choice establishes that, in fact, the low-crime districts do NOT suffer from significant crime increases after the removal of some officers-- an essential assumption upon which the commissioner's proposal depends.

38. **Answe** : **A**

The statement concludes that rising sea levels caused by global warming will destroy major coastal population centers and displace millions of people. Any assumption in support of this conclusion would have to corroborate that these events will definitively take place.

(A) This choice is correct. If new technological developments in the next century allow people to divert rising seas from the world's cities (i.e., population centers), cities will not be destroyed and millions of people will not be displaced. Thus, a necessary assumption is that these technologies will not be developed.

(B) A simple awareness of the steps to reduce emissions in no way undermines the statement's assumption, as this answer choice does not describe any action being taken by individuals.

population centers are similarly affected; this choice is too extreme and overreaching for the argument's conclusion.

(C) The statement never suggests that all coastal

(D) This might be true, but it is not an assumption on which the statement rests. Instead, this answer choice is simply an inference that might be drawn from the premises.

(E) The idea that human activity is the sole cause of global warming is neither suggested nor assumed by the argument. In addition, the wording "sole cause" is too extreme.

39. **Answer: E**

The researchers claim that Delta-32 prevents its carriers from contracting the Plague. They support this claim by noting that a strikingly large percentage of descendants of Plague survivors carry the mutation. We are asked to find an assumption underlying the claim.

- (A) The statement is specific to the relationship between Delta-32 and resistance to the Plague. Other diseases are irrelevant.
- (B) Again, the statement is specific to the relationship between Delta-32 and resistance to the Plague. Other diseases are irrelevant.
- (C) Delta-32 may have existed in its current form before the sixteenth century and the merit of the argument would not change.
- (D) The statement does not claim that Delta-32 prevents all bacteria-caused disease.

(E) This choice is correct. The researchers claim that Delta-32 prevented its carriers from contracting the Plague on the basis of its presence in descendants of Plague survivors. In order to claim that the mutation prevented the Plague, we must assume that the Plague did not cause the mutation Delta-32.

40. Answer: E

The author concludes that one will only be able to determine the age of a Brazilian ash by counting its rings if the temperature in the tree's environment never exceeds 95 degrees Fahrenheit. The author bases this conclusion on the fact that the tree loses rings when the temperature exceeds that level. However, if the number of rings lost by a Brazilian ash at high temperatures can be predicted, it may be possible to determine the age of a tree even if the temperature exceeds 95 degrees.

- (A) The statement says nothing about precipitation. This answer choice is out of scope since it would require a number of other assumptions to make it relevant to the statement's conclusion.
- (B) Whether other trees share this feature is irrelevant; the statement focuses only on the Brazilian ash.
- (C) The number of days of excessive heat needed to cause the tree to lose rings is irrelevant.
- (D) The thickness of the rings is irrelevant.
- (E) This choice is correct. The conclusion is that the rings will be a reliable measure only if the temperature never exceeds 95 degrees. This is true only if there is no way to

predict how many rings would be lost when the temperature does exceed 95 degrees.

41. **Answer** : **B**

The conclusion is that a company should wait until purchases of an old device begin to decline before announcing a new device. The basis for this claim is that consumers stop buying the old device. We are asked to strengthen the argument.

- (a) The typical drop in the price of new technology does not influence whether a company should wait until sales of an old technology begin to decline before introducing a new one.
- (b) This choice states that media outlets such as television and magazines often report on the planned introduction of new devices while sales of old devices are still strong. The argument requires that consumers "hear about the new device"; stories in the media provide a means for consumers to do so. Hence B is correct.
- (c) If many consumers are unable to determine the superiority of new technology, then they might be less swayed to wait for a new, recently announced device than otherwise. As a result, this claim may be seen to weaken the assertion.
- (d) The number of technology purchases per year does not directly relate to this argument. The argument is about waiting until the consumer demand declines before announcing a new technology.

(e) The passage makes no mention of whether the technologies belong to the same company or different companies

42. Answer: E

The best approach for these kinds of questions is to treat each question independently as a true/false question. In this case, each of the three selections is false. The first selection could be true based on the information that some spouses have enrolled in the programme, but it is possible that spouses might be enrolled without being employees. Similarly, for b and c and hence choice (e) is the right answer.

43. Answer: C

This is an 'if then' kind of argument. (a) is incorrect because the first sentence of the argument required to be a 1st slip position to occupy the position of a wicketkeeper. (c) is the exact opposite of (a) and hence is the right answer.

44. **Answer** : **D**

We have to find a conclusion for the statement. The best way to do that is to ask "why" with each option. When we do this, D forms the best question that can be answered by the given statement and that's why it is the correct answer.

45. **Answer** : **C**

If this point was not true and the White rhinos have shifted to another location, then the conclusion will not hold good. However, if this point was actually true, it would clear any confusion and provide evidence for the foresters' view.

46. **Answer: B**

You may immediately go ahead and select (d) but Voltaire is not the main topic of the passage. Please consider all options before you answer. Option (a) doesn't follow from the passage. The passage presents the idea that a person who believes in ridiculous things or superstitious or illogical things can easily commit evil deeds against others. So the obvious option to infer from that is (b) The person's beliefs are dangerous to others.

47. **Answer : D**

The author is trying to point out the redundancy of the socalled new invention/development. Hulls are made of wood. The new invention involves a method, which converts wood into some kind of plastic, which is then used to make hulls of ships. The new invention is basically lengthening and complicating the process. Thus, D is

48. Answer: C

correct.

This passage relates information from two studies concerning high school seniors: the first discusses the financial responsibilities of high school seniors, while the

second explains the coursework in finance taken by typical high school seniors.

- (a) Although it might be true that schools would be wise to educate students in finance, this is an opinion; it doesn't necessarily need to follow from the given evidence.
- (b) The fact that one-third of high school seniors claim "significant financial responsibilities" to their families does not necessarily mean that these same students work "part-time jobs after school." There are many possible ways that these students might earn money for their families. If they do work, they might work on weekends or over the summer, for example.
- (c) This choice is correct. The first study states that one-third of all high school seniors have significant financial responsibilities to their families. The second study states that 80% of seniors have opened a bank account, and of this 80%, one third has bounced a check. The number of seniors that has bounced a check (one-third of 80%) is fewer than the number of seniors with significant financial responsibilities to their families (one-third of 100%).

(d) The passage states that certain high school seniors who contribute to the food, shelter, or clothing for themselves or their families rate themselves as having significant

financial responsibilities. This does not mean that any high school senior who contributes to these categories has significant financial responsibilities.

(e) The passage states that one-third of high school seniors

say that they have "significant financial responsibilities." This in no way indicates that the other two thirds have "no" responsibilities. Because no information is given about the other two-thirds of the students, a reasoned conclusion cannot be drawn about them.

49. Answer: A

The conclusion in the statement is that altering the tests so that students will receive higher score which will have a positive effect on students' self-esteem levels. (a), if true contradicts this by showing that self-esteem is already set and cannot be changed by something like test scores.

50. Answer: C

The conclusion is that potential donor will be flattered by requests for large donations and frequently offended by requests for small amounts. Therefore, it is worth the gamble to start high. At worse, the potential donor may decrease his request. Alternatives (a), (b) and (d) are not conclusion made in the statement.



Data Sufficiency

S.

Directions (1-2): The question below can be answered using one of the options given below. Study the following information carefully and find out which of the following option is sufficient to answer.

1) Eight persons namely – A, B, C, D, E, F, G, and H are sitting around a circular table facing the center. G and E sit together. D sits third to the left of E. Two persons sit between G and A, who sits adjacent to D.

Who sits immediate right of H?

- a) Two persons sit between B and C. B sits adjacent to H but not adjacent to D.
- b) Two persons sit between F and H. F neither sits adjacent to G nor sits adjacent to E.
- c) B sits facing F, who sits immediate left of C. F and G don't sit together.
- d) C sits immediate right of F, who doesn't sits adjacent to G. B sits adjacent to H, who doesn't sits adjacent to A.
- e) Either C or D.
- 2) Nine persons namely –B, G, H, J, L, N, R, S and W are sitting in a linear row facing north. B sits fourth from the right end. W neither sits adjacent to H nor sits adjacent to B. Three persons sit between B and H, who sits immediate right of R. Two persons sit between S and W.

Who sits second to the right of L?

a) G, who doesn't sits adjacent to W, sits third places from N. One person sits between N and J.

- b) J sits third to the right of B. L and W doesn't sit together.
- C) Two persons sit between N and G, who doesn't sit adjacent to W. J sits at one of the ends but not adjacent to
- G.d) J sits second to the right of N. L doesn't sit adjacent to
- e) More than one statement is sufficient.
- (Directions 3–5): Below question consists of one question followed by two statements you have to decide which of the following statement is sufficient to answer.
- a) If only statement I alone is sufficient to answer the question.
- b) If only statement II alone is sufficient to answer the question.
- c) If either statement I or statement II alone sufficient to answer the question.
- d) If neither the statement I nor statement II together are sufficient to answer the question.
- e) If both the statement I and statement II together are sufficient to answer the question
- 3) Six persons P, Q, R, S, T, and U are sitting around a circular table facing the center. Who sits immediate right of Q?

- I. R sits third to the left of the one who sits second to the left of P. Neither P nor R sits adjacent to either S or Q.
- II. R sits facing S, who sits second to the left of P. Neither P nor S sits adjacent to T.
- 4) Five persons namely G, H, K, L, and M were born in different years viz.- 1992, 1989, 1985, 1981, and 1977 but not necessarily in the same order. The age of each person is calculated from the base year 2020. Who among the following person was born just before H?
- I. Two persons were born between L and K, whose age is a multiple of 3. The age of H is not a prime number and was born after G.
- II. H was born two persons after G and his age is a multiple of 7. Two persons were born between L and
- K, who was born before L.
- 5) Six persons namely B, D, G, H, M, and U are attending a seminar during a week starting from Monday to Saturday but not necessarily in the same order. Who attends the seminar just after D?
- I. U attends a seminar on Friday three days after B.

 Two persons are attending a seminar between G and
- H, both are attending a seminar after B.II. H attends the seminar on Wednesday and attends
- the seminar two days after M. Neither M nor H attends the seminar just before G. More than two persons are attending a seminar between B and G.
- Directions (6-8): Study the following statement carefully and decide which of the following statement

- in the option is sufficient to answer the below questions.
- 6) Seven persons namely P, Q, R, S, T, U, and V are sitting in a circular table facing the center, then who among the following person sits immediate left of T?
- a) S sits third to the left of U. V sits second to the right of Q, who doesn't sit adjacent to U. T neither sits adjacent to U nor sits adjacent to V.

b) One person sits between S and R, who sits third to the

- left of T. S neither sits adjacent to T nor sits adjacent to U. c) Two persons are sitting between P and V, who sits third to the right of T.
- d) The Person immediately left of T sits fourth to the right of S, who sits second to the left of R. Q and R are not sitting together.
- e) More than one statement is sufficient.
- 7) Seven persons namely Ankur, Shreya, Tapsi, Kokila, Murgan, Sameer, and Navya were born in the same week starting from Tuesday to Monday. Ankur was born on Sunday and was born three days after Sameer. Who among the following person was born just after Murgan?
- I. Shreya was elder than Murgan and Ankur but younger than Navya. Murgan is not the youngest.
- II. Murgan was elder than Kokila and Tapsi but younger than Shreya, who is not the eldest.
- III. Kokila is elder than Ankur and Tapsi but younger than Shreya and Murgan. Navya is the eldest.
- a) Only statement I alone is sufficient

- b) Either statement II or statement III alone is sufficient
- c) Either statement I or statement II alone is sufficient
- d) None of these
- e) Onlystatement III alone is sufficient
- 8) Statements:
- I. Some Cycles are Train.
- II. No Bus is Auto.
- III. Some Autos are Train.
- **Conclusions:**
- I. Some Cycles are not Cart.
- II. Some Autos are not Cart.
- Which of the following statements need to be added in such a way that both the given conclusions are
- definitely true?a) Some Cycles are Cart.
- b) No Cart is Auto.
- c) No Train is Cart.
- d) All Buss are Cart.
- e) More than one statement is true.
- **Directions (9-10): Each of the questions below consists**
- of a question and two statements numbered I and II. You have to decide whether the data provided in the
- statements are sufficient to answer the questions.
- a) If data in statement I alone sufficient to answer, while data in statement II is not sufficient to answer
- the question.
- b) If data in statement II alone sufficient to answer, while data in statement I is not sufficient to answer the question.

- c) If data in either statement I or II alone sufficient to answer the question.
- d) If data in both statements I and II together are not sufficient to answer the question.
- e) If data in both statements I and II together are sufficient to answer the question.
- 9) There are five friends P, Q, R, S, and T. Each of them was born in the same month of the same year on different dates viz.- 10, 17, 19, 26, and 31but not necessarily in the same order. T was born on which of the following date?
- I. S and P were not born on an even date. S was born before P. Only two persons were born between R and Q.
- II. None of them was born after Q. One person was born between T and R. Either T or R was born on an even date.

10) There are seven persons namely – C, E, G, H, I, O,

- and N in a family. Is I is the grandson of H?
- I. H is the father of G. E is the brother-in-law of G. E has two children.
- II. N is the son-in-law of E and not married to I. O is the daughter of C. G is the maternal uncle of O. I is the sibling of O.
- Direction (11-12): Below questions consists of two statements I and II you have to decide which of the following statement is sufficient to answer the following question.
- 11) Seven persons are living in a building topmost floor is numbered as 7 and the bottom-most floor is

numbered as 1. Who lives on the fourth floor?

- I) there are two persons live between B and A. F lives on the top floor. There are four floors between B and G, who lives on an even floor.
- II) There are three floors above and below A.
- a) Only I
- b) Only II
- c) Neither I nor II
- d) Both I and II
- e) Either I or II
- 12) There is an uncertain number of the person sitting in a row faces north. How many persons are there in a row?
- I) Three persons sit between P and Q, who sits left of P and one of them sits at extreme ends. Five persons sit between P and R, who sits fourth from one of the extreme ends. Only three persons sit to the right of R.
- II) Six persons sit between P and Q, who sit at the extreme left of the row. O sits fourth right to P. S sits
- fourth left of P.
- a) Only Ib) Only II
- c) Neither I nor II
- d) Both I and II
- e) Either I or II
- Directions (13-17): Each of the questions below consists of a question followed by two statements numbered I and II. You have to decide whether the data provided in the statements are sufficient to answer the questions.

- a) If data in statement I alone is sufficient to answer.
- b) If data in statement II alone is sufficient to answer.
- c) If data in either statement I or statement II alone is sufficient to answer.
- d) If data in both statements I and statement II together are not sufficient to answer.
- e) If data in both statements I and statement II together are sufficient to answer.
- 13) Six persons namely –A, B, C, D, E, and F are sitting around a triangular table in such a way that one person sits on each side facing center and one person sits on each corner facing away from the center. Who sits immediate right of B?
- I. Two persons are sitting between B and A, who sits on the sides. Neither C nor F is sitting adjacent to B. One person sits between E and D.D and F are not immediate neighbors.
- II. C sits second to the left of B, who sits on the corner. Neither D nor F is sitting adjacent to C. F and A are sitting

together but A and C are sitting together.

14) Which of the following statement is sufficient such

that all three conclusions are true?

Statement: Only Tea is Coffee. Only a Few tea are Juice.

All Ice-crème is Juice. Few Tea are Soda.

Conclusion: Some Tea is not Ice-cream. All Soda can never be Tea. Some Juice is not Cold Drink.

- I. Only Soda is Cold Drink.
- II. No Ice-cream is Cold Drink.

15) Eight persons namely – A, B, C, D, E, F, G, and H are equally sitting around two concentric circular tables. The person in the inner circular table sits exactly facing the persons in the outer circular table. The person facing D sit immediate right of G, who sits facing away from the center. One person sits between

Who among the following persons sits immediate left of H?

I. One person sits between B and E. C and F are facing each other.

II. One person sits between A and F, who doesn't sit facing D.

16) Six persons namely – B, C, D, E, F, and G were born in different years viz.- 1987, 1989, 1991, 1994, 1996, and 1999. Who among the following person was

born just after B?

G and H, who sits facing E.

I. C was born three years after E, who was born in an evennumbered year. Two persons were born between E and B.

One person was born between F and D.

II. Three persons were born between C and B. Two persons were born between G and D, who was born in 1987.

17) Seven Ph.D. persons namely – P, Q, R, S, T, U, and V submits a thesis on seven days of a week starting

from Monday to Sunday. Who among the following

person submits the thesis just before V?

I. Q submits a thesis on Saturday and three persons submit thesis between Q and P. Two persons are submitted thesis between V and T, who neither submits a thesis on Wednesday nor Friday.

II. Three persons submit T and S, who submits the thesis

on Friday. Two persons submit a thesis between U and V, who neither submits thesis Tuesday nor Sunday.

Directions (18-20): Study the following statement carefully and decide which of the following statement.

carefully and decide which of the following statement in the option is sufficient to answer the below questions.

18) Eight persons namely – A, B, C, D, E, F, G, and H

are sitting around a circular table facing the center. C

sits three places away from B. Person who sits second right of B sits facing H, who sits third to the right of F. Who among the following person sits second to the right of E?

a) G and F are not sitting together. D and G are sitting together.

b) One person sits between D and A, who is not sitting

adjacent to B. Persons facing A sits adjacent to E.

c) Two persons are sitting between G and A, who doesn't sit adjacent to B.

d) The Person facing D sits second to the right of A, who doesn't sit adjacent to G. B sits immediate left of G.

e) More than one statement is sufficient.

19) Nine persons namely – A, B, C, D, E, F, G, H, and I are sitting in a row facing north. A sits third from the

left end and sits fourth to the left of B. Two persons are sitting between F and H, who either sits immediate left

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of B or immediate right of A. H sits fourth to the left of E.

Who among the following person is sitting second to the right of C?

- a) Three persons are sitting between D and I, either of them sits at the end.
- b) Persons second to the right of C sit five places away from D.
- c) Three persons are sitting between person adjacent to H and D, who sits at any place right of C.
- d) The number of persons between C and H is the same as the numbers of persons between D and I.
- e) None of the statements is sufficient., m
- 20) Five boxes A, B, C, D, and E are kept one above

the other. Color of each box is different viz.- Pink, Yellow, Blue, Red, and Black. The red box is kept three

places above box D, which is kept just above the Pink box. One box is kept between box E and Blue box. The

color of box E is neither red nor Pink.

Which of the box is kept just below box B?

- a) The black box is kept two places below box C.
- b) The yellow box is kept just below box C.
- c) Box A has kept three places below the Yellow box.
- d) The black box is kept exactly between boxes A and C.
- Box E is not in black color.
- e) More than one statement is sufficient.

Direction: (21-24): Each of the following questions below consists of a question and some statements are 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.

21) Six persons A, B, C, D, E and F are sitting around

a triangular table facing centre such that three of them are sitting at the corners and the remaining are sitting in the middle of each side but not necessarily in the

same order. Then who sits immediate right of A?

I) A sits second to the right of D and sits in the middle

of the table. Two persons sit between D and E.

II) Two persons sit between E and F and sits in the middle of the table. B sits second to the right of E and second to the left of A.

- a) Only statement I alone is sufficient
- b) Only statement II alone is sufficient
- c) Either statement I or statement IIis sufficient
- d) Both statement I and statement II is sufficient
- e) None of these
- 22) What is the code of 'Corona' in a certain code?
- I) 'Corona is pandemic' is written as 'su da tc'
- II) 'Medicine is produced' is written as 'tcphra'
- III) 'Corona is dangerous' is written as 'tcsu, gi'
- IV) 'No vaccination till' is written as' qi pnsi'
- a) Only statement I alone is sufficient

d) Statements I, II and III is sufficient

- b) Only statement IV alone is sufficient
- c) Either statement I or statement II is sufficient
- e) None of these
- 23) Ram is 16th from the right end in the class and Shyam is 17th from the left end in the class. Find the

total students in a class, if ram sits to the right of shyam?

- I) If they interchange their position then the position of Ram is 20^{th} from the right end.
- II) If 5 students sit between Ram and Shyam.
- a) Only statement I alone is sufficient
- b) Only statement II alone is sufficient
- c) Either statement I or statement II is sufficient
- d) Neither statement I nor statement II is sufficient
- e) None of these

Ε.

- 24) Six boxes are arranged in two stacks from bottom to top numbered from 1-3. Each stack contains three boxes. Stack X is in the West of Stack Y. Which box is
- placed immediate above B in the same stack?
- I) Box B is kept west of box F and placed immediate above box A but not in the same stack.
- II) One box is placed between box B and Box E both are in the same stack. C is placed west of D. Box E is
- placed above box B. No box is placed to the west of box
- a) Only statement I alone is sufficient
- b) Only statement II alone is sufficient
- c) Either statement I or statement II is sufficient
- d) Neither statement I nor statement II is sufficient
- e) Both statement I and statement II are sufficient

Direction (25-26): Each of the questions below consists of a question and three statements numbered as I, II and III given below it. You have to decide whether the

data provided in the statements are sufficient to answer the question. Read all the three statements and give answer.

25. A, B, C, D and E are five persons who live on a five floor building where ground floor is numbered as 1^{st} floor, the floor above it is numbered as 2^{nd} so on till the topmost floor is numbered as 5^{th} but not necessarily in the same order then find who among the following lives

topmost floor. D lives immediately above A's floor.

II. Two persons lives between D and E. C lives on an even numbered floor.

I. E lives on an odd numbered floor but not on the

- III. B lives above C's floor but not immediately above.
- **D lives above E's floor.**(a)Both II and III
- (b)Both I and III

on the 3rd floor?

- (c)Both I and II
- (d) Any of the two statements
- (e) All I, II, III
- 26. M is in which direction with respect to N?
- I. W is in the east of Z, who is in the south of Q.
- II. M is in the north of W and east of Q.
- III. N is in the south-west of Z.
- (a) Both I and II
- (b) Only III
- (c) Any two of the three

- (d) All I, II and III
- (e) None of these

Direction (27-28): Each of the questions below consists of a question and two statements numbered as I and II given below it. You have to decide whether the data provided in the statements are sufficient to answer the

question. Read all the two statements and give answer.

27) Eight persons P, Q, R, S, T, U, V and W sitting around a rectangular table but not in the same order

around a rectangular table but not in the same order.

Four of them sit at the corner while remaining sit at the middle of each side of the table. All of them are facing towards the centre. Who sits third to the right of the one who faces U?

I) Three persons sit between R and T. U sits third to the left of T.

II) Two persons sit between S and V, who sits at the middle of the table. Q sits second to the left of V. U sits third to the left of S.

- a) Only statement I
- b) Only statement II
- c) Either statement I or statement II
- d) Neither statement I nor statement II
- e) Both statement I and statement II

28) Seven persons L, M, N, O, P, Q and R goes to the market on different days of week starting from Monday but not in the same order. Who goes to the market at last?

I) O goes to the market on Wednesday. Two persons go between O and P. Three persons go between P and

R. Two persons go between M and L who goes to the market on Monday. N doesn't go on Sunday.

II) M goes on Friday. Two persons go between L and M. Four persons go between L and Q.

- a) Only statement I
- b) Only statement II
- c) Either statement I or statement II
- d) Neither statement I nor statement II
- e) Both statement I and statement II

In each of the following questions two statements are given. You have to decide which of the following statement logically sufficient to get the answer of the following questions.

- **a)** If statement I is alone sufficient.
- **b**) If statement II is alone sufficient.
- c) If either statement I or II is alone sufficient.
- **d**) If neither statement I nor II is alone sufficient.
- **e**) If both statements I and II together are sufficient.

29) Six boxes viz. - P, Q, R, S, T and U are kept one above other in the form of stack but not necessarily in the same order. Which of the following box is kept just above the box T?

I) One box is kept between the box U and the box T. Box P is kept three places above box S. The box R is kept just above the box U. Box S and box T are not kept adjacent

to each other.

II) Two boxes are kept between S and P, which is kept just below the box U. The box Q is not kept at bottom.

Box U is kept three places above the box Q. The box R is neither kept adjacent to the box P nor to box S.

30) Five persons namely – P, Q, R, S and T are sitting in a row facing north. Each person works in different bank - RBI, PNB, BOB, SBI and UBI. All the information is not necessarily in the same order. Who sits immediate right of the one who works in RBI?

I) The one who works in PNB sits second to right of S. Q sits third to left of R, who works in BOB. One person sits between R and the one who works in PNB. S neither works in RBI nor works in UBI. The one who works in UBI sits immediate right of P.

II) T neither works in PNB nor works in BOB. One person sits between the one who works in BOB and the one who works in PNB. The one who works in SBI sits third to left of T at extreme end. The one who works in PNB sits immediate right of P. Two persons sit between Q and R, who doesn't sits adjacent to the one who works in SB

31) Eight persons namely – A, B, C, D, E, F, G and H

31) Eight persons namely – A, B, C, D, E, F, G and H are sitting in a square table in such a way that one person sits at each corner and one person sits at middle of each side. Person sitting at the middle of the sides are facing away from centre and persons at corner facing centre. All the information is not necessarily in the same order. Who sits second to the right of G?

I) D is facing E, who sits immediate left of C. H sits third to right of F, who sits immediate left of A. D neither sits adjacent to H nor sits adjacent to F. One person sits between C and A, who doesn't sits adjacent to H.

II) One person sits between A and C, who doesn't sits adjacent to B. C sits adjacent to E, who is facing D. B sits at one of the corners and third to right of A. Two persons sit between D and H when counted from the left of D.

32) Age of seven persons namely – P, Q, R, S, T, U and V are different. Age of how many persons are more than Q?

I) U is eldest and age of only one person is less than T. Age of only two person are more than P. S is younger to P and R but not as much as V and Q.

II) Age of only one person is more than R. Age of only three person is less than S. Age of P is more than S and T but not as much as U and R.

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:

Each of the questions below consists of a question and

- a) If the data in Statement I alone is sufficient to answer the question, while the data in Statement II alone is not sufficient to answer the question.
- **b**) If the data in Statement II alone is sufficient to answer the question, while the data in Statement I alone is not sufficient to answer the question.
- c) If the data either in Statement I alone or in Statement II alone is sufficient to answer the question.
- **d**) If the data in both the Statements I and II together are not sufficient to answer the question.
- **e**) If the data in both the Statements I and II together are necessary to answer the question.

- 33) Salary of seven persons namely A, B, C, D, E, F and G are different. Salary of who among the following is second lowest?
- I). Salary of only G is more than B. Salary of C is not lowest. Salary of A is more than E and D but not as much as B. Salary of only two persons is less than D.
- **II).** Salary of only one person is more than B. Salary of F is lowest. Salary of E is more than D and C but not as much as G and B. Salary of A is not the highest.
- 34) Seven persons namely P, Q, R, S, T, U and V lives on seven floored building marked 1 to 7 from bottom to top but not necessarily in the same order. What is the position of S from bottom?
- I). P lives just below Q, who doesn't lives on topmost floor. T lives on even number floor and lives three floors away from P. R neither lives on adjacent floor of P nor lives adjacent floor of Q. U lives four floors above R.
- **II).** R lives three floors below Q, who lives on even numbered floor. V neither lives on adjacent floor of Q nor R. T lives on adjacent floor of V but not on odd number floor. U lives on any floor above P, who lives on odd number floor.
- 35) Six persons namely P, Q, R, S, T and U sits in a row facing north but not necessarily in the same order.

Who sits immediate right of U?

I). P sits third from left end. Q neither sits adjacent to P nor sits adjacent to R. One person sits between P and R. S sits immediate right of Q. Neither U nor S sits at end of the row.

- **II).** Three persons sit between Q and R, who doesn't sits at the end. P sits second to left of R, who doesn't sits adjacent to S. One person sits between T and U.
- 36) Six persons namely P, Q, R, S, T and U sit in a circular table facing centre. Who sits immediate right of R?
- sits adjacent to U. S neither sits adjacent to Q nor T.

 II). U is facing Q, who sits adjacent to P. R neither sits

I). T is facing R. T sits second to left of Q, who doesn't

- adjacent to P nor sits adjacent to U.

 37) In a family of six members having one married couple, who is R's son?
- I). R is mother of Q, who is only sister of T's father. L is only brother of T and is son of J who is a female. T is a granddaughter of R.
- **II).** R is brother of Q's mother. H is mother-in-law of L's brother. J is married to Q and is only son of T.

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:
- a) If the data in Statement I alone is sufficient to answer the question, while the data in Statement II alone is not sufficient to answer the question.
- **b)** If the data in Statement II alone is sufficient to answer the question, while the data in Statement I alone is not sufficient to answer the question.
- c) If the data either in Statement I alone or in Statement II alone is sufficient to answer the question.

- **d**)If the data in both the Statements I and II together are not sufficient to answer the question.
- **e**) If the data in both the Statements I and II together are necessary to answer the question.
- 38) Height of six persons namely -P, Q, R, S, T and U are different. Height of who among the following is second tallest?
- **I.** Height of only two persons is more than Q. Height of P is more than R and T but not as much as U and S.
- **II.** Height of only two persons is less than P. Height of S is more than R and U but not as much as Q and T.
- 39) Six persons namely P, Q, R, S, T and U sits around a rectangular table facing center but not necessarily in the same order. In such a way that two persons sit at longer side and one person sits at each smaller side. Who is facing P?
- **I.** T sits immediate left of R. U sits second to left of S, who sits at smaller side. R neither sits adjacent to U nor sits adjacent to S.
- **II.** P sits third to right of R. One person sits between S and U. R sits immediate left of Q, who sits at one of the smaller side.
- 40) Five persons namely A, B, C, D and E live on five floor building marked 1 to 5 from bottom to top but not necessarily in the same order. Each person likes an even number from 2 to 10. One number is likes by only one person. Who lives just above the one who likes 6?
- **I.** B, who likes 2, lives on an odd number floor. The one who likes 10 lives three floors below B. D, who likes 8,

- lives on an odd number floor just below E. One person lives between D and C, who doesn't lives on adjacent floor of E.
- **II.** The one who likes 2 lives just above E. At least two person lives below E. D lives two floors above C and likes 8. C does not like 6.
- 41) Six boxes namely P, Q, R, S, T and U are kept one above another not necessary in same order. Which box is kept just below box Q?
- **I.** Box U is kept third from top and is kept at a gap of two boxes from P. Box R is neither kept adjacent to box P nor box U. Box T is kept at any place below box U but not immediately below.
- II. Only one box is kept below box T, which is kept at a gap of two from box S. Box R is kept adjacent to box S and is at a gap of one box from box U. R is placed above U.
- 42) How "Life" is coded in the given code language?

 I. "Book More Life System" is coded as "go la zm hq" and "Half Book Keep System" is coded as "hm dj la zm".
- II. "Long Day More Life" is coded as "pm xm hq go" and "Heavy Day Book System" is coded as "xm pz zm la".
- three statements numbered I, II and III given below it. You have to decide whether the data provided in the statements are sufficient to answer the question:

Each of the questions below consists of a question and

- 43) Six persons A, B, C, D, E and F live on six floored building marked 1 to 6 from bottom to top but not necessarily in the same order. Each person likes different number viz.- 7, 11, 12, 16, 19 and 21. D lives on floor 3 and lives three floors below C. F, who likes 16, lives just below C. Two persons live between the one who likes 21 and B, who doesn't like odd number. Three persons live between the one who likes 16 and 21. Who lives just above the one who likes 7?
- **I).** D neither likes 7 nor likes 11. Two persons live between the one who likes 11 and the one who likes 19.
- II). A, who doesn't likes 21, lives on any floor below the one who likes 11. At least two persons live between E and the one likes 11.
- **III).** E, who doesn't likes prime number, lives two floors below the one who likes 19. The one who likes 11 lives on floor 6.
- a) Only I
- **b**) Either II or III
- c) Only II
- **d**) Either I or II or III
- e) None of these
- 44) Sam, Teza, Ravi, Shreya, Deep, Jay and Hari sit in a row facing south. Sam sits third from right end. One person sits between Sam and Hari, who neither sits adjacent to Ravi nor sits at end of the row. Three persons sit between Ravi and Teza. Who sits immediate left of Shreya?
- I). Shreya and Sam don't sit together.

- **II).** Jay sits at any position right of Deep but not at the end of the row.
- III). Neither Hari nor Ravi sits adjacent to Deep.
- a) Either II or III
- **b**) Both I and II
- c) Either III or both I and II
- d) Only III
- e) Only II
- 45) Eight boxes A, B, C, D, E, F, G and H are kept
- one above other. Box B is kept four places below C which is not kept adjacent to H. One box is kept
- between C and E. Box E is kept three places below box
- G. At least three boxes are kept between E and D. G is
- not kept sixth from the bottom. Which of the box is
- kept just below box F?
- **I).** Box F is kept at any position below box H.
- **II).** Three boxes are kept between box F and A.
- III). Box A is not kept adjacent to B but kept above box
- H.
- a) Either II or III
- b) Only III
- c) Either III or II
- d) Only II
- e) None of these
- 46) Eight persons P, Q, R, S, T, U, V and W are sitting in a circular table facing centre but not necessarily in
- the same order. R is facing Q, who doesn't sits adjacent
- to T. One person sits between Q and W. S and V sits

together. Neither S nor V sits adjacent to Q. Who is facing T? (2 Marks)

- **I).**T sits second to left of V and sits facing P.
- II).S and U sit together.
- III). T and W sit together.
- a) Either II or III
- **b**) Only III
- c) Either I or III
- **d**) Either I or II
- e) one of these

among all.

many persons are younger to A?

47) Ages of A, B, C, D, E, F and G are different. How

- I). D is younger to F and B but not C and G. F is eldest
- II). A is younger to D but not E and G. Only one person
- is younger to E.
- **III).** Only two persons are older to D. A is younger to F and B but not E. C is elder to E and G but not B and D. B
- is not the eldest but G is the youngest. F and B are elder
- to D.

 a) Only III
- **b**) Both I and II
- c) Either I or III
- d) Either III or Both I and II
- e) None of these
- 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

have to decide whether the data provided in the statements are sufficient to answer the question:

- **a)** If the data in Statement I alone is sufficient to answer the question, while the data in Statement II alone is not sufficient to answer the question.
- **b**) If the data in Statement II alone is sufficient to answer the question, while the data in Statement I alone is not sufficient to answer the question.
- c) If the data either in Statement I alone or in Statement II alone is sufficient to answer the question.
- **d**) If the data in both the Statements I and II together are not sufficient to answer the question.
- e) If the data in both the Statements I and II together are necessary to answer the question.
- 48) P, Q, R, S and T lives on five floor building marked

1 to 5 from bottom to top but not necessarily in the

same order. Each person likes different colours viz.-Red, Blue, Green, Black and Yellow. Who lives just

below the one who likes Yellow? (2Marks)

one who likes Black lives two floors below P. The one who likes Red lives three floors above Q. Neither the one

who likes Green nor Yellow lives on lowermost floor.

I). S, who likes Black, lives on an even number floor. The

- II). P likes Red and lives on floor 4. One person lives between the one who likes Green and R. The one who
- likes Red lives two floors above S, who doesn't likes

Green. Two persons live between the one who likes Green

- and the one who likes Black.
 - 49) Six friends namely Mike, Sam, Tom, Jai, Rohit and Hari are standing in a row according to their heights in descending order from left to right not

necessary in same order . Height of how many persons is less than Jai?

I). Height of only one person is more than Mike. Height of Jai is more than Rohit but not as much as Tom and Hari. Hari is not a tallest person and Rohit is not the shortest person.

II). Height of only two persons are more than Hari. Height of Rohit is more than Sam but not as much as Jai and Mike. Tom is tallest among all.

Below consists of a question and three statements numbered I, II and III given below it. You have to decide whether the data provided in the statements are sufficient to answer the question:

sufficient to answer the question:
50) Six boxes B01, B02, B03, B04, B05 & B06 are kept one above other in the form of stack but not necessarily in the same order. Each box contains different articles viz. Bottle, Book, Ball, Mobile, Pen and Bat but not necessary in the same order. Box B03 is kept at a gap of three boxes below the box which contains Ball. The box which contains Pen is neither kept at top nor adjacent to the box B06.One box is kept between the

box which contains Pen and the box B04, which contains Ball. The box B06 is neither kept adjacent to the box which contains Ball nor the box B03. The box B06 is kept just below the box which contains Book. How many boxes are kept below the box which contains Bat? (2 Marks)

I). The box B01 is kept at a gap of two boxes from the box B02, which contains Book. The box B05 is kept just below the box which contains Mobile.

II). The box which contains Mobile is kept at a gap of two boxes above the box B02. Three boxes are kept between the box which contains Bottle and the box B01.

III). The box B02 is kept just above the box which contains Bottle. The box B01 doesn't contain Bat. Two boxes are kept between the box which contains Bottle and the box B05.

- a) Only II
- **b**) Either II or III
- c) Only III
- d) Either I or II or III
- e) None

Data Sufficiency - Answers with Explanation

1. D

Explanation:

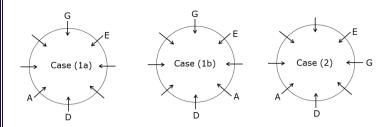
We have:

- D sits third to the left of E.
- G and E sit together.

That means, in case (2) G sits immediate left of E, in case (1) G sits immediate right of E.

Two persons sit between G and A, who sits adjacent to D.

That means, in case (1a) & case (2) A sits immediate left of D, in case (1b) A sits immediate right of D.



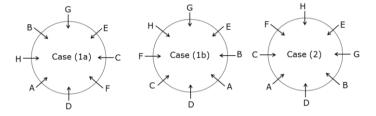
From C:

We have:

B sits facing F, who sits immediate left of C.

F and G don't sit together.

Based on the above-given information we have:



Cleary, the exact position of H is not known.

Hence, statement C is not sufficient.

Form D:

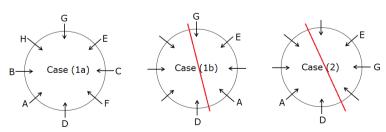
We have:

C sits immediate right of F, who doesn't sits adjacent to

G.

B sits adjacent to H, who doesn't sits adjacent to A.

Based on the above-given information we have:



Clearly, B sits immediate right of H. Thus, statement D is alone sufficient.

Hence, option D is the correct choice.

2. C

Explanation:

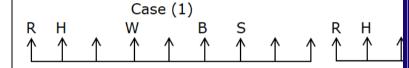
We have:

- B sits fourth from the right end.
- Three persons sit between B and H, who sits immediate right of R.

That means, R sits at left end.

- W neither sits adjacent to H nor sits adjacent to B.
- Two persons sit between S and W.
 That means, in case (1) W sits second to the right of H, in case (2) W sits second from the right end.

Based on the above-given information we have:



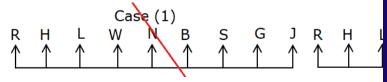
From C:

We have:

Two persons sit between N and G, who doesn't sit adjacent to W.

J sits at one of the ends but not adjacent to G.

Based on the above-given information we have:



Clearly, S sits second to the right of L. Thus, only statement C is sufficient to answer.

Hence, option C is the correct choice.

Direction (3-5):

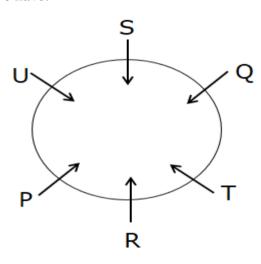
- **3.** E
- **4.** A
- **5.** E

Explanation:

3.

From I and II:

We have:



Clearly, S sits immediate right of Q.

Hence, both statements I and II together are sufficient to answer.

4.

From I:

We have:

Year	Name
1977	G
1981	K
1985	Н
1989	М
1992	L

Clearly, K was born just before H.

Hence, the statement I is alone sufficient.

From II:

We have:

Year	Case(1)	Case(2)
1977	K	G
1981	М	K
1985	G	Н
1989	L	М
1992	Н	L

Clearly, in both cases the different person was born just before H, thus statement II is not sufficient.

5.

From I:

We have:

Day	Name
Mon	M/D
Tue	В
Wed	H/G
Thu	D/M
Fri	U
Sat	H/G

Clearly, the exact seminar day of D is not known.

Thus, the statement I is not sufficient alone.

From II:

We have:

Day	Name
Mon	М
Tue	В
Wed	Н
Thu	D/U
Fri	U/D
Sat	G

Clearly, the exact seminar day of D is not known.

Thus, statement II is not sufficient alone.

From I and II:

Day	Name
Mon	М
Tue	В
Wed	Н
Thu	D
Fri	U
Sat	G

Clearly, U attends just after D.

Hence, both statements I and II together are sufficient.

Direction (6-8):

6. C

7. D

8. C

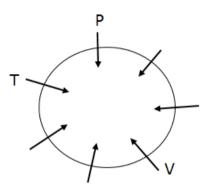
Explanation:

6.

We have:

Two persons are sitting between P and V, who sits third to the right of T.

Based on the above given information we have:



Clearly, P sits immediately left of T.

Hence, option C is the correct choice.

7.

From the above given statements we have:

Day	Statement III	Statement II	
Tue		Navya	
Wed	Shreya /	Shreya	,
Thu	Sameer	Sameer	
Fri	Murgan/Shreya	Murgan	1
Sat	Murgan/	Kokila/Tapsi	
Sun	Ankur	Ankur	
Mon		Tapsi/Kokila	

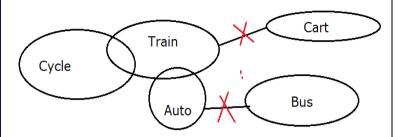
Clearly, we can't find a person who born just after Murgan.

Hence, option D is the correct choice.

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8.

From statement C we have the following diagram:



Hence, option C is the correct choice.

Direction (9-10):

9. D

10. D

Explanation:

9.

From I:

We have:

Date	Case (1)	Case (2)	Case (3)
10	Q/R	R/Q	R/Q
17	S	Т	S
19	Р	S	Т
26	R/Q	R/Q	R/Q
31	Т	Р	Р

Clearly, we don't have the exact date of T.

Hence, the statement I is not alone sufficient.

From II:

We have:

Date	Case (1)	Case (2)
10		R/T
17	T/R	
19		T/R
26	R/T	
31	Q	Q

Clearly, we don't have the exact date of T.

Hence, statement II is not alone sufficient.

From I and II:

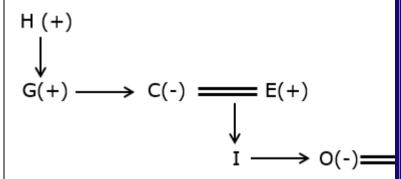
Since, both statements are independent.

Hence, the statement I and II together are not sufficient.

10.

From I & II:

We have:



Since, the gender of I is not known.

Hence, the statement I and II are not sufficient.

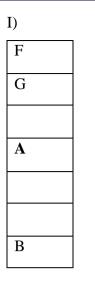
Direction (11-12):

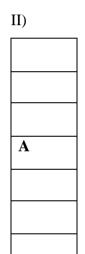
11. E

12. A

Explanation:

11.





Either I or II statement is required to answer the question.



Only I statement is required to answer the question.

Direction (13-17):

13. B

14. A

15. C

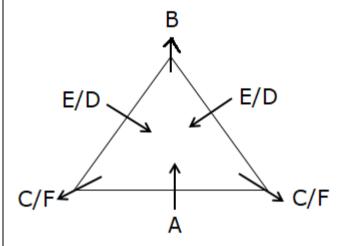
16. E

17. E

Explanation:

13.

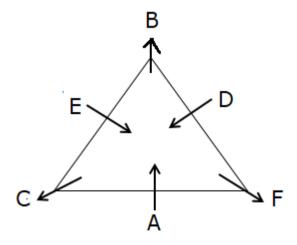
From I:



Thus, we can't say who sits an immediate right of B.

Hence, the statement I is not sufficient.

From II:

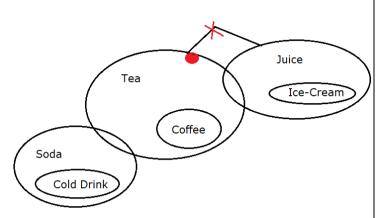


Thus, D sits an immediate right of B.

Hence, statement II is alone sufficient.

14.

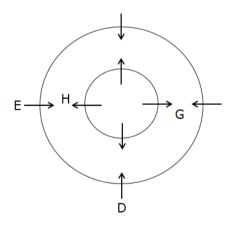
From I:



Hence, the statement I is alone sufficient.

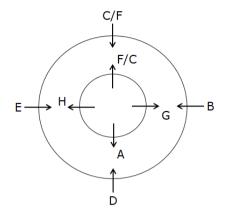
15.

We have:



From I:

We have:

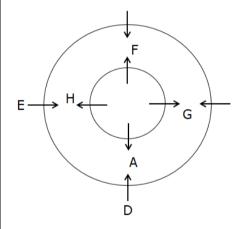


Thus, A sits immediate left of H.

Hence, the statement I is alone sufficient.

From II:

We have:



Thus, A sits immediate left of H.

Hence, statement II is alone sufficient.

16.

From I:

Year	Name
1987	F/D
1989	В
1991	F/D
1994	G
1996	Е
1999	С

Thus, we don't know who was born just after B.

Hence, the statement I is not sufficient.

From II:

We have:

Year	Name
1987	D
1989	C/B
1991	
1994	G
1996	
1999	B/C

Thus, we don't know who was born just after B.

Hence, statement II is not sufficient.

From I and II:

We have:

Year	Name
1987	D
1989	В
1991	F
1994	G
1996	E
1999	С

Thus, F was born just after B.

Hence, both statements I and II together are sufficient.

17.

From I& II:

We have:

Day	Name
Monday	Т
Tuesday	Р
Wednesday	R
Thursday	V
Friday	S
Saturday	Q
Sunday	J

Direction (18-20):

18. D

19. E

20. D

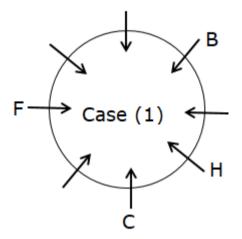
Explanation:

18. We have:

C sits three places away from B.

Person who sits second right of B sits facing H, who sits third to the right of F.

Based on the above given information we have:



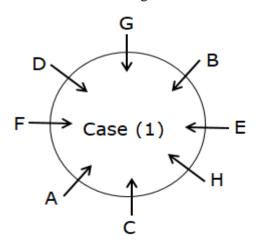
From D:

We have:

The Person facing D sits second to the right of A, who doesn't sit adjacent to G.

B sits immediate left of G.

Based on the above given information we have:



Thus, G sits second to the right of E.

Hence, option D is the correct choice.

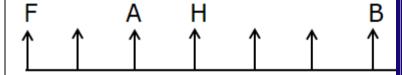
19.

A sits third from the left end and sits fourth to the left of B.

Two persons are sitting between F and H, who either sits immediate left of B or immediate right of A.

H sits fourth to the left of E.

Based on the above given information we have:



None of the above statements is sufficient.

Hence, option E is the correct choice.

20.

The red box is kept three places above box D, which is kept just above the Pink box.

One box is kept between box E and Blue box.

The color of box E is neither red nor Pink.

Based on the above given information we have:

Box	Color
	Red
Е	
D	Blue
	Pink

From D:

The black box is kept exactly between boxes A and C.Box

E is not in black color.

Box	Color
C/A	Red
Е	Yellow
В	Black
D	Blue
A/C	Pink

Thus, box D is kept just below box B.

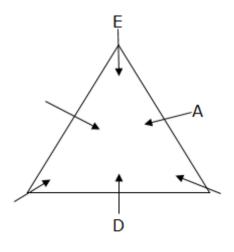
Hence, option D is the correct choice.

Direction (21-24):

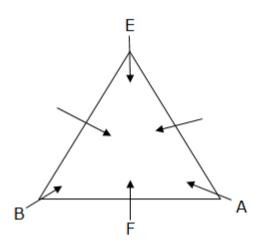
- **21.** A
- **22.** D
- **23.** C
- **24.** B

Explanation:

21.



II)



Only statement I alone is sufficient

22.

Statements I, II and III is sufficient

23.

Total Students = Ram's position from the right end after interchanging + Shyam's position from the left end -1 20+17-1 = 36 students.

II) Total Students = Ram's position + Shyam's position +

Students between them

16 + 17 + 5 = 38 Students

Either statement I or statement II is sufficient

24.

I)

	Stack X	Stack Y
3		
2	В	F
1		A

	Stack X	Stack Y
3	В	F
2		A
1		

II)

	Stack X	Stack Y
3	Е	
2	С	D
1	В	

Only II statement is required to answer the question.

Direction (25-26):

25. D

26. D

Explanataion:

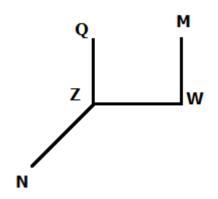
25.

Sol By using Any of the two statements we can determine that A lives on 3rd floor.

Floors	Persons
5	В
4	D
3	A
2	С
1	Е

26.

From I, II and III it is clear that M is in north-east of N.



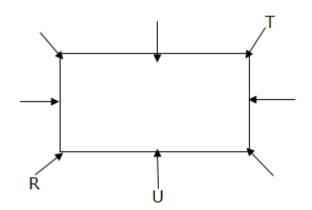
Direction (27-28):

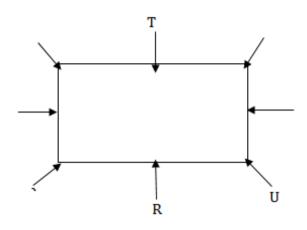
27. A

28. C

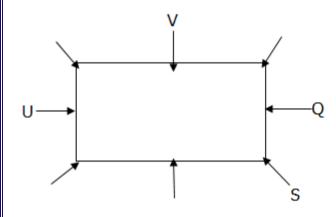
Explanation:

27. I)





II)



Only I statement is required.

28.

I)

Mon	Tue	Wed	Thu	Fri	Sat	Sun
L	R	О	M	N	P	Q

II)

Mon	Tue	Wed	Thu	Fri	Sat	Sun
	L			M		Q

Either Statement I or Statement II is required to answer the question.

29. C

Explanation

From I:

We have:

• Box P is kept three places above the box S.

That means, in case (1) the box P is kept at top, in case (2) the box P is kept second from top, in case (3) the box P is kept third from top.

- One box is kept between the box U and the box T.
- Box R is kept just above the box U.
- Box S and box T are not kept adjacent to each other.

That means, case (1) & case (2) are not valid.

Case (1)	Case (2)	Case (3)
Р	Q	R
R	Р	U
V	R	Р
S	U	Т
Т \	S	Q
Q	Т	S

Case (1) & case (2) are not valid as box S and T are not kept adjacent to each other.

Thus, box P is kept just above the box T.

Hence, statement I alone is sufficient to answer.

From II:

We have:

- The box U is kept three places above the box Q.
- The box Q is not kept at bottom.

That means, in case (1) box U is kept at top, in case (2) box U is kept second from top.

- Two boxes are kept between S and P, which is kept just below the box U.
- The box R is neither kept adjacent to the box P nor to box S.

That means, in case (2) box R is kept at top and box S is kept at bottom, case (1) is not valid.

Based on above given information we have:

Case (1)	Case (2)
U	R
P	U
	Р
Q	Т
S	Q
	S

Case (1) is not valid as box R is neither kept adjacent to the box P nor S.

Thus, box P is kept just above the box T.

Hence, statement II alone is sufficient to answer.

Hence, option C is correct choice.

30. A

Explanation

From I:

We have:

- Q sits third to left of R, who works in BOB.
- One person sits between R and the one who works in PNB.

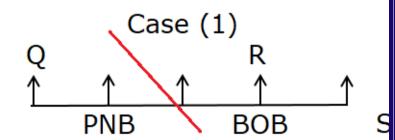
That means, in case (1) Q sits at extreme left end, in case (2) Q sits second from left end.

 The one who works in PNB sits second to right of S.

That means, in case (2) S sits at extreme left end, case (1) is not valid.

- S neither works in RBI nor works in UBI.
- The one who works in UBI sits immediate right of P.

That means, S works in SBI and P works in PNB.



Case (1) is not valid as the one who works in PNB sits second to right of S.

Clearly, P sits immediate right of the one who works in

RBI.

Hence, statement I is alone sufficient.

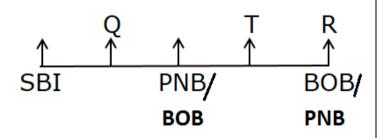
From II:

We have:

- The one who works in SBI sits third to left of T at extreme end.
- T neither works in PNB nor works in BOB.
- One person sits between the one who works in BOB and the one who works in PNB.
- Two persons sit between Q and R, who doesn't sits adjacent to the one who works in SBI.

That means, Q sits second from left end and the one who works in SBI sits at left end.

Based on above given information we have:



Thus, The one who works in PNB sits immediate right of P the above possibility will become invalid.

Hence, statement II is not sufficient.

Hence, option A is correct choice.

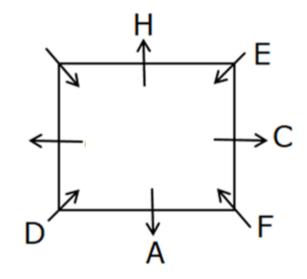
31. E

Explanation

From I:

- H sits third to right of F, who sits immediate left of A.
- D neither sits adjacent to H nor sits adjacent to F.
- D is facing E, who sits immediate left of C which means D sits at the corner.
- One person sits between C and A, who doesn't sits adjacent to H.

Based on above given information we have:



Here, exact position of G is not known.

Hence, statement I is alone not sufficient.

From II:

We have:

- B sits at one of the corner third to right of A.
- One person sits between A and C, who doesn't sit adjacent to B.

That means, C sits second to left of A.

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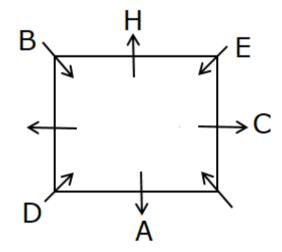
• C sits adjacent to E, who sits facing D.

That means, E sits immediate left of C.

• Two persons sit between D and H when counted from the left of D.

That means, H sits immediate left of B.

Based on above given information we have:

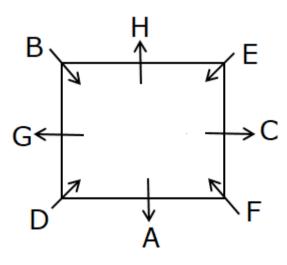


Since, exact position of G is not known.

Hence, statement II is not sufficient.

From I and II:

After combining both statements we have:



Clearly, H sits second to right of G.

Hence, both statements I and II together are sufficient.

Hence, option E is correct choice.

32. D

Explanation

From I:

We have:

- Age of only two persons is more than P.
- S is younger to P and R but not as much as V and Q.
- U is eldest and age of only one person is less than T.

Based on above given information we have:

$$U > R > P > S > V/Q > T > Q/V$$
.

Since, exact age of Q is not known.

Hence, statement I is not sufficient.

From II:

We have:

- Age of only three persons is less than S.
- Age of only one person is more than R.
- Age of P is more than S and T but not as much as U and R.

Based on above given information we have:

$$U>R>P>S>T/V/Q>V/T/Q>Q/V/T. \\$$

Since, exact age of Q is not known.

Hence, statement II is not sufficient.

From I and II:

After combining statement I and II we have:

$$U > R > P > S > V/Q > T > Q/V$$
.

Since, exact age of Q is not known.

Hence, statement I and II together is not sufficient.

Hence, option D is correct choice.

33. E

Explanation

From I:

We have:

- Salary of A is more than E and D but not as much as B.
- Salary of only G is more than B.

B > A > E/D.

G>B>__>__>__>_

- Salary of only two persons is less than D.
- Salary of C is not lowest.

Based on above given information we have:

 $G > B > __ > __ > D > __ > __ .$

Since, exact salary of A, E, F & C are not known.

Thus, statement I is not sufficient.

From II:

We have:

- Salary of F is lowest.
- Salary of E is more than D and C but not as much as G and B.
- Salary of only one person is more than B.
- Salary of A is not the highest.

Based on above given information we have:

 $G > B > __ > __ > __ > F$

Since, exact salary of D, A,E & C are not known.

Thus, statement II is not sufficient alone.

From I and II:

After combining above statements we have:

G > B > A > E > D > C > F

Thus, salary of C is second lowest.

Hence, statement I and II together are sufficient to answer this question.

34. D

Explanation

From I:

We have:

- T lives on even number floor and lives three floors away from P.
- P lives just below Q, who doesn't lives on topmost floor.

That means, in case (1) T lives on floor 2 and Q lives on floor 6, in case (2) T lives on floor marked 4 and Q lives on floor 2, in case (3) T lives on floor 6 and Q lives on floor 4.

- R neither lives on adjacent floor of P nor lives adjacent floor of Q.
- U lives four floors above R.

That means, in case (1) U lives on top floor, in case (3) U lives on floor 5, case (2) is not valid.



Floor	Case (1)	Case (2)	Case (3)
7	U		S/V
6	Q		Т
5	Р		U
4	S/V	Ţ	Q
3	R		Р
2	Т	Q	V/S
1	V/S	Ρ	R

Since, exact position of S is not known.

Thus, statement I is not alone sufficient.

From II:

We have:

 R lives three floors below Q, who lives on even numbered floor.

That means, in case (1) R lives on floor 1, in case (2) R lives on floor 3.

- V neither lives on adjacent floor of Q nor R.
- T lives on adjacent floor of V but not on odd number floor.
- U lives on any floor above P, who lives on odd number floor.

That means, in case (1) V lives on top floor and P lives on floor number 3, in case (2) V lives on bottom most floor and P lives on floor 5.

Based on above given information we have:

Floor	Case (1)	Case (2)
7	V	U
6	Т	Q
5	U	Р
4	Q	S
3	Р	R
2	S	Т
1	R	V

Since, exact position of S is not known.

Hence, statement II is not sufficient.

From I and II:

After combining above statements we have:

Floor	Case (1)	Case (2)
7	V	U
6	Т	Q
5	U	Р
4	Q	S
3	Р	R
2	S	Т
1	R	V

Clearly, exact position of S is not known.

Thus, statement I and II together are not sufficient.

Hence, option D is correct choice.

35. A

Explanation

From I:

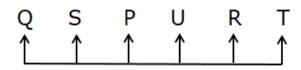
We have:

- P sits third from left end.
- One person sits between P and R.

- Q neither sits adjacent to P nor sits adjacent to R.
- S sits immediate right of Q.
- Neither U nor S sits at end of the row.

That means, Q sits at left end and R sits second from right end.

Based on above given information we have:



Thus, R sits immediate right of U.

Hence, statement I alone is sufficient to answer.

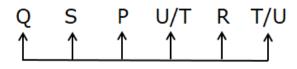
From II:

We have:

- Three persons sit between Q and R, who doesn't sits at the end.
- P sits second to left of R, who doesn't sits adjacent to S.
- One person sits between T and U.

That means, Q sits at left end.

Based on above given information we have:



Since, exact position of U is not known.

Thus, statement II alone is not sufficient to answer.

Hence, option A is correct choice.

36. A

Explanation

From I:

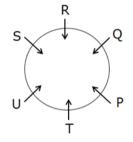
We have:

- T sits second to left of Q, who doesn't sits adjacent to U.
- S neither sits adjacent to Q nor T.
- T sits facing R.

That means, S sits second to left of T and P sits immediate right of T.

Since, Q and U doesn't sits together, thus U sits immediate left of T.

Based on above given information we have:



Thus, S sits immediate right of R.

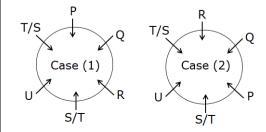
Hence, statement I is alone sufficient.

From II:

We have:

- U sits facing Q, who sits adjacent to P.
- R neither sits adjacent to P nor sits adjacent to U.

In case (1) P sits immediate right of Q, in case (2) P sits immediate left of Q.



Since, person immediate right of R is not known.

Hence, statement II alone is not sufficient to answer.

Hence, option A is correct choice.

37. D

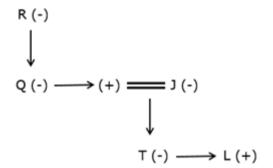
Explanation

From I:

We have:

- R is mother of Q, who is only sister of T's father.
- L is only brother of T and is son of J who is a female. T is a granddaughter of R.

Based on above given information we have:



Clearly, we don't know about R's son.

Hence, statement I alone is not sufficient to answer.

From II:

We have:

- R is brother of Q's mother.
- H is mother-in-law of L's brother.
- J is married to Q and is only son of T.

Based on above given information we have:

$$R (+) \longrightarrow H (-) \qquad T$$

$$\downarrow \qquad \qquad \downarrow$$

$$Q (-) = \longrightarrow J (+) \longrightarrow L (-)$$

Clearly, we don't know about R's son.

Thus, statement II alone is not sufficient to answer.

From I and II:

Clearly, both statements are independent so, we can't compare both the statements.

Hence, statement I and II together are not sufficient to answer.

Hence, option D is correct choice.

38. D

Explanation

From I:

We have:

- Height of only two persons is more than Q.
- Height of P is more than R and T but not as much as U and S.

Based on above given information we have:

S/U>U/S>Q>P>R/T>T/R.

Since, exact height of U and S is not known.

Thus, statement I alone is not sufficient to answer this question.

From II:

We have:

- Height of only two persons is less than P.
- Height of S is more than R and U but not as much as Q and T.

Based on above given information we have:

T/Q > Q/T > S > P > R/U > U/R.

Since, exact height of U and S is not known.

Thus, statement II alone is not sufficient to answer this question.

From I and II:

Since, both statements are independent, so the statements can't be compared.

Hence, statement I and II together not sufficient to answer.

39. B

Explanation

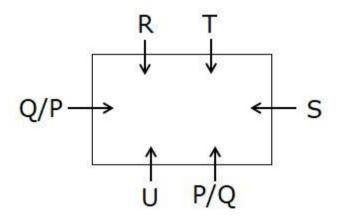
From I:

We have:

- U sits second to left of S, who sits at smaller side.
- R neither sits adjacent to U nor sits adjacent to S.
- T sits immediate left of R.

That means, R sits facing U.

Based on above given information we have:



Clearly, exact position of P is not known.

Thus, statement I is not sufficient.

From II:

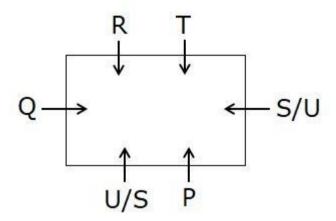
We have:

• P sits third to right of R.

- R sits immediate left of Q, who sits at one of the smaller side.
- One person sits between S and U.

That means, T sits facing P.

Based on above given information we have:



Clearly, T sits facing P.

Thus, statement II alone is sufficient to answer this question.

Hence, option B is correct choice.

40. E

Explanation

From I:

We have:

- The one who likes 10 lives three floors below B.
- B, who likes 2, lives on an odd number floor.

That means, B lives on floor marked 5.

- D, who likes 8, lives on an odd number floor just below E.
- One person lives between D and C, who doesn't lives on adjacent floor of E.

That means, C lives on floor marked 1.

Based on above given information we have:

Name	Floor	Number
В	5	2
Е	4	6/4
D	3	8
Α	2	10
С	1	4/6

Since, we don't know who likes 6.

Thus, statement I is not alone sufficient.

From II:

We have:

- The one who likes 2 lives just above E.
- At least two person lives below E.

That means, in case (1) E lives on floor marked 4, in case (2) E lives on floor marked 3.

- C does not like 6.
- D lives two floors above C and likes 8.

That means, in case (1) D lives just below floor of E, case (2) is not valid.

Based on above given information, we have:

	Case (1)		Case (2	2)
Name	Floor	Number	Name	Floor	Number
A/B	5	2	1	5	
E	4		1	4	2
D	3	8	E	3	
B/A	2			2	
С	1			1	

Since, we don't know who likes 6.

Thus, statement II is not alone sufficient.

From I and II:

After combining both statements together, we have:

Case (1)		
Name	Floor	Number
В	5	2
Е	4	6
D	3	8
Α	2	10
С	1	4

Clearly, E likes 6, thus B lives just above the one who likes 6.

Hence, both statement I and II are together sufficient to answer this question.

41. E

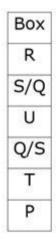
Explanation

From I:

We have:

- Box U is kept third from top and is kept at a gap of two box from P, that means box P is kept at bottom.
- Box R is neither kept adjacent to box P nor box U, that means box R is kept at top.
- Box T is kept at any place below box U but not exactly below, that means box T is kept just above box P.

Based on above given information we have:



Clearly, we don't know position of box Q.

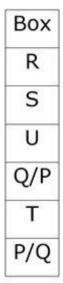
Thus, statement I alone is not sufficient to answer.

From II:

We have:

- Only one box is kept below box T, which is kept at a gap of two from box S, that means box T is kept second from bottom.
- Box R is kept adjacent to box S and is at a gap of one box from box U, that means box R is kept at top. R is placed above U.

Based on above given information we have:

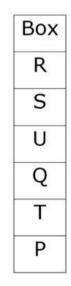


Clearly, we don't know exact position of box Q.

Thus, statement II alone is not sufficient to answer.

From I and II:

After combining above given statements we get:



Clearly, Box T is kept just below box Q.

Thus, both statement I and II together are sufficient to answer this question.

Hence, option E is correct choice.

42. D

Explanation

From I:

We have:

"Book More Life System" ----- "go la zm hq".

"Half Book Keep System" ----- "hm dj la zm"

After decoding above statements we have:

Book/System --> la/zm (not necessary in same order)

More/Life --> go/hq (not necessary in same order)

Half/Keep --> dj/hm (not necessary in same order)

Clearly, we can't determine exact code of "Life".

Thus, statement I alone is not sufficient.

From II:

We have:

"Long Day More Life" ----- "pm xm hq go".

"Heavy Day Book System" ----- "xm pz zm la".

After decoding above statements we have:

Day --> xm

Long/More/Life --> pm/hq/go (not necessary in same

order)

Heavy/Book/System --> pz/zm/la (not necessary in same

order)

Clearly, we can't determine exact code of "Life".

Thus, statement Halone is not sufficient.

From I and II:

After combining above statements we have:

Book/System --> la/zm (not necessary in same order)

More/Life --> go/hq (not necessary in same order)

Half/Keep --> dj/hm (not necessary in same order)

Day --> xm

Long --> pm

Heavy --> pz

Clearly, we can't determine exact code of "Life".

Thus, both statement I and II together are not sufficient to answer this question.

43. E

Explanation

We have:

- D lives on floor marked 3 and lives three floors below C.
- F, who likes 16, lives just below C.
- Three persons live between the one who likes 16 and 21.
- Two persons live between the one who likes 21 and B, who doesn't likes odd number.

Based on above given information we have:

Name	Floor	Number
С	6	
F	5	16
В	4	12
D	3	
	2	
	1	21

From I:

We have:

• D neither likes 7 nor likes 11.

Two person lives between the one who likes 11 and the one who likes 19.

That means, D likes 19.

Based on above given information we have:

Name	Floor	Number
С	6	11
F	5	16
В	4	12
D	3	19
A/E	2	7
E/A	1	21

Clearly, D lives just above the one who likes 7.

Thus, statement I alone is sufficient.

From II:

We have:

- A, who doesn't likes 21, lives on any floor below the one who likes 11.
- At least two person lives between E and the one likes 11.

Based on above given information we have:



Name	Floor	Number
С	6	11
F	5	16
В	4	12
D	3	7/19
Α	2	19/7
Е	1	21

Clearly, we don't know who likes 7.

Thus, statement II is not sufficient.

From III:

We have:

- E, who doesn't likes prime number, lives two floors below the one who likes 19.
- The one who likes 11 lives on floor marked 6.

That means, D likes 19 and A likes 7.

Based on above given information we have:

Name	Floor	Number
С	6	11
F	5	16
В	4	12
D	3	19
Α	2	7
E	1	21

Clearly, D lives just above the one who likes 7.

Thus, statement III alone is sufficient.

Hence, option E is correct choice.

44. E

Explanation

We have:

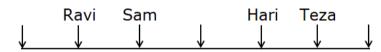
- Sam sits third from right end.
- One person sits between Sam and Hari, who neither sits adjacent to Ravi nor sits at end of the row.

That means, Hari sits second to the left of Sam.

• Three persons sit between Ravi and Teza.

That means, Ravi sits immediate right of Sam.

Based on above given information we have:



From I:

 Shreya and Sam don't sit together. So Shreya may be sits either from left end of the row or from right of the row.

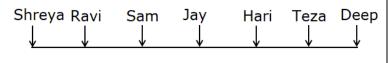
Statement I alone is not sufficient to answer.

From II:

 Jay sits at any position right of Deep but not at the end of the row.

That means, Shreya sits at right end and Deep sits at left end.

Based on above given information we have:



Clearly, Ravi sits immediate left of Shreya.

Thus, statement II alone is sufficient to answer.

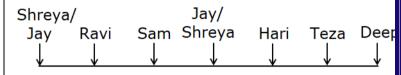
From III:

We have:

• Neither Hari nor Ravi sits adjacent to Deep.

That means, Deep sits at left end.

Based on above given information we have:



Clearly, exact position of Shreya is not known.

Thus, statement III is not sufficient.

Hence, option E is correct choice.

45. E

Explanation

We have:

- Box B is kept four places below C, which is not kept adjacent to H.
- One box is kept between C and E.
- Box E is kept three places below box G. G is not kept sixth from the bottom.

That means, in case (1) box B is kept third from bottom,

in case (2) box B is kept second from bottom

• At least three boxes are kept between E and D.

That means, in case (1) box G is kept at top, in case (2)

box G is kept second from top.

Case (1)	Case (2)
G	D
С	G
	С
E	
	E
В	
	В
D	

From I:

We have:

• Box F is kept at any position below box H.

Clearly, we don't know which box is kept exactly below box F.

Thus, statement I alone is not sufficient.

From II:

We have:

• Three boxes are kept between box F and A.

Based on above given information we have:

Case (1)	Case (2)
G	D
С	G
F/A	С
E	A/F
Н	E
В	Н
F/A	В
D	A/F

Clearly, we don't know which box is kept exactly below box F.

Thus, statement II alone is not sufficient.

From III:

We have:

• Box A is not kept adjacent to B but kept above box H.

That means, box A is kept just below box C.

Case (1)	Case (2)
G	D
С	G
Α	С
E	Α
H/F	E
В	H/F
F/H	В
D	F/H

Clearly, we don't know which box is kept exactly below box F.

Thus, statement III alone is not sufficient.

Hence, option E is correct choice.

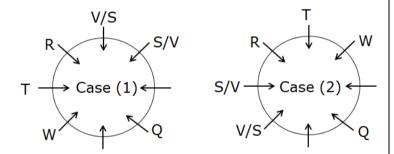
46. D

Explanation

We have:

- R sits facing Q, who doesn't sits adjacent to T.
- One person sits between Q and W.
- S and V sit together.
- Neither S nor V sits adjacent to Q.

Based on above given information we have:



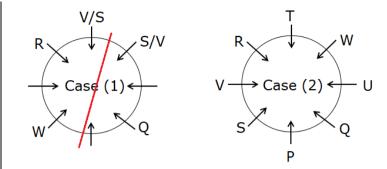
From I:

We have:

• T sits second to left of V and sits facing P.

That means, in case (2) P sits facing T.

Based on above given information we have:



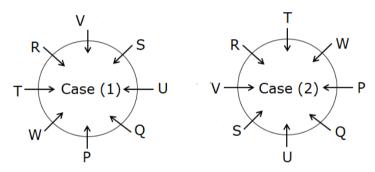
Thus, statement I alone is sufficient.

From II:

• S and U sit together.

That means, in both case U sits facing T.

Based on above given information we have:



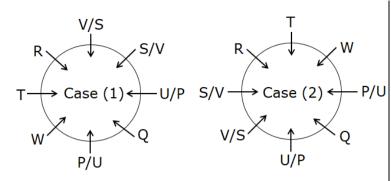
Clearly, T sits facing U.

Thus, statement II alone is sufficient.

From III:

We have:

• T and W sit together.



Clearly, we don't know who sits facing T.

Thus, statement III is not sufficient.

Hence, option D is correct choice.

47. E

Explanation

We have:

From I and II:

- F is eldest among all.
- D is younger to F and B but not C and G.

F > B > D > C, G.

• A is younger to D but not E and G.

D > A > E, G.

• Only one person is younger to E.

Based on above given information we have:

F>B>D>A/C>C/A>E>G/C.

Clearly, exact age of A is not known.

Thus, statement I and II is not sufficient.

From III:

We have:

- Only two persons are older to D.
- A is younger to F and B but not E.
- C is elder to E and G but not B and D. F and B are elder to D.

• B is not the eldest but G is the youngest.

That means, F is eldest in the group.

Based on above given information we have:

F > B > D > C/A > A/C > E > G

Clearly, exact age of A is not known.

Thus, statement III is not sufficient.

Hence, option E is correct choice.

48. E

Explanation

From I:

We have:

- S, who likes Black, lives on an even number floor.
- The one who likes Black lives two floors below P.

That means, S lives on floor marked 2.

- Neither the one who likes Green nor Yellow lives on lowermost floor.
- The one who likes Red lives three floors above Q.

That means, Q likes Blue and lives on floor marked 1.

Based on above given information we have:

Name	Floor	Colour
T/R	5	Green/Yellow
Р	4	Red
R/T	3	Yellow/Green
S	2	Black
Q	1	Blue

Clearly, exact floor of the one who likes Yellow is not known.

Thus, statement I alone is not sufficient to answer this question.

From II:

We have:

- The one who likes Red lives two floors above S, who doesn't likes Green.
- P likes Red and lives on floor 4.
- Two persons live between the one who likes Green and the one who likes Black.

That means, the one who likes Green lives on top floor.

 One person lives between the one who likes Green and R.

Based on above given information we have:

Name	Floor	Colour
T/Q	5	Green
Р	4	Red
R	3	Yellow/Blue
S	2	Black
Q/T	1	Blue/Yellow

Clearly, exact floor of the one who likes Yellow is not known.

Thus, statement II alone is not sufficient to answer this question.

From I and II:

After combining both statement I and II we have:

Name	Floor	Colour		
Т	5	Green		
Р	4	Red		
R	3	Yellow		
S	2	Black		
Q	1	Blue		

Clearly, S lives just below the one who likes Yellow.

Thus, statement I and II are together sufficient to answer this question.

49. A

Explanation

From I:

We have:

- Height of only one person is more than Mike.
- Height of Jai is more than Rohit but not as much as Tom and Hari.

Tom/ Hari > Jai > Rohit.

• Hari is not a tallest person and Rohit is not the shortest person.

Based on above given information we have:

Tom > Mike > Hari > Jai > Rohit > Sam

Clearly, height of only two persons is less than Jai.

Thus, statement I alone is sufficient to answer this question.

From II:

We have:

• Height of only two persons are more than Hari.

- Height of Rohit is more than Sam but not as much as Jai and Mike.
- Tom is tallest among all.

Based on above given information we have:

Tom > Mike/Jai > Hari > Jai/Mike > Rohit > Sam

Clearly, exact height of Jai and Mike is not known.

Thus, statement II alone is not sufficient to answer this question.

Statement I alone is sufficient to answer this question and statement II is not necessary to answer this question. Hence, option A is correct choice.

50. B

Explanation

We have:

- Box B03 is kept at a gap of three boxes below the box which contains Ball.
- One box is kept between the box which contains
 Pen and the box B04, which contains Ball.
- The box which contains Pen is neither kept at top nor adjacent to the box B06.
- The box B06 is neither kept adjacent to the box which contains Ball nor the box B03, that means in case (1) The box which contains Ball is kept at the top, in case (2) the box which contains Ball is kept third from top, in case (3) the box which contains Ball is kept second from top.
- The box B06 is kept just below the box which contains Book, that means in case (1) the box

which contains Book is kept second from bottom and case (2) is not valid.

Based on above given information we have:

Ca	Case (1)		Case (2)		e (3)
Box	Article	Box	Article	Box	Article
B04	Ball	B06			
				в04	Ball
	Pen	B04	Ball		
B03					Pen
	Book		Pen	B03	
B06		B03			

Case (2) is not valid as the box which contains Book is kept just above the box B06 and Case (3) is not valid as the box B06 is neither kept adjacent to the box which contains Ball nor the box B03.

From I:

We have:

- The box B01 is kept at a gap of two boxes from the box B02, which contains Book, that means the box B01 is kept second from top.
- The box B05 is kept just below the box which contains Mobile, that means the box which contains Mobile is kept second from top.

Based on above given information we have:

Box	Article
B04	Pall
B04	Ball
B01	Mobile
B05	Pen
B03	
BOO	Dools
B02	Book
B06	
500	

Clearly, we don't know exact position of the box which contains Bat.

Hence, statement I alone is not sufficient.

From II:

We have:

- The box which contains Mobile is kept at a gap of two boxes above the box B02, that means the box B02 contains Book.
- Three boxes are kept between the box which contains Bottle and the box B01, that means the box B01 is kept second from top.

Based on above given information we have:

Box	Article
B04	Ball
B01	Mobile
B05	Pen
B03	Bat
B02	Book
B06	Bottle

Clearly, only two boxes are kept below the box which contains Bat.

Hence, statement II alone is sufficient.

From III:

We have:

- The box B02 is kept just above the box which contains Bottle.
- Two boxes are kept between the box which contains Bottle and the box B05,that means the box which contains Bottle is kept at bottom.
- The box B01 doesn't contain Bat, thus the box B01 must contain Mobile.

Based on above given information we have:

Box	Article
B04	Ball
B01	Mobile
B05	Pen
B03	Bat
B02	Book
B06	Bottle

Clearly, only two boxes are kept below the box which contains Bat.

Thus, statement III alone is sufficient.

Hence, option B is correct choice.

Coding Decoding with Input Output

Direction1-5: Study the following information carefully and answer the given question:

A word and number arrangement device when given an input line of words, rearranges them

following a particular pattern in each step. The following is an illustration of input and rearrangement.

	Step 2	Step 3	Step 4
ees	33t s4n4 c2 4on4	%%1 2&	%%%
remo		& 1& &2	&&& %&
be		&	&&&
inma			
ldco	med4	3&	%&
arparti	10sq10su10d10m	&6&&&	&&&&&
cul	4oxi oe3	&3 2%	&% &%
enwh			
nda			
atb	3uc 3ui 5u5oq	%2 %2	%& %&
ath	etx5s	%3% 4%	%%% &%
utinp			
dswor			
	remo be inma ldco arparti cul enwh nda atb ath utinp	remo be inma ldco med4 arparti 10sq10su10d10m cul 4oxi oe3 enwh nda atb 3uc 3ui 5u5oq ath etx5s utinp	remo be inma ldco arparti cul enwh nda atb atb atb ath etx5s winna & 1& &2 & & & & & & & & & & & & & & & & & &

1. What is the step 2 of the given following statement?

Statement- blue gone white

- a. 44cm o4h4 u5xi5
- b. 3ui 5u5oq etx5s
- c. s4n4 c2 4on4
- d. 4oxi oe3 etx5s

- e. None of these
- 2) What is the 3rd word of the 3rd step of the following statement from right?

Statement: - injury even dog girl

- a. 2%&
- b. 3&&
- c. &2&

- d. &2%
- e. None of these
- 3) What is the 3rd word step 4 of the given following statement?

Statement: - particular when and

- a. &%
- b. &&
- c. %%
- d. %&
- e. None of these
- 4) What is 2nd word of the 1st step of the following statement?

Statement: - game win month

- a. inw
- b. nwi
- c. win
- d. either a or b

- e. None of these
- 5) What is 3rd word of the 2nd step of the following statement?

Statement: - hat input words

- a. sw5r
- b. 5u5oq
- c. etx5s
- d. either a or b
- e. None of these

Direction6-10: Study the following information carefully and answer the given question:

A word and number arrangement device when given an input line of words, rearranges them following a particular pattern in each step. The following is an illustration of input and rearrangement.

Statements	Step	Step Step St		Step
	1	2	3	4
White gone	Wht	w8t	2@	@@
bad	gn	g14	1@	#@
	bd	b4	1@	#@
Red turns	Rd	r4	1@	#@
blue	trns	t18ns	3@	#@
	bl	b12	1@	#@
Black eyes	Blck	b12ck	3@	#@
true	ys tr	y19	1#	##
		t18	1@	#@

6. What is the step 1 of the given following statement?

Statement- brown pram gone

- a. Brwn prm gn
- b. bron prm gon
- c. orwn parm gen
- d. Brwn pram gne
- e. None of these
- 7) What is the 2nd word of the 4th step of the following statement?

Statement: - white elephant blue

- a. @@
- b. #@
- c. ##
- d. #@
- e. None of these
- 8) What is the 3rd word of the step 2 of the given following statement?

Statement: - notebook turns yellow

- a. y12lw
- b. yl12w
- c. yll23
- d. 2511w
- e. None of these

9) What is 1st word of the 1st step of the following statement?

Statement: - raju wants car

- a. rj
- b. rau
- c. rju
- d. either a or b
- e. None of these
- 10) What is 4th word of the 3rd step of the following statement?

Statement: - kids playing football daily

- a. 2@
- b. 4@
- c. 4#
- d. 2#
- e. None of these

Direction 11-15: Study the following information carefully and answer the given question:

A word and number arrangement device when given an input line of words, rearranges them following a particular pattern in each step. The following is an illustration of input and rearrangement.

Statements	Step 1	Step 2	Step	Step
			3	4
Eat healthy	Fbs	F21	1&	&&
food	gfbksgx	gfbks31	5&	&7
	eppc	ep19	2&	\$&

Play strong	Okbx	Ok26	2\$	\$&
daily	rsqpmf	rsqp19	4&	\$&
	cbjkx	cbj35	3&	&&
Love each	Kpuf	Kp27 gb9	2&	\$&
other	fbbg	psg23	2&	\$&
	psgfq		3&	&&

11. What is the step 3 of the given following statement?

Statement- square are circle

- a. 4& 1& 4&
- b. 4\$ 1& 4&
- c. 4\$ 1& 4\$
- d. 4& 1\$ 4&
- e. None of these

12) What is the 1st word of the 1st step of the following statement?

Statement: - learn again

- a. Kfbqm
- b. Kfbrm
- c. Kfbqn
- d. Kebqm
- e. None of these

13) What is the 2nd word of the step 2 of the given following statement?

Statement: - gone high

- a. Fp19
- b. gj13
- c. gj12

- d. gk13
- e. None of these
- 14) What is 2nd word of the 4th step of the following statement?

Statement: - Only drive

- a. &\$
- b. \$\$
- c. &&
- d. either a or b
- e. None of these
- 15) What is 1st word of the 2nd step of the following statement?

Statement: - party hard

- a. Obq43
- b. Ocq43
- c. Obr43
- d. Ocr43
- e. None of these

Directions 16-20: Study the following information carefully and answer the questions given below.

In a certain language,

'CLIPS REFINE APPRECIATE MASSAGE' is a. 19I b. 5#TT coded as '13#FI 8##S 16I 4###EC' 'EFFORTS RECRUITMENT MIND SOULFUL' c. 7##EM is coded as '7##L 2###I 9IN 14#O' d. 8DU 'STUDIO LOTION RETRIBUTE REQUIRED' e. None of these 20) EFFORTS is coded as? is coded as '4UD 13###I 14##UI 2#TI' 'MODULE MOVEMENT ANCIENT MATTER' a. 7##I. is coded as '19I 5#TT 7##EM 8DU' b. 2###I 16) What is the code for 'MOISTURISER'? c. 9IN d. 14#O a. 13#U b. 5###U e. None of these **Directions 21-25: Study the following** c. 8##U d. 5###TU information carefully and answer the e. None of these questions given below. 17) 'ROTATING' is coded as? In a certain language, "Some parts are tough" is coded as "O#5, O&8, a. 9#AT b. 9##T A%19, R@5", "Search all the persons" is coded as "E#8, H&5, c. 11#AT E%19, L@12", d. 11##AT "Some truths are personal" is coded as "R@5, e. None of these 18) Which of the following word is coded as O#5, R&19, E%12", '1##M'? "Always prepare the sandwich" is coded as "H&5, A#8, L@19, R%5," a. SUPERMARKET b. STUPIDITY 21) What is the code for "TALENT"? c. SUMMARY a. A&20 d. FAILURE b. S&4

19) MOVEMENT is coded as?

e. None of these

e. None of these

c. A@4

d. S@20

22) Which of the following statements is true?

- a. KEPT THERE is coded as K%12, H&6
- b. PALACE is coded as A%5
- c. SKEPTICAL is coded as K#5
- d. HAPPY ALRIGHT is A@12, A@20
- e. None of these

23) What is the code of the sentence "ALONE

PRAYER STRUGGLE"?

- a. R%18, E%19, T@5
- b. L@5, P%18, S#5
- c. L@5, R%18, T#5
- d. T#5, R@18, L@5
- e. None of these

24) What is code for "personal"?

- a. R@5
- b. O#5
- c. R&19
- d. E%12
- e. None of these

25) Which letter is coded as the code for

R&19?

- a. Some
- b. truths
- c. are
- d. personal

Direction 26-30: Study the information carefully answers the questions given below.

In a coded language D, E, F, +, $^{\wedge}$, \sim are represented by 6, 12, 10, 4, 7 and 2 respectively.

When any two symbols used together then one of them represent hour hand and another represent minute hand in a clock.

For e.g

D ~ is represents 6:10 AM in clock.

^ F is represents 7:50 AM in clock.

Note - Consider all time at AM unless stated.

- 26) Sanjay starts walking at + F and goes to park and come back to home at D^. How much time Sanjay took in this period?
- a. 112 min
- b. 113 min
- c. 115 min
- d. 110 min
- e. 105 min
- 27) Renu start listening song at F + and listens until E ^. How much time she thinks she spend in listening songs?
- a. 2 hour 15 minutes
- b. 2 hour 18 minutes
- c. 3 hour 14 minutes
- d. 3 hour 17 minutes
- e. None of these
- 28) A Fashion show is scheduled at ^ F the Manager is required to reach at least 90 mins early so that it looks all the arrangements and schedule everything at the show. At what time should he reach?
- a. F^

- b. D+
- c. +D
- d. ~E
- e. Data inadequate
- 29) A washing machine takes 100 minutes to be Wash and Dry clothes completely at what time should Sneha start the machine so that it is wash and Dry clothes at the time when she wants the cloth to wear and she wants the cloth to wear at +D?
- a. D~
- b. ^+
- c. F+
- d. DE
- e. ~F
- 30) If the Program start at ~^ but dancer reaches 120 minutes late. At what time does she reach?
- a. ^~
- b. +F
- c. +^
- d. D+
- e. E~
- Directions 31-35: Answer the following questions based on the information given below:
- In a code language,
- "Centre solution jump migrate" is coded as
- "12&15, 7\$4, 13%10, 14@17"

- "Public tackle sincere here" is coded as "18@21,
- 14\$17, 3#0, __(1)_ "
- "Silence not corner hopeful" is coded as "12\$15,
- 16&19, 18&21, 20&23"
- "Run mobile (2) situation" is coded as
- "18#21, 20\$23, 2&5, 14%17"
- 31) Which among the following code comes in place of (1)?
- a. 3%6
- b. 2%5
- c. 6@9
- d. 5\$8
- e. 4\$7
- 32) Which among the following word comes in place of (2)?
- a. since
- b. timely
- c. horticulture
- d. garden
- e. covers.
- 33) Which among the following is correctly
- matched?
- a. Picnic 3&0
- b. Hungama 17% 14
- c. Lover 22&25
- d. Pointer 10&13
- e. Quite 9&12
- 34) Which of the following is the code for
- "hopeful"?

- a. 12\$15
- b. 16&19
- c. 18&21
- d. 20&23
- e. None of these
- 35) Which of the following is the code for "migrate"?
- a. 12&15
- b. 7\$4
- c. 13%10
- d. 14@17

- e. None of these
- 36-40) Direction: In each of the question given below, a group of digits/letter is given followed by four combinations of symbols numbered (1), (2), (3) and (4). You have to find out which of the four combinations correctly represents the group of digits/letters based on the symbol codes and the conditions given below. If none of the four combinations represents the group of digits correctly, give (5) i.e., none of these as the answer.

Digit	3	8	9	7	4	6	1	2	5
Symbo	#	%	@	\$	*	€	©	μ	£
1									

Conditions for coding the group elements:

- (i) If the first digit is even and the last digit is divisible by 3, then both are to be coded as X.
- (ii) If the first, as well as the last digit, is odd, then both are to be coded by the code of the first digit.
- (iii) If the first digit is odd and the last digit is even number, then the code of the first and last digit is to be interchanged.
- (iv) If even number is followed by perfect square, then the code of the perfect square is same as the code of that even number. (1 is counted as perfect square)

Note: If two conditions follows at the same time, apply condition in consecutive order i,e condition iv is followed after applying condition I or ii or iii 36) What is the code for "29548"?

- a. @ % μ * \$
- $b. \mu \mu \pounds * \%.$
- c. * © € \$ #
- d. \$ @ % µ *
- e. None of these
- 37) What is the code for "18537"?
- a. © € \$ # \$
- b. € \$ # * %
- c. © € \$ # *
- d. © % £ # ©

- e. None of these
- 38) What is the code for "41359"?
- a. X © # £ @
- b. * © μ € %
- c. ©© #£X
- d. * # % € X
- e. None of these
- 39) What is the code for "61348"?
- a. \$ * % € \$
- b. € € # * %.
- c. @ µ € © %
- d. \$ * # % €
- e. None of these
- 40) What is the code for "74523"?
- a. \$*£ μ \$.
- b. %*£ μ \$.
- c. \$*£ % \$.
- d. \$*£ %%
- e. None of these
- 41-45) Directions: In a certain number system

there are only two notations to represent

numbers: A and B. 0 is represented by A and 1

by B. The subsequent numbers are

represented in the following manner:

- 2 is represented as BA,
- 3 is represented as BB,
- 4 is represented as BAA,
- 5 is represented as BAB and so on.

- Based on this coded language, answer the following questions.
- 41) Which of the following is the sum of
- **AABBAA** and **ABABAB**?
- a. BAAAAB
- b. BAABAB
- c. BAAABB
- d. BBAAAB
- e. None of them
- 42) What is the resultant if BAAAAA is
- divided by BAAA?
- a. BA
- b. BAA
- c. BB
- d. BBA
- e. BBB
- 43) Which of the following is the average of
- **BBBB** and **BBBBB**?
- a. 22
- b. 18
- c. 25
- d. 23
- e. None of these
- 44) What is the cube of 20% of BBBB?
- a. BBBAB
- b. BBBBA
- c. BBBAA
- d. BBABB
- e. None of them.

45) Which of the following is a multiple of

BABB?

- a. BBABA
- b. BBBAA
- c. BABAB
- d. BBBBA
- e. BABBA

46-50) Directions: Answer the following questions based on the information given

below:

In a code language,

- "PREACH ENLARGE BOARD TOUCHING" is
- coded as "O5*H, R3\$E, R4%I, G4&F"
- "OFFICE THICK KINGDOM SAVER" is coded
- as "E3\$S, C4\$L, O5&N, F3%F"
- "HOSTILE DONE STITCH PAID" is coded as
- "L4&F, O2#F, A2#E, T5%I"
- "EMOTION APART PASTE SULPHAT" is
- coded as "A5&U, T3\$F, O3&O, R3\$U"

46) What would be the word for 'N4&U'?

- a. PROMINENT
- b. EMINENT
- c. UBUNTU
- d. PRESENT
- e. None of these.

47) What is the code for "CLEARED

EXAM"?

- a. E4&E X2#N
- b. E4&D A2%N
- c. G5&E X3#N
- d. E4&F X4#O
- e. None on these

48) What is the code for 'AUGUST'?

- a. S3%U
- b. U6\$R
- c. U3%U
- d. S5&U
- e. None of these.

49) What is the code for "KINGDOM"?

- a. E3\$S
- b. C4\$L
- c. O5&N
- d. F3%F
- e. None of these

50) What is the code for "COLD CITY"?

- a. I3#Z O3#E
- b. I3@Z O3@E
- c. O3&Z I3&E
- d. O3#Z I3@E
- e. None of these

Coding Decoding with Input Output – Answer and Explanation

- 1. A
- 2. C
- 3. A

4. A

5. C

Solution 1

The pattern followed here is,

In step $1 \rightarrow$

Last two alphabets of every word are placed in front.

Example: see, "ee" will come in front of the word and all will become "ees".

Step $2 \rightarrow$

Consonants are replaced by the next letter of English alphabetical series.

Vowels are replaced by the number of letters present in that word.

Example: more, $m \rightarrow n$, $r \rightarrow s$, $e \rightarrow 4$, $o \rightarrow 4$

More- s4n4

Step $3 \rightarrow$

In place of alphabets, number of alphabets present in that word are taken.

In place of odd number $\rightarrow \%$

In place of even number $\rightarrow \&$

Example: s4n4

 $4\rightarrow$ &, n, s \rightarrow 2, $4\rightarrow$ &

Step 4: 2&&

Symbols are kept same, but numbers are replaced.

Odd number → %

Even number \rightarrow &

Sentence: blue gone white

Applying conditions:

Statements	Step 1	Step 2	Step 3	Step 4
blue gone	Uebl	44cm	&&2	&&&
white	nego	o4h4	2&&	&&&
	tewhi	u5xi5	3%%	%%%

Hence in second step blue gone white is coded as 44cm o4h4 u5xi5

Solution 2

Applying conditions:

Statements	Step 1	Step 2	Step 3	Step 4
Injury even dog girl	Ryinju ehev ogd rlgi	S66ok6 4o4w 3he smh4	3&&& &2& %2 3&	%&&& &&& %& %&

Hence &2& is correct answer

Solution 3

Applying conditions:

Statements	Step 1	Step 2	Step 3	Step 4
particular	arparticul		&6&&&	
when and	enwh nda	10sq10su10d10m 4oxi oe3	&3 2%	&&&&& &% &%

Hence &% is correct answer

Solution 4

Applying conditions:

Statements	Step 1	Step 2	Step 3	Step 4
game win month	mega inw thmon	n4h4 3ox uin5o	2@@ #2 4#	@@@ @@ @#

Hence inw is correct answer

Solution 5

Applying conditions:

Statements	Step 1	Step 2	Step 3	Step 4

bat hat	ath utinp	3ui 5u5oq	%2	%&
	dswor	etx5s	%3%	%%%
input			4%	&%

Hence etx5s is correct answer

Solution 6-10

- 6. A
- 7. A
- 8. A
- 9. A
- 10. A

The pattern followed here is,

In step $1 \rightarrow$

Vowels are eliminated from the word and only consonants are written.

Example: White, will become wht as I and e are vowels and they are eliminated

Step $2 \rightarrow$

The second letter of the changed is changed to numerical position

Example: wht, h numerical position is 8 so "wht" is coded as "w8t" and rest letters will be kept same

Step $3 \rightarrow$

In place of alphabets, number of alphabets present in that word is taken.

In place of odd number $\rightarrow \#$

In place of even number \rightarrow @

Example: w8t

 $8 \rightarrow @$, w, $t \rightarrow 2$,

W8t→2@

Step 4: 2@

Symbols are kept same, but numbers are replaced.

Odd number $\rightarrow \#$

Even number $\rightarrow @$

Sentence: brown pram gone

Applying conditions:

Statements	Step 1	Step 2	Step 3	Step 4
brown	Brwn	B18wn	3@ 2@	#@ @@
pram gone	prm gn	p18m g14	1@	#@

Hence in first step brown pram gone is coded as Brwn prm gn

Solution 7

Applying conditions:

Statements	Step 1	Step 2	Step 3	Step 4
white	Wht	W8t	2@ 4@	@@@@
elephant blue	lphnt bl	116hnt b12	1@	#@

Hence @@ is correct answer

Solution 8

Applying conditions:

Statements	Step 1	Step 2	Step 3	Step 4
notebook	Ntbk trns	N20bk	3@ 3@	#@ #@
turns	yllw	t18ns	3@	#@
yellow		y12lw		

Hence y12lw is correct answer

Solution 9

Applying conditions:

Statements	Step 1	Step 2	Step 3	Step 4
raju wants	Rj wnts	R10 w14ts c18	1@ 3@	#@ #@
car	cr	10 W 1+15 C 10	@	#@

Hence Rj is correct answer

Solution 10

Applying conditions:

Statements	Step 1	Step 2	Step 3	Step 4
kids	Kds	K4s p12yng	2@ 4@	@@
playing	plyng	f20bll d12y	4@ 2@	@@
football	ftbll dly			@@
daily				@@

Hence 2@ is correct answer

Solution 11-15

11. A

12. A

13. B

14. C

15. A

The pattern followed here is,

In step $1 \rightarrow$

Vowels will be +1

Consonants will be -1

Example: healthy, will become gfbksgx

Step 2 \rightarrow

The last two letters of the word are changed to sum of their numerical position

Example: gfbksgx, "g and x" numerical position is 7 and 24 so 7+24=31 so gfbksgx is coded as "gfbks31" and rest letters will be kept same

Step $3 \rightarrow$

In place of alphabets, number of alphabets present in that word is taken.

In place of odd number $\rightarrow \&$

In place of even number \rightarrow \$

Example: gfbks31

 $31 \rightarrow \&$

g, f, b, k, $s \rightarrow 5$,

gfbks $31 \rightarrow 5$ &

Step 4: 5&

Symbols are kept same, but numbers are replaced.

Odd number $\rightarrow \&$

Even number \rightarrow \$

Sentence: square are circle

Applying conditions:

Statements	Step 1	Step 2	Step 3	Step 4
square are	Rpvbqf	Rpvb23	4& 1&	\$& &&
circle	bqf	b23	4&	\$&
	bjqbkf	bjqb17		

Hence in 3rd step square are circle is coded as 4& 1& 4&

Solution 12

Applying conditions:

Statements	Step 1	Step 2	Step 3	Step 4
learn	Kfbqm	Kfb30	3\$ 3&	&\$ &&
again	bfbjm	bfb23	3\$ 3&	&\$ &&

Hence Kfbqm is correct answer

Solution 13

Applying conditions:

Statements Step 1	Step 2	Step 3	Step 4
-------------------	--------	--------	--------

gone high	Fpmf	Fp19	2& 2&	\$& \$&
gone high	gjfg	gj13		

Hence gj13 is correct answer

Solution 14

Applying conditions:

Statements	Step 1	Step 2	Step 3	Step 4
Only drive	Pmkx cqjuf	Pm35 cqj27	2& 3&	\$& &&

Hence && is correct answer

Solution 15

Applying conditions:

Statements	Step 1	Step 2	Step 3	Step 4
party hard	Obqsx	Obq43 gb20	3& 2\$	&& \$\$
party nard	gbqc			

Hence Obq43 is correct answer

Solution 16-20

16. B

17. C

18. A

19. C

20. D

The coding language used to code the given sentences should be decoded in three steps.

Step I: The first element of the code is the difference in the alphabetic positions of first and the last alphabets of the word.

Step II: The second element of the code is the symbol on the basis of the number of pairs of same letters in the words.

For 1 pair = #

For 2 pairs = ##

For 3 pairs = ###

Step III: The third element of the code is the middle alphabet/alphabets of the word.

For example,

APPRECIATE is coded as '4###EC'

Difference of A and E = 5 - 1 = 4

Three pairs (AA, EE, PP) = ###

EC are the middle alphabets.

Solution 21-25

- 21. A
- 22. B
- 23. C
- 24. D
- 25. B

From the above statements, we can see that each statement contains words whose first alphabets are A, P, T and S. Also, each code contains symbols among @, %, &, #. So, we conclude that the word which starts from A has '@' symbol, P has '%' symbol, T has '&' symbol and S has '#' symbol. Second alphabet of the word from the left is written as first, then symbol and then the position of last alphabet of the words.

For example, first letter of the word 'SEARCH' is S, so we would use # symbol. Second letter of the word is E. Position of the last letter i.e. H, in the word according to alphabetical series is 8. So, 'SEARCH' is coded as 'E#8'.

Solution 26-30

- 26. E
- 27. A
- 28. B
- 29. E
- 30. C

Symbol / Letter	D	Е	F	+	^	~
-----------------	---	---	---	---	---	---

Code	6	12	10	4	7	2

Sanjay starts walking at + F means 4:50 AM.

He reached back home at D ^ means 6:35 AM.

Hence, Time taken by Sanjay in this period is 6:35 - 4:50 = 105 minutes.

Solution 27

Symbol / Letter	D	Е	F	+	^	~
Code	6	12	10	4	7	2

Renu starts listening song at F + means 10:20 AM

She listens until it is E ^ means 12:35 PM

Hence, Renu spends time in listening songs is 12:35 PM - 10:20 AM = 2 hours 15 minutes.

Solution 28

Symbol / Letter	D	Е	F	+	۸	~
Code	6	12	10	4	7	2

Scheduled time of fashion show ^ F means 7:50 AM

90 mins early means 6:20 AM i.e. D+.

Hence, the manger should reach at D+.

Solution 29

Symbol / Letter	D	Е	F	+	۸	~
Code	6	12	10	4	7	2

She wants the cloth to wear at +D means 04:30 AM.

 $04:30 \text{ AM} - 100 \text{ min} = 2:50 \text{ AM i.e. } \sim \text{F}.$

Hence, Sneha starts the washing machine at ~F.

Solution 30

Symbol / Letter	D	Е	F	+	٨	~
Code	6	12	10	4	7	2

The Program starts at ~^ means 2:35 AM.

Dancer reaches 120 minutes late means; 2:35 + 120 = 04:35 AM i.e. +^.

Hence, worker reaches at $+^{\wedge}$.

Solution 31-35

- 31. B
- 32. D
- 33. C
- 34. B
- 35. B

In each code, then number before the symbol is the value of the 3rd letter (from the left end) of the word in the alphabetical series.

The symbol in the code is as per the vowel which is 2nd letter from the left end in each word:

- a. For vowel "A", the symbol used is #
- b. For vowel "E", the symbol used is @
- c. For vowel "I", the symbol used is \$
- d. For vowel "O", the symbol used is &
- e. For vowel "U", the symbol used is %

If the number representing the 3rd alphabet in alphabetical series from left end is an even number, then that even number is added by 3 and the obtained number is the number after the symbol.

If the number representing the 3rd alphabet in alphabetical series from left end is an odd number, then the difference of odd number and 3 and the obtained number is the number after the symbol.

Example:

'CENTRE'

3rd letter (from the left end) of the word is N, its value in alphabetical series is 14, so 14 is the number before the symbol.

2nd letter from the left end of the word is E, so the symbol used is @.

As the number representing 3rd alphabet from left end is 14 (an even number), so the number after the symbol is (14 + 3)=17.

Therefore, the code for 'CENTRE' is '14@17'.

Solution 36-40

36. B

37. D

38. C

39. B

40. A

Digit	3	8	9	7	4	6	1	2	5
Symbo	#	%	@	\$	*	€	©	μ	£
l									

Conditions for coding the group elements:

If even number is followed by perfect square, then the code of the perfect square is same as the code of that even number.

so the required code for 29548 is $\mu~\mu~\pounds$ * %.

Solution 37

Digit	3	8	9	7	4	6	1	2	5
Symbo	#	%	@	\$	*	€	©	μ	£
1									

Conditions for coding the group elements:

(ii). If the first as well as the last digit is odd, then both are to be coded by the code of the first digit.

By using condition (ii), the code for 18537 is $\mathbb O$ % £ # $\mathbb O$.

Solution 38

Digit	3	8	9	7	4	6	1	2	5
Symbo	#	%	@	\$	*	€	©	μ	£
l									

Conditions for coding the group elements:

- (i). If the first digit is even and the last digit is divisible by 3, then both are to be coded as X.
- (iv) If even number is followed by perfect square, then the code of the perfect square is same as the code of that even number.

By using condition (i) and (iv), the code for 41359 is ©© #£X

Solution 39

Digit	3	8	9	7	4	6	1	2	5
Symbo	#	%	@	\$	*	€	©	μ	£
1									

Conditions for coding the group elements:

(iv) If even number is followed by perfect square, then the code of the perfect square is same as the code of that even number.

Clearly, the code for 61348 will be $\in \in \# * \%$.

Solution 40

Digit	3	8	9	7	4	6	1	2	5
Symbo	#	%	@	\$	*	€	©	μ	£
l									

Conditions for coding the group elements:

(ii). If the first as well as the last digit is odd, then both are to be coded by the code of the first digit.

By using condition (ii), the code for 74523 is \$*£ μ \$.

Solution 41-45

- 41. A
- 42. B
- 43. D
- 44. D
- 45. E

Logic:

So AABBAA \rightarrow 001100

So, the equivalent decimal of 001100 is

$$(0\times\!2^0) + (0\times\!2^1) + (1\times\!2^2) + (1\times\!2^3) + (0\times\!2^4) + (0\times\!2^5)$$

$$= 0 + 0 + 4 + 8 + 0 + 0$$

= 12

And ABABAB $\rightarrow 010101$

So, the equivalent of 010101 is

$$(1 \times 2^{0}) + (0 \times 2^{1}) + (1 \times 2^{2}) + (0 \times 2^{3}) + (1 \times 2^{4}) + (0 \times 2^{5})$$

$$= 1 + 0 + 4 + 0 + 16 + 0$$

= 21.

The sum is 12 + 21 = 33

And the binary equivalent of 33 is

$$33 = 32 + 1 \rightarrow 100001$$
.

And by the notations, it is BAAAAB.

Hence, BAAAAB is the correct answer.

Solution 42

Logic:

 $BAAAAA \rightarrow 100000$

The decimal equivalent of 100000 is

$$(0 \times 2^0) + (0 \times 2^1) + (0 \times 2^2) + (0 \times 2^3) + (0 \times 2^4) + (1 \times 2^5)$$

$$= 0 + 0 + 0 + 0 + 0 + 32$$

= 32

And BAAA $\rightarrow 1000$

The decimal equivalent of 1000 is

$$(0 \times 2^0) + (0 \times 2^1) + (0 \times 2^2) + (1 \times 2^3)$$

=8

$$= 0 + 0 + 0 + 8$$

=8

So,
$$32/8 = 4$$
.

And the binary equivalent of 4 is $4 + 0 + 0 \rightarrow 100 \rightarrow BAA$.

Hence, BAA is the correct answer

Solution 43

Logic:

BBBB \rightarrow 1111 which is the binary equivalent of

$$(1 \times 2^0) + (1 \times 2^1) + (1 \times 2^2) + (1 \times 2^3) =$$

$$1 + 2 + 4 + 8 = 15$$
.

BBBBB \rightarrow 11111 which is the binary equivalent of

$$(1 \times 2^0) + (1 \times 2^1) + (1 \times 2^2) + (1 \times 2^3) + (1 \times 2^4)$$

$$1 + 2 + 4 + 8 + 16 = 31$$

$$15 + 31 = 46$$

$$46/2 = 23$$

Hence, 23 is the correct answer.

Solution 44

Logic:

BBBB \rightarrow 1111 which is the binary equivalent of

$$(1 \times 2^0) + (1 \times 2^1) + (1 \times 2^2) + (1 \times 2^3) =$$

$$1 + 2 + 4 + 8 = 15$$
.

20% of 15 is 3 and cube of 3 is 27.

Binary equivalent of 27 will be 16 + 8 + 2 + 1.

So, $11011 \rightarrow BBABB$.

Hence BBABB is the correct answer.

Solution 45

Logic:

 $BABB \rightarrow 1011$ is the binary equivalent of

$$(1 \times 2^{0}) + (1 \times 2^{1}) + (0 \times 2^{2}) + (1 \times 2^{3}) = 11$$

1) BBABA \rightarrow 11010 is the binary equivalent of

$$(0 \times 2^{0}) + (1 \times 2^{1}) + (0 \times 2^{2}) + (1 \times 2^{3}) + (1 \times 2^{4}) =$$

$$0+2+0+8+16=26$$

26 is not a multiple of 11.

2) BBBAA \rightarrow 11100 is the binary equivalent of

$$(0 \times 2^0) + (0 \times 2^1) + (1 \times 2^2) + (1 \times 2^3) + (1 \times 2^4)$$

$$0+0+4+8+16=28$$

26 is not a multiple of 11.

3) BABAB \rightarrow 10101 is the binary equivalent of

$$(1 \times 2^0) + (0 \times 2^1) + (1 \times 2^2) + (0 \times 2^3) + (1 \times 2^4)$$

$$1 + 0 + 4 + 0 + 16 = 21$$

26 is not a multiple of 11.

4) BBBBA \rightarrow 11110 is the binary equivalent of

$$(0 \times 2^0) + (1 \times 2^1) + (1 \times 2^2) + (1 \times 2^3) + (1 \times 2^4)$$

$$0 + 2 + 4 + 8 + 16 = 30$$

26 is not a multiple of 11.

5) BABBA \rightarrow 10110 is the binary equivalent of

$$(0\times\!2^0) + (1\times\!2^1) + (1\times\!2^2) + (0\times\!2^3) + (1\times\!2^4)$$

$$0 + 2 + 4 + 0 + 16 = 22$$

Hence, 22 is a multiple of 11.

Hence, BABBA is the correct answer.

Solution 46-50

46. B

47. A

48. C