

# SBI Clerk Mains Previous Year Paper 2021

**Directions (1-5): Read the following passage carefully and answer the questions given below them.**

Employees are indeed true assets of an organization. Managers need to know their employees well to expect them to contribute their level best and also to remain loyal towards the organization. Employees need to feel valued and important at the workplace for them to deliver their level best. Knowing employees well leads to a healthy work culture. Managers connect with their team members and employees tend to know each other better. No individual can work in an organization where people do not talk to each other. Human beings need people around to talk to and express their feelings. We spend the maximum part of our day at workplaces and it is essential for us to have friends here. Work becomes a mere source of burden when individuals are glued to their computers the whole day. Discussions and brainstorming sessions lead to innovative solutions and quick results. Knowing employees strengthens the relationship between employees and their Bosses. Being rude to employees will not only demotivate them but also make you an unpopular member within the organization. Call them by their names rather than addressing as “Mr/Ms” or “Hey”, greet them with a smile and enquire what is going on in their personal lives once in a while and see the difference yourself. Trust me; you will be elated to see employees striving hard to accomplish assigned targets within the shortest possible time frame.

Conflicts and misunderstandings lead to no solutions. Fights over petty issues not only lead to frustration but also spoil the ambience at the workplace. Do not forget that we are not school going kids who would fight over small things. It is essential to behave as mature professionals. Encourage healthy communication at workplace where employees get an opportunity to interact with each other, discuss ideas and also gain from each other’s expertise. Let them open up. Knowing each other well leads to better understanding among employees and they seldom fight with each other, eventually leading to a healthy and positive work culture. It also leads to peace at the workplace. Knowing employees helps managers to understand how he can motivate his team members and use them to the best of their abilities. It helps you to understand which team member would fit into which particular role and which employee would not do justice to his work. Knowing employees helps you judge your subordinates well and hence there is no question of confusions at the workplace. There is seldom any overlapping of work and everyone knows what he/she is supposed to do. Individuals feel attached towards their organization and love coming to work.

**Q1. Which of the following is/are the benefit(s) of conversation among people?**

- (a) It makes people resolve their difficult tasks smoothly with the help of senior most colleagues
- (b) people spend most of their daytime sitting which causes many physical illnesses
- (c) talk at office place gives a boost to rapid outcomes and innovative solutions
- (d) it’s a stress relief therapy by sharing the difficulties one faces in the organization
- (e) None of these

**Q2. How the manager of the company can contribute to employees’ best performance?**

- (i) Employees’ productivity can be increased by the manager’s amicable nature
  - (ii) Manger’s interaction makes employees’ loyal to the company
  - (iii) Manager can introduce team members and employees to each other
- (a) only (ii)
  - (b) only (iii)
  - (c) Both (ii) and (iii)
  - (d) Both (i) and (ii)
  - (e) All of these

**Q3. What is/are the impact(s) of personal interaction with employees sometimes?**

- (a) It inspire the employee to get higher productivity in lesser time
- (b) it maintains harmony among the employees of the organization
- (c) personal interactions decrease the depression of employee
- (d) Only (a) and (b)
- (e) All of these

**Q4. What are the factors of healthy and positive culture in companies?**

- (i) job security which secures employees' future too, motivates employees to work hard
- (ii) working environment where people can interact freely to know about each other
- (iii) a working culture with no disputes or hardly any conflicts and fights
- (a) All of these
- (b) only (iii)
- (c) Both (ii) and (iii)
- (d) Both (i) and (ii)
- (e) None of these

**Q5. How is it beneficial for managers to know their employees?**

- (a) Overlapping of work can be avoided by allocating every employee their tasks
- (b) manager can take work from employees efficiently to full of their capacity
- (c) Manager can easily analyze the suitable position for every employee by knowing them
- (d) Both (a) and (c)
- (e) All of these

**Directions (6-12): Read the following passage carefully and answer the questions given below them.**

The major issue of Environment & Urbanization focusing on rural–urban linkages. The first, which came out in 1998, described the reliance of many low-income households on both rural-based and urban-based resources in constructing their livelihoods. But the majority of the papers also underlined the fact that this straddling of the rural–urban divide is usually ignored by policy makers, and that the rigid division between “rural” and “urban” on the part of sectoral strategies actually makes life more difficult for low-income groups. The papers in this issue show many reasons why it has become even less realistic for development specialists to separate into rural and urban camps. The notion of a “divide” has become a misleading metaphor, one that oversimplifies and even distorts the realities. As these papers demonstrate, the linkages and interactions have become an ever more **intensive** and important component of livelihoods and production systems in many areas – forming not so much a bridge over a divide as a complex web of connections in a landscape where much is neither “urban” nor “rural”, but has features of both, especially in the areas around urban centres or along the roads out of such centres what can be termed the peri-urban interface.

In addition, much of the rural population depends on urban centres for access to secondary schools, post and telephones, credit, agricultural extension services, farm equipment, hospitals and government services. Of course, there are still conflicts between rural and urban interests. But there are also conflicts between many urban interests and the needs of most of the urban population. There are also significant synergies between many rural and urban interests. Some factors can be generalized as having a key role in the increase in the scale of rural–urban linkages. Decreasing incomes from farming, especially for small-scale producers who, because of a lack of land, water or capital, are unable to intensify and switch to higher value crops, means that increasing numbers of rural residents engage in non-farm activities that are often located in urban centres.

For those who continue farming, direct access to markets is essential in the wake of the demise of parastatal marketing boards – and markets are also usually located in urban centres. Better access to markets can increase farming incomes and encourage shifts to higher value crops or livestock. Population growth and distribution patterns affect the availability of good agricultural land and can contribute to rural residents moving out of farming. With the expansion of urban centres, land uses change from agricultural to residential and industrial, and in the peri-urban interface these processes go hand in hand with transformations in the livelihoods of different groups – with the poorest often losing out.

**Q6. As per the passage, what aggravates the problems of low-income group people?**

- (a) Uniformity in policies which can't be applied on urban and rural together due to different conditions
- (b) Policymakers pursue only rural areas for forming policies which make urban people suffer
- (c) the sectoral strategies division between urban and rural which is usually overlooked by policymakers
- (d) the urban-rural division which confines them to their particular area for employment
- (e) None of these

**Q7. Which of the following is true about the peri-urban interface?**

- (a) rural areas can be considered as peri-urban areas if they can provide full employment to inhabitants
- (b) the peri-urban interface constitutes the habitat of a diversity of populations from both urban and rural
- (c) areas dominated by a single habitat especially by the urban population where rural can't survive
- (d) peri-urban has biotic communities at larger spatial scales which is a wealthier community
- (e) None of these

**Q8. Which factor is responsible for linkage between rural and urban?**

- (a) Developing urban areas provide assistance to rural who have suffered loss in agriculture
- (b) All of these
- (c) FMCG growth in the urban market has driven the rural market to urban sector
- (d) being unable to switch over to higher value crop, the small-scale farmers move to non-farming activities in urban areas from rural areas.
- (e) None of these

**Q9. What is/are the benefits to farmers of access to the urban markets?**

- (a) farmers having direct access to the market can have the opportunity to increase their income
- (b) All of these
- (c) Farmers with higher income from the market can be able to switch higher value crops
- (d) Government provides warehouse storage for crops to farmers for avoiding spoil of crops
- (e) Both (a) and (c)

**Q10. What is/are the reason(s) for decreasing agriculture trend in urban areas?**

- (a) Nowadays agriculture activity is looking down upon by the current young generations.
- (b) people nowadays opt for secure jobs rather than agriculture which depends on climate
- (c) mutation of agricultural land of urban into commercial use and households
- (d) both (a) and (c)
- (e) None of these

**Q11. Which of the following is true as per the information given in the passage?**

- (i) Due to government policies, farmers' incomes are independent of access to market
  - (ii) There is a conflict between urban population needs and urban interest
  - (iii) Low-income groups depend on the urban and rural-based source of income
- (a) Both (ii) and (iii)
  - (b) Only (iii)
  - (c) Both (ii) and (i)
  - (d) Only (j)
  - (e) All of these

**Q12. Which of the following is opposite in meaning to 'Intensive' as used in the passage?**

- (a) anew
- (b) retard
- (c) caveat
- (d) superficial
- (e) None of these

**Directions (13-17): In the following questions seven sentences are given. Further, these sentences may or may not form a contextually meaningful sequence. You have to rearrange these sentences to make a contextually meaningful paragraph. The sentence (C), which has already been highlighted, would be the third sentence after rearrangement. Later, answer the follow-up questions.**

- (A) Here, using national mobility data, we estimate global emission reductions for ten species during the period February to June 2020.
- (B) As a result, we estimate that the direct effect of the pandemic-driven response will be negligible, with a cooling of around  $0.01 \pm 0.005$  °C by 2030 compared to a baseline scenario
- (C) We also estimate that global NOx emissions declined by as much as 30% in April, contributing a short-term cooling since the start of the year.**
- (D) This cooling trend is offset by ~20% reduction in global SO2 emissions that weakens the aerosol cooling effect, causing short-term warming.
- (E) In contrast, with an economic recovery tilted towards green stimulus and reductions in fossil fuel investments, it is possible to avoid future warming of 0.3 °C by 2050.
- (F) The global response to the COVID-19 pandemic has led to a sudden reduction of both GHG emissions and air pollutants.

**Q13. Which of the following would be the correct order of sentences after rearrangement?**

- (a) DECFBA
- (b) BECDFA
- (c) ABCFED
- (d) BACFED
- (e) FACDBE

**Q14. Which of the following would be the THIRD sentence after rearrangement?**

- (a) A
- (b) B
- (c) C
- (d) D
- (e) F

**Q15. Which of the following would be the FIRST sentence after rearrangement?**

- (a) A
- (b) B
- (c) C
- (d) D
- (e) F

**Q16. Which of the following would be the FIFTH sentence after rearrangement?**

- (a) A
- (b) B
- (c) E
- (d) D
- (e) F

**Q17. Which of the following would be the FOURTH sentence after rearrangement?**

- (a) A
- (b) B
- (c) C
- (d) D
- (e) F

**Directions (18-22):** In each of the following questions given below are two independent sentences containing five words highlighted in bold. These five words may or may not be in their correct position. The sentences are then followed by options with the correct combination of words that should replace each other in order to make both the sentence grammatically and contextually correct. Find the correct combination of the words that replace each other.

**Q18. (I)** Drug **operated (A)**, when released into waterbodies even in **minuscule (B)** amounts, can harm human beings and the ecosystem in the long term.

**(II)** If you allow banks to fail, depositors who **compounds (C)** under the **presumption (D)** that the regulatory framework would protect their money would be **undermined (E)**.

- (a) (A)- (D)
- (b) (A)- (E) and (B)- (C)
- (c) (B)- (E)
- (d) (A)- (C)
- (e) No correction required

**Q19.** (I) A proposal to build a **effective (A)** wall around the Lake by **comprehensive (B)** funds.  
(II) The judges directed the government to issue a **awaiting (C)** circular, **incorporating (D)** all guidelines for the **boundary (E)** functioning of the committees.  
(a) (A)- (E)  
(b) (A)- (E) and (B)- (C)  
(c) (B)- (D) and (A)- (C)  
(d) (A)- (C)  
(e) No correction required

**Q20.** (I) Fire and Rescue Services personnel **expected (A)** a fire that broke out in a shop in an operation that **lasted (B)** several hours  
(II) Issues **pertaining (C)** to manufacturing of **affordable (D)** cloth and paper bags are **extinguished (E)** to be discussed at the meeting  
(a) (A)- (E)  
(b) (A)- (E) and (B)- (C)  
(c) (B)- (D) and (A)- (C)  
(d) (A)- (C)  
(e) No correction required

**Q21.** (I) Data showed that the vaccine was not only **appreciated (A)** to introduce but that it also **improves (B)** health and saves lives.  
(II) The **triumphs (C)** of science are best **feasible (D)** when they make human lives easier or safer, or **simply (E)**, offer hope.  
(a) (A)- (E)  
(b) (A)- (D)  
(c) (B)- (D) and (A)- (C)  
(d) (A)- (C)  
(e) No correction required

**Q22.** (I) The farmer and the **developed (A)** of farmers' **quantitative (B)** is the aim of the policy.  
(II) The Nobel winners this year have handled such **complex (C)** systems and **improvement (D)** tools to get meaningful, **livelihood (E)** results out of them  
(a) (A)- (E)  
(b) (A)- (D)  
(c) (B)- (D) and (A)- (C)  
(d) (A)- (D) and (B)- (E)  
(e) No correction required

**Directions (23-25):** In the following questions, there are five words given for each question. These words have been numbered as (i), (ii), (iii), (iv) and (v). Find the correct combination of the words that form the synonyms of each other from the given options.

**Q23.**  
(i) Scourge  
(ii) hinge  
(iii) menace  
(iv) salient  
(v) lash

- (a) only (i)- (iii)
- (b) Only (v)- (iii)- (i)
- (c) All of these
- (d) Only (iii)- (ii)-(v)
- (e) Only (i)- (v)

**Q24.**

- (i) alleviation
  - (ii) Mammoth
  - (iii)enormous
  - (iv)colossal
  - (v)skirmish
- (a) only (i)- (iii)
  - (b) Only (v)- (iii)- (i)
  - (c) All of these
  - (d) Only (iii)- (ii)-(iv)
  - (e) Only (i)- (v)

**Q25.**

- (i) perilous
  - (ii) reclusive
  - (iii) Irrefutable
  - (iv)resilient
  - (v) solitary
- (a) only (i)- (iii)
  - (b) Only (v)- (iii)- (i)
  - (c) All of these
  - (d) Only (iii)- (ii)-(iv)
  - (e) Only (ii)- (v)

**Directions (26-29): Read the given directions and answer the following questions.**

**Q26.** The given sentence is divided in five parts in which sentence (C) is fixed as a third sentence. Rearrange the remaining four parts in correct sequence to make sentence grammatically correct and contextually meaningful.

- (A) at present and predicting it's future
  - (B) The Bain report is a data-based prediction
  - (C) **anchored to the agricultural set-up**
  - (D) trajectories in another 20 years
  - (E) on agri-business scenarios,
- (a) ABCDE
  - (b) EACBD
  - (c) DACBE
  - (d) BECAD
  - (e) EACDB

**Q27.** Which of the following parts does contain an error?

- (A) at present and predicting it's future
  - (B) The Bain report is a data-based prediction
  - (C) **anchored to the agricultural set-up**
  - (D) trajectories in another 20 years
  - (E) on agri-business scenarios,
- (a) E
  - (b) B
  - (c) A
  - (d) C
  - (e) D

**Q28.** The given sentence is divided in five parts in which sentence (A) is fixed as a first sentence. Rearrange the remaining four parts in correct sequence to make sentence grammatically correct and contextually meaningful.

- (A) **Banks are the core of the**
  - (B) it to go down
  - (C) credit pipe and allowing
  - (D) would be a problem.
  - (E) settlements system and the
- (a) AECBD
  - (b) AECDB
  - (c) ADCBE
  - (d) ACBED
  - (e) None of these

**Q29.** Which of the following parts does contain an error?

- (A) **Banks are the core of the**
  - (B) it to go down
  - (C) credit pipe and allowing
  - (D) would be a problem.
  - (E) settlements system and the
- (a) E
  - (b) B
  - (c) A
  - (d) C
  - (e) D

**Directions (30-32):** In each of the following questions, two sentences are given. Five connectors are given in to connect two sentences. Find the correct option to connect these two sentences without changing the intended meaning.

- Q30.** (i) The farmers are also willing to continue the protest indefinitely  
(ii) Methods have come to the unfavorable notice of Supreme Court judges
- (a) thereafter it
  - (b) since they
  - (c) even as their
  - (d) even after it
  - (e) because it is



**Q31.** (i) Covering nearly 30% land surface of the earth, forests around the globe provide a wide variety of ecosystem services

(ii) Stabilize the climate, sequester carbon and regulate the water regime.

- (a) therefore it also
- (b) but it also
- (c) for them they
- (d) as long as
- (e) and they also

**Q32.** (i) The government's focus on cash transfer and other welfare schemes continues to draw the support of the electorate,

(ii) Issues of violence and corruption raised by the opposition did not strike a chord with them.

- (a) despite the
- (b) while the
- (c) in like matter
- (d) otherwise the
- (e) in this case

**Q33. In the following question there are four statements in each question. Each sentence has one given word in bold. Find the word which is grammatically and contextually incorrect in any of four sentences. Mark (E) i.e. 'all are correct' if all the given words are grammatically and contextually correct.**

- (a) Many have identified how inadequate political will at city scales **constrain** developing sustainable cities
- (b) The government's affidavit covers three different **aspects** of the caste census issue.
- (c) The usual means of disposal of plastic waste involves **incarnation**, land-filling and recycling.
- (d) Pfizer trial showed the vaccine was safe and generated a **robust** antibody response.
- (e) All are correct

**Q34. In the following question there are four statements in each question. Each sentence has one given word in bold. Find the word which is grammatically and contextually incorrect in any of four sentences. Mark (E) i.e. 'all are correct' if all the given words are grammatically and contextually correct.**

- (a) The researchers are planning to **collaborate** with industry to take up technology in to a pilot scale
- (b) The **rationale** of some of the new groups was unclear even when they were formed.
- (c) Two new smog towers have been recently **inaugurated** in Delhi
- (d) Indian cities have often been **signaled** out for not doing enough on climate change
- (e) All are correct

**Q35. In the following question there are four statements in each question. Each sentence has one given word in bold. Find the word which is grammatically and contextually incorrect in any of four sentences. Mark (E) i.e. 'all are correct' if all the given words are grammatically and contextually correct.**

- (a) The prisoners held a hurried **conference** and quick as thought decided to make a bold bid for liberty.
- (b) Trade Minister is confident that the **stumbling** blocks to free trade agreement can be surpassed as negotiations kick off afresh.
- (c) Nature-based solutions have demonstrated how **restoring** ecosystem health can sustain human systems as well.
- (d) Key aspect **inherent** in transforming cities is focusing on changing behaviours and lifestyles.
- (e) All are correct

**Q36. In the following question there are four statements in each question. Each sentence has one given word in bold. Find the word which is grammatically and contextually incorrect in any of four sentences. Mark (E) i.e. 'all are correct' if all the given words are grammatically and contextually correct.**

- (a) The obvious **focal** point in Japanese foreign policy going forward will be Japan-China relations.
- (b) The DoT has amended license norms to **rationalize** the interest rate for delayed payment of licence fees
- (c) Dependence on forests of the global human population has put **eminence** pressure on ecosystems
- (d) Though India's increasing economic growth is helping to eliminate poverty, there is continued **degradation** and a growing scarcity of natural resources.
- (e) All are correct

**Directions (37-40): Read the following passage carefully and answer the questions given below them.**

In this country, there are more than 40 million subscribers who rely on their cellular phones to conduct their business or just talk to friends and family. With the increase of mobile phone users, dangers to safety, while talking while one is driving have also increased. Everyday, there are accidents when a person using mobile while he is driving have also increased. Every day, there are accidents when a person while talking on cell phone could not pay attention to road in front of him and was injured himself or injured others or both. The rise in phone related accidents is very serious, thought provoking and a danger to all concerned. When one is driving and talking on his cell phone, his or her attention is naturally diverted. Talking on mobile phones affect a person in several ways. For example, the emotional stress involved in a conversation can lead to lessened awareness of what is happening on the road. Having to dial phone numbers and answering calls takes one's attention from the road. There are so many good uses of mobile phones. This is an established fact which cannot be denied but along with this truth, so many accidents are taking place everyday, when people were talking and driving. This fact also cannot be denied.

No law, no committee, no state or government can stop this danger unless people wake up and come to realize that for a little convenience, they are endangering themselves and others. If a very important call is ringing or they have an important call to make, they can easily stop, finish the call and start again. No law or fine can make them realize this fact. They have to take care of their safety and the safety of others. It is ***no use crying over the spilt milk.***

**Q37. Which of the following is the reason for the diversion of attention while driving and talking?**

- (a) a sudden stop by traffic police on road causes disbalance of the vehicle which results in an accident
- (b) Some common causes of distractions are dialing numbers and getting involvement in emotional stress.
- (c) Drink and drive is the most common cause of the accident because a person lose consciousness
- (d) All of these
- (e) None of these

**Q38. As per the passage, what is the importance of cell phones in our lives?**

- (i) During pandemics more than half of the population of students relied on cell phones their studies
  - (ii) People can connect instantly to emergency services such as ambulance or police cell
  - (iii) Mobile phones have become essential for professional purposes and to connect with next of kin
- (a) Only (i)
  - (b) Only (ii) and (i)
  - (c) Only (ii)
  - (d) All of these
  - (e) Only (iii)

**Q39.** Which of the following could be the reason for the failure of government rules and regulations?

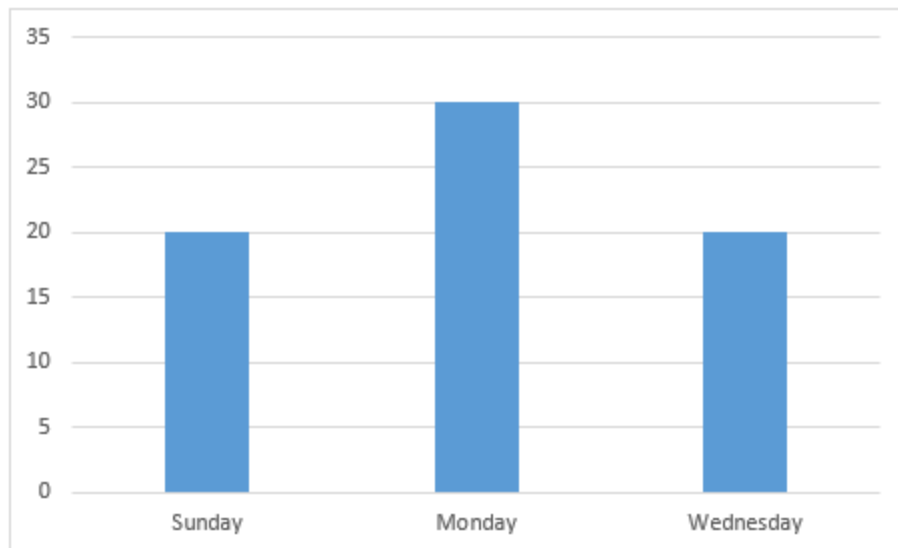
- (a) loopholes in rules and regulation cause chaos among people and infringement of rules
- (b) Negligence of awareness by the citizens which can endanger lives of them as well as others
- (c) potholes on roads and highways are the main reason for the increasing number of accidents
- (d) Implementation of policies is also governmental responsibility which is never fulfilled
- (e) None of these

**Q40.** What does mean by phrase “*no use crying over the spilt milk*”?

- (a) no use in being upset over the situation which already happened and now can be improved
- (b) no use in being upset over situations that have already happened and cannot be changed
- (c) no use in being upset over the situation which was not in our control and cannot be tackled by you
- (d) no use in being happy for the fruitful situation without your contribution and involvement
- (e) None of these

**Directions (41-45):** Total population (male + female) going to a mall in four different days, i.e., Sunday, Monday, Tuesday and Wednesday are 320. Out of the total population, 145 are male. On each day, some people out of total people who going to mall are getting some discount coupons. The bar graph given below shows the total number of populations getting the discount on Sunday, Monday and Wednesday. The table given below shows the ratio of male and female visiting on the given days.

**Note:** On every particular day, the total population who got discount coupon is 25% of the total population on that day.



Day	Male: Female
Sunday	3 : P
Monday	7 : 5
Tuesday	3 : 5
Wednesday	3 : P

**Q41. Find the value of P.**

- (a) 5
- (b) 7
- (c) 3
- (d) 6
- (e) None of these

**Q42. On Tuesday, how many people got discount coupon.**

- (a) 20
- (b) 40
- (c) 25
- (d) 10
- (e) 30

**Q43. On Monday, if 4 person got Rs.50 discount and rest got Rs.100 discount, then calculate the total discounted amount on Monday.**

- (a) Rs.1800
- (b) Rs.2800
- (c) Rs.1700
- (d) Rs.1200
- (e) Rs.3200

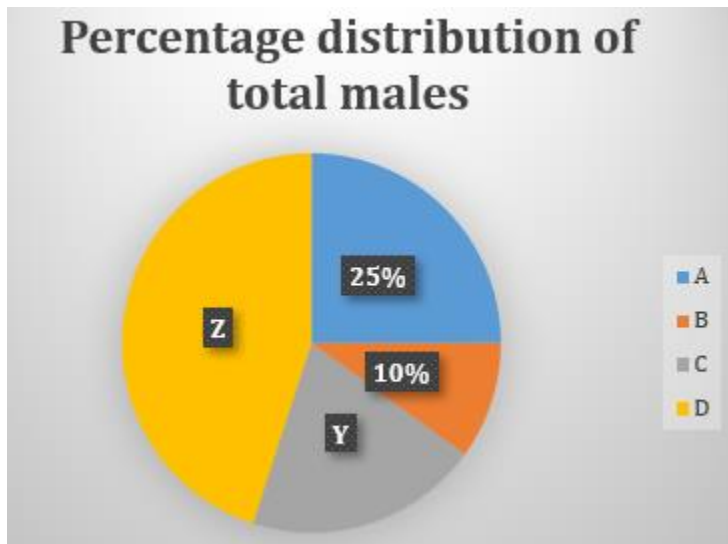
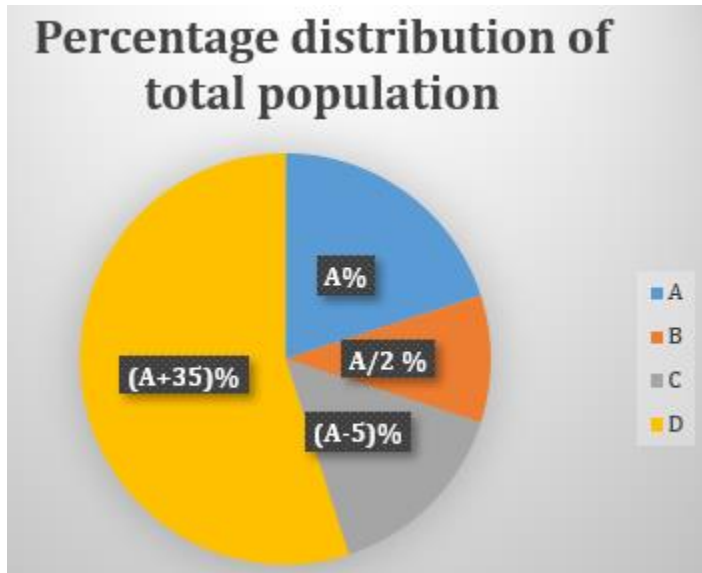
**Q44. Out of the total population, getting discount on Wednesday, one fifth redeemed the coupon on that day, which is half of the number of total females getting discount coupons on that day. Find the number of males who got discount coupon on that day.**

- (a) 8
- (b) 10
- (c) 12
- (d) 6
- (e) 14

**Q45. Total population who got discount coupon on Thursday are 15% more than that on Wednesday and total population who did not get discount coupon on Thursday are 20% less than that on Monday. Find total population who went to Mall on Thursday.**

- (a) 83
- (b) 91
- (c) 107
- (d) 95
- (e) 125

Directions (46-50): Pie chart (I) given below shows the percentage distribution of total population of four cities A, B, C and D. The pie chart (II) shows the percentage distribution of male in these cities.



**Note:** 1. Difference between male populations of D and C is 25% of the total male population. (Male population of  $D > C$ )

2. Male population of A is 80.

3. Ratio of male to female population of C is 8: 7.

**Q46. Find the ratio of male population of C to the female population of D?**

- (a) 8: 7
- (b) 8: 37
- (c) 9: 26
- (d) 11: 8
- (e) None of these

**Q47. Out of total female population of A, 25% are Doctors and out of total male population, 20% are doctors. Rest population of city A are Engineers. Find the total number of Engineers in city A?**

- (a) 112
- (b) 124
- (c) 136
- (d) 128
- (e) 144

**Q48. If from city C,  $\frac{1}{8}$ th male population migrated to city B due to Covid, then find the new male population of city B?**

- (a) 40
- (b) 48
- (c) 24
- (d) 44
- (e) 36

**Q49. Find the central angle corresponding to male population of D.**

- (a)  $144^\circ$
- (b)  $172^\circ$
- (c)  $112^\circ$
- (d)  $162^\circ$
- (e)  $156^\circ$

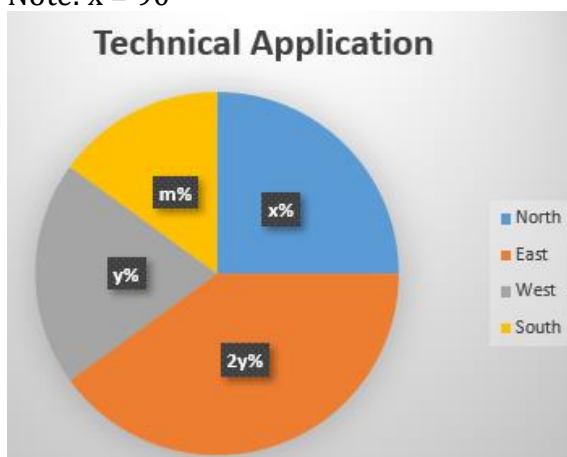
**Q50. Male population of city B is what percentage more/less than female population of city A.**

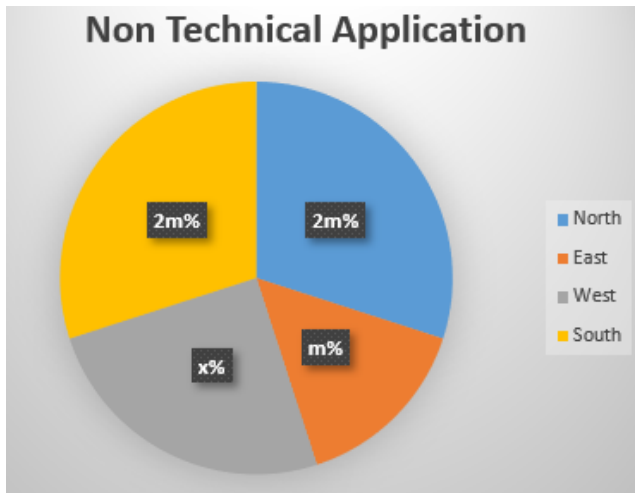
- (a) 60%
- (b) 40%
- (c) 50%
- (d) 75%
- (e) 25%

**Directions (51-55):** The pie chart (I) shows the percentage distribution of technical applications received from four zones, i.e., east, west, north and south zones and the pie chart (II) shows the percentage distribution of non-technical application received from those four zones. Number of applications received for non-technical from all zones is 50% more than the number of applications received for technical from all zones.

Sum of number of applications received under technical north zone and non-technical north zone is 280.

Note:  $x = 90^\circ$





**Q51. The female candidates who applied for technical from east zone are what percentage of the total applicants applied for non-technical, if the respective ratio of male and female who applied for technical from east zone is 5: 3?**

- (a) 20%
- (b) 25%
- (c) 10%
- (d) 15%
- (e) 12.5%

**Q52. If application fee for technical is Rs.500 and for non-technical is Rs.300 then find the total fee collection from west zone.**

- (a) Rs.85000
- (b) Rs.75000
- (c) Rs.65000
- (d) Rs.60000
- (e) Rs.80000

**Q53. If 250 new students join technical and 360 new students join non-technical through in interim exam, then find the new ratio of students in technical and non-technical.**

- (a) 63: 73
- (b) 65: 96
- (c) 67: 84
- (d) 65: 92
- (e) 66: 83

**Q54. If  $m+x-?=y$ , then find the value of question marks (?). (All the value are in percentage)**

- (a) 10
- (b) 20
- (c) 30
- (d) 25
- (e) 5

**Q55. Total male candidates who applied in north zone are 120 and number of female candidates who applied for non-technical in north zone are 75, then find the number of male candidates who applied for non-technical in north zone is how much more/less than number of female candidates who applied for technical in north zone.**

- (a) 20
- (b) 15
- (c) 25
- (d) 30
- (e) 45

**Directions (56-60): The table shows the data about five companies and their manufacturing and imported spare parts. Only some manufacturing spare parts are coming for refurbishing. Some values are missing and you have to calculate according to the question.**

**Note:** Total spare parts = Manufactured parts + Refurbished parts + Imported parts

Company	Total spare parts	% Of imported spare parts	Ratio of manufactured and refurbished spare parts
<b>A</b>	----	15%	13: 7
<b>B</b>	25000	12.5%	----
<b>C</b>	24000	----	8: 3
<b>D</b>	18000	----	7: 5
<b>E</b>	----	----	----

**Q56. If company A imports 3000 spare parts from overseas, then find the number of spare parts of company A which came for refurbishing.**

- (a) 6250
- (b) 7000
- (c) 13000
- (d) 5950
- (e) None of these

**Q57. If manufactured spare parts of company C is  $\frac{2}{3}$ <sup>rd</sup> of its total spare parts, then find refurbished spare parts of C is what percentage more or less than the imported spare parts of C?**

- (a) 50%
- (b) 100%
- (c) 150%
- (d) 125%
- (e) 200%



**Q58. If refurbished spare parts of D are 4500 and D imports spare parts from Russia and Japan in the ratio of 7: 2, then find the number of spare parts imported by D from Russia is what approximate percentage of its total spare parts.**

- (a) 31%
- (b) 46%
- (c) 53%
- (d) 26%
- (e) 38%

**Q59. If company E has  $16\frac{2}{3}\%$  more spare parts than company D and out of these 13% are imported and rest are manufactured, then find the refurbished spare parts of E. 20% of the manufactured spare parts by E came for refurbished.**

- (a) 4532
- (b) 3654
- (c) 3245
- (d) 3645
- (e) 2345

**Q60. Total imported spare parts of company C is 3100 and ratio of refurbished parts of company B and that of company C is 24: 19. Find the total manufactured spare parts (excluding refurbished) of company B.**

- (a) 12725
- (b) 13235
- (c) 14675
- (d) 15165
- (e) 11425

**Directions (61-64): Read the data given carefully and answer the following questions based on it.**

There are two buses V1 and V2. V1 is 8-seater bus excluding driver and V2 is 7-seater bus excluding driver. Both took three rounds in a day i.e., Round 1, Round 2 and Round 3.

V1: Total number of passengers travel in V1 in all 3 rounds are 19. Only in round 2, all seats are full.

V2: Number of passengers travel in 7-seater bus in two rounds out of three rounds are same i.e., 6. No seats are full in all 3 rounds.

Sum of number of passengers travel in round 1 in both is equal to number of passengers travel in round 2 in both. Respective ratio of number of passengers in round 3 in V1 and V2 is 2: 3.

**Q61. If fare in round 1 for passengers is Rs.120, in round 2 for passengers is Rs.175 and in round 3 for passengers is Rs.225. In return trip fare reduced by 20%. If all passengers took same vehicle in return trip. Find the total fare collection by V1 in all three rounds in return trip.**

- (a) Rs.2627
- (b) Rs.3194
- (c) Rs.2512
- (d) Rs.2196
- (e) None of these

**Q62.** In V2,  $\frac{2}{3}$ <sup>rd</sup> of number of passengers in round 1,  $\frac{1}{5}$ <sup>th</sup> of number of passengers in round 2 and 50% of number of passengers in round 3 pay the fare by online mode. Find the difference between the number of passengers in V2 who made payment through online and offline mode.

- (a) 1
- (b) 0
- (c) 2
- (d) 3
- (e) 4

**Q63.** Find the sum of number of passengers in round 3 in V1 and round 1 in V2.

- (a) 8
- (b) 9
- (c) 10
- (d) 11
- (e) 12

**Q64.** Find the sum of number of empty seats in both buses in all the three rounds.

- (a) 12
- (b) 9
- (c) 8
- (d) 10
- (e) 13

**Directions (65-66):** Read the data given below and answer the following questions.

Riya and Sahil have some cards. Each card's price is Rs.2.5/cm<sup>2</sup>.

Riya: 2N number of cards of size (s×s) cm<sup>2</sup>. 5 cards of (5×b) cm<sup>2</sup>.

Sahil: N number of cards of (s+2×s+2) cm<sup>2</sup>.

Total cost for Riya for 2N cards of (s×s) cm<sup>2</sup> is Rs.6400. Ratio of total cost for Riya and Sahil for N cards of (s×s) cm<sup>2</sup> and (s+2×s+2) cm<sup>2</sup> respectively is 16: 25.

**Q65.** Find the value of s.

- (a) 4
- (b) 2
- (c) 16
- (d) 8
- (e) 20

**Q66.**

If total cost of 5 cards of (5 × b) cm<sup>2</sup> for Riya is Rs.225, then find the value of b.

- (a) 2.4
- (b) 2.8
- (c) 3.2
- (d) 3.6
- (e) 4

**Directions (67-68):** Read the given below information carefully and answer the following questions based on it.

There are two friends Trisha and Amrita. They spend their income on grocery, rent and electricity bills and remaining they save. Trisha spends 20% of her income on grocery. From the remaining, she spends 10% and 15% on electricity bill and rent respectively. Amrita spends 20% of her income on grocery and saves 52% of income. Amount spent on grocery by Amrita is Rs.3000 less than the amount spent on grocery by Trisha. Amrita saves Rs.11160 less than savings of Trisha.

**Q67. Find the difference between the income of Trisha and Amrita.**

- (a) Rs.12000
- (b) Rs.18000
- (c) Rs.9000
- (d) Rs.6000
- (e) Rs.15000

**Q68. What is the ratio between the amount spent on rent by Trisha and amount spent on electricity bill by Amrita, if she spent the rest expenditure amount on rent and electricity bill in the ratio of 3:4?**

- (a) 7: 6
- (b) 9: 8
- (c) 3: 4
- (d) 6: 5
- (e) 5: 4

**Directions (69-71):** In the given questions, two quantities are given, one as 'Quantity I' and another as 'Quantity II'. You have to determine relationship between two quantities and choose the appropriate option

**Q69.**

**Quantity I:** If  $a, b, c$  are three consecutive whole numbers such that  $a + b + c = 3$ , then  $28x^c - 15x^b + 2x^a = 0$

**Quantity 2:**  $y^2 = 4y$

- (a) Quantity I > Quantity II
- (b) Quantity I < Quantity II
- (c) Quantity I  $\geq$  Quantity II
- (d) Quantity I  $\leq$  Quantity II
- (e) Quantity I = Quantity II or no relation

**Q70.**

$a$  and  $b$  are two prime numbers. When sum of  $a$  and  $b$  is divided by 2 then remainder is 1. If  $a > b$ .

**Quantity I:** value of  $b$

**Quantity II:** common factor by which both numbers can divisible.

- (a) Quantity I > Quantity II
- (b) Quantity I < Quantity II
- (c) Quantity I  $\geq$  Quantity II
- (d) Quantity I  $\leq$  Quantity II
- (e) Quantity I = Quantity II or no relation

**Q71.**

A bag contains seven red balls, three green balls and 'y' blue balls. If one ball drawn at random probability of being blue is  $\frac{3}{8}$ .

**Quantity I** - If three balls taken out from the bag at random, then what will be Probability of that all three balls are of different colors.

**Quantity II** -  $\frac{11}{40}$

- (a) Quantity I > Quantity II
- (b) Quantity I < Quantity II
- (c) Quantity I  $\geq$  Quantity II
- (d) Quantity I  $\leq$  Quantity II
- (e) Quantity I = Quantity II or no relation

**Q72.** A sum of Rs. P is invested for five years at the interest rate of R% in simple interest and the interest become five times of itself. If Rs. (P+150) is invested for five years at (R-48) % rate of interest, the interest received is Rs.3640, then find the value of P?

- (a) 1400
- (b) 1550
- (c) 1250
- (d) 1350
- (e) 1200

**Q73.** 8 males and 22 females can complete a work in 16 days. 49 males and 20 females can complete a work in 4 days. 1 female is half as efficient as child. In how many days does 6 children can do the same work.

- (a) 72 days
- (b) 36 days
- (c) 54 days
- (d) 90 days
- (e) 44 days

**Q74.** 15 men can do a work in X days. 20 women can do the same work in 2X days. 57 women can do the work in 20 days. In how many days 9 men can do the same work.

- (a) 47.5 days
- (b) 42.5 days
- (c) 52.5 days
- (d) 45 days
- (e) 49.5 days

**Q75.** X spheres of diameter 6 cm put into a right angled-cylindrical vessel of diameter 8 cm. The height of water rose to 36 cm and all the sphere are completely submerged in water. What is the value of X?

- (a) 12
- (b) 9
- (c) 16
- (d) 18
- (e) 10

**Q76. P invested Rs.2000 and Q invested Rs.2500 in a business. After 4 months Q left and R joined with Y% of Q's capital. Total profit at the end of year was Rs.7500 and P's profit share was Rs.2400. Find the value of Y.**

- (a) 110%
- (b) 220%
- (c) 175%
- (d) 205%
- (e) 125%

**Q77. Time taken by boat to cover an upstream distance of 'D+40' km is double of the time taken by boat to cover a downstream distance of 'D' km. If the ratio of speed of boat in still water to speed of current is 5: 1, then find the speed of boat in still water.**

- (a) 20 kmph
- (b) 16 kmph
- (c) 12 kmph
- (d) 24 kmph
- (e) CND

**Q78. Cost price of article A is Rs.X+150 and cost price of article B is Rs.X-150. Article A sold at loss of 20% and article B sold at profit of 25%. If the selling price of article B is Rs.750 more than that of article A. Find the cost price of B.**

- (a) Rs.2500
- (b) Rs.2200
- (c) Rs.1850
- (d) Rs.2750
- (e) None of these

**Q79. A mixture contains 165 liters milk and X liters water. When X liter milk and 120-liter water added to mixture the respective ratio becomes 5: 4. What will the ratio of (X+30) liter milk and (X-15) liter water.**

- (a) 3: 2
- (b) 5: 3
- (c) 2: 1
- (d) 4: 3
- (e) None of these

**Q80. A container contains 180-liter milk and X liter water. When 10-liter water added to mixture then water will become 14.001%. Find the approximate resultant quantity of water in mixture?**

- (a) 29.3 liter
- (b) 32.6 liter
- (c) 24.8 liter
- (d) 36.2 liter
- (e) 39.5 liter

**Q81.** Total population of town A is 25% less than that of town B. Female in town A are 40% of total population. Male of town B is 1320 more than that of town A. Female in town B are 46.01% of total population of town A. Find the total population (approx.) of both towns together?

- (a) 86000
- (b) 96000
- (c) 14400
- (d) 11200
- (e) 74000

**Q82.** Train A running with the speed of 180 km/hr crosses a platform thrice of its length in 36 sec and train B running at the speed of 54 kmph crosses a standing man in 50 sec. Find the time taken by both trains to cross each other when running in same direction?

- (a)  $28\frac{2}{7}$  seconds
- (b)  $24\frac{2}{7}$  seconds
- (c)  $34\frac{2}{7}$  seconds
- (d)  $36\frac{2}{7}$  seconds
- (e)  $30\frac{2}{7}$  seconds

**Q83.** The present ages of Father & Mother is in ratio 8:7 while that of Father & Son is 5:1. 4 years ago, the ratio of Father age to Daughter age was 12:1. The sum of present age of Son & Daughter is 20% of sum of ages of Father & Mother. Find ratio of present age of Mother to that of his daughter?

- (a) 5:2
- (b) 8:1
- (c) 4:1
- (d) 5:1
- (e) 5:3

**Directions (84-85):** If both equation I and II are added than find the product of roots of new formed equation.

**Q84.**

I.  $2x^2 + 12x + 10 = 0$

II.  $x^2 - x = 0$

- (a)  $-\frac{10}{3}$
- (b) 30
- (c)  $\frac{10}{3}$
- (d) 5
- (e) None of these

**Q85.** If 2 is subtracted from equation II, then find the addition of the roots of new formed equation.

- (a) 2
- (b) -2
- (c) -1
- (d) 0
- (e) 1

**Directions (86-87):** Find the wrong number in following number series:

**Q86.** 8, 10, 20, 70, 320, 1570, 7830

- (a) 7830
- (b) 10
- (c) 8
- (d) 320
- (e) 1570

**Q87.** 36, 80, 166, 340, 690, 1392, 2798

- (a) 690
- (b) 36
- (c) 340
- (d) 1392
- (e) 80

**Directions (88-90):** What approximate value should come in the place of question (?) mark in following questions.

**Q88.** 32.07% of 799.98 + 86.98 % of 599.93 =? + 249.97

- (a) 528
- (b) 518
- (c) 538
- (d) 512
- (e) 508

**Q89.**

$$\{(5999.99 \div 74.99) + 19.99\} \times 7.03 = \left( \frac{2196.99}{169.03} \times 24.99 \right) + ?$$

- (a) 375
- (b) 385
- (c) 485
- (d) 425
- (e) 475

**Q90.**  $1395.99 + 411.99 - ? + (30.93)^2 = 2703.99$

- (a) 55
- (b) 60
- (c) 75
- (d) 70
- (e) 65

**Directions (91-94):** In the following questions, the symbols %, #, @, and \$ are used with the following meanings as illustrated below. Study the following information and answer the given questions:

'A\$5B' means A is 15m east of B.

'A#12B' means A is 5m north of B.

'A%6B' means A is 16m west of B.

'A@14B' means A is 7m south of B.

**B@35F, L\$11B, M\$12D, X%17Y, C#35Y, K@14Y, P#21L, P%3X, M@27X**

**Q91.** If the statement 'O%(-8)P' is true then, what is the shortest distance between point O and point M?

- (a) 35m
- (b) 43m
- (c) 25m
- (d) 28m
- (e) Can't be determined

**Q92.** If the statement 'A%51C' is true then how far and in which direction is point A with respect to point F?

- (a) #21
- (b) #28
- (c) %21
- (d) @14
- (e) None of these

**Q93.** Four of the following five are alike in a certain way and so form a group. Find the one which does not belong to that group?

- (a) F-L
- (b) P-M
- (c) X-K
- (d) C-D
- (e) B-M

**Q94.** Find the difference between the total distance from point F to point X and the total distance from point Y to point L?

- (a) 6m
- (b) 28m
- (c) 18m
- (d) 10m
- (e) 22m



**Q95. Statement:** There has been huge surge in covid cases, but some of the medicine's retailers are doing black marketing of medicines and medical equipment.

**Course of Action:**

- I. Government should take proper legal action against them.
  - II. All those black marketers should be hanged.
  - III. Government should fix the rate of medicine and medical equipment.
- (a) Only I and II follow  
(b) Only I follows  
(c) Only I and III follow  
(d) Only II and III follow  
(e) All follow

**Q96. Statement:** Election commission of India is going to announce the result of five states. Mass gathering and celebration of political leaders and workers may result increase in corona cases.

**Course of Action:**

- I. Election commission should issue the guidelines to close all the political party office on the result day.
  - II. Section 144 should be imposed in whole states whose results are to be announced.
- (a) Only II follows  
(b) Only I follows  
(c) Both I and II follow  
(d) Either I or II follows  
(e) None follows

**Directions (97-101): Study the following information carefully and answer the questions given below:**

Eight persons R, S, T, U, V, W, X, Y shifted to different cities in two different years 2009 and 2010 of four given months viz. January, April, July and October but not necessarily in the same order.

No one shifted between T and the one who shifted to Jaipur and both of them shifted in different years. More than two persons shifted between the one who shifted to Shimla and Jaipur. V does not shift to Manali. The one who shifted to Gurugram is shifted just before V and just after S. Three persons shifted between S and R who shifted in the month which has even numbers of days. X is shifted to Chandigarh just before the one who shifted to Delhi. The one who shifted to Goa is shifted just before Y and just after W. U neither shifted Manali nor Raipur.

**Q97. Who among the following is shifted in October 2009?**

- (a) The one who shifted to Jaipur
- (b) The one who shifted to Delhi
- (c) S
- (d) The one who shifted to Goa
- (e) None of these

**Q98. Four of the following five are alike in a certain way and so form a group. Find the one who does not belong to that group?**

- (a) U-Delhi
- (b) V-Gurugram
- (c) W-Jaipur
- (d) S-Manali
- (e) T-Raipur

**Q99. Which of the following statements is not true?**

- I. S shifted just after the one who shifted to Jaipur
- II. The number of persons shifted before X is half than the number of persons shifted after T
- III. No one shifted before the one who shifted to Raipur

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

**Q100. Which of the following pair/group of persons shifted in the month which has odd numbers of days in the same year?**

- (a) X, W, Y
- (b) R, T
- (c) S, V, Y
- (d) Y, W
- (e) None of these

**Q101. How many persons shifted between R and the one who shifted just after S?**

- (a) Three
- (b) None
- (c) More than three
- (d) One
- (e) Two

**Directions (102-104): Each of the questions below consists of a question and two statements numbered I and II given below it. You have to decide whether the data provided in the statements are sufficient to answer the question. Read all the statements and answer the following questions.**

**Q102. Seven persons live in a seven-storey building, such that ground floor is numbered as 1 and so on till the topmost floor is numbered as 7. Who among the following lives just above U's floor?**

Statements I. R lives just below U's floor. Two persons live between Q and R. More than three persons live below Q. There are as many persons live below T as live above Y. B lives three floors below T.

Statements II. One floor gap between B and R. U lives between B and R but not live on even numbered floor. No one lives between Q and B.

- (a) If the data in statement I alone are sufficient
- (b) If the data in statement II alone are sufficient
- (c) If the data either in statement I alone or statement II alone are sufficient to answer
- (d) If the data given in both I and II together are not sufficient
- (e) If the data in both the statements I and II together are necessary to answer

**Q103. Six persons L, M, N, O, P and Q going to attend a meeting one by one in different months- January, March, June, July, October and November but not necessarily in the same order. Who among the following goes just after L?**

Statements I. P attend meeting just before month of M. O attend meeting after 5 months of N. Q attend meeting before L.

Statements II. More than three persons attend meeting between N and M. One person attends a meeting between O and P. Q attend a meeting before P but not just before.

- (a) If the data in statement I alone are sufficient
- (b) If the data in statement II alone are sufficient
- (c) If the data either in statement I alone or statement II alone are sufficient to answer
- (d) If the data given in both I and II together are not sufficient
- (e) If the data in both the statements I and II together are necessary to answer

**Q104. Seven persons P, Q, R, S, T, U and V are arranged in descending order according to their heights from left to right but not necessarily in the same order. How many persons are taller than V?**

Statements I. Only R and U are smaller than T. Three persons in between S and R. V is just taller than Q. P is not the tallest among all.

Statements II. Only S is taller than U. At least three persons in between Q and T. P is taller than R but shorter than V.

- (a) If the data in statement I alone are sufficient
- (b) If the data in statement II alone are sufficient
- (c) If the data either in statement I alone or statement II alone are sufficient to answer
- (d) If the data given in both I and II together are not sufficient
- (e) If the data in both the statements I and II together are necessary to answer

**Directions (105-109): A number arrangement machine when given an input line of numbers rearranges them following a particular rule in each step. The following is an illustration of input and rearrangement.**

**Input: 35 47 59 39 68**

Step I: 332 443 554 336 662

Step II: 331 441 551 333 664

Step III: 331 333 441 551 664

Step IV: 7 9 9 11 16

Step V: 14 18 18 22 48

And step V is the last step of the arrangement. As per the above rule followed in the above steps, find out in each of the following questions the appropriate step for the given input:

**Input: 19 27 78 48 57**

**Q105. What is the sum of the numbers which is 3<sup>rd</sup> from the left in Step III and 4<sup>th</sup> from the right in the final step?**

- (a) 447
- (b) 454
- (c) 443
- (d) 466
- (e) None of these

**Q106. Which of the following element is 3<sup>rd</sup> from the left in Step IV?**

- (a) 9
- (b) 13
- (c) 7
- (d) 8
- (e) 20

**Q107. How many steps required to complete the arrangement?**

- (a) Four
- (b) Six
- (c) Five
- (d) Seven
- (e) None of these

**Q108. Which of the following step found “776 440 553” in the same manner?**

- (a) Step III
- (b) Step II
- (c) Step V
- (d) Step IV
- (e) Step VI

**Q109. Which of the following is the penultimate step?**

- (a) 9 8 7 13 20
- (b) 18 14 24 26 60
- (c) 8 7 9 13 20
- (d) 9 7 8 20 13
- (e) None of these

**Directions (110-114):** In each question below some statements are given followed by three conclusions numbered I, II and III. You have to take the given statements to be true even if they seem to be at variance with commonly known facts and then decide which of the given conclusions logically follows from the given statements, disregarding commonly known facts. Give answer

**Q110. Statements:**

- Only a few Desk are Furniture.
- All Furniture are Wood.
- Only few Cupboard are Wood.
- Only Cupboard is Table. No Desk is Cupboard.

**Conclusion:**

- I. All Cupboard being Wood is a possibility.
- II. Some Desk can never be Furniture.
- III. Some Wood which are Cupboard are not Desk.

- (a) If only conclusion I follows.
- (b) If both conclusion I and II follows.
- (c) If all conclusion I, II and III follows.
- (d) None follows.
- (e) If both conclusions II and III follow.

**Q111. Statements:**

All Peony are Orchid.

All Orchid are Aster.

No Tulips are Orchid.

Only a few Orchid are Daisy.

**Conclusion:**

I. Some Peony are not Tulips.

II. All Daisy being Orchid is a possibility.

III. All Tulips being Aster is a possibility.

(a) If only conclusion II follows.

(b) If both conclusion I and II follows.

(c) If all conclusion I, II and III follows.

(d) None follows.

(e) If both conclusions II and III follow.

**Q112. Statements:**

Only a few Pen are Mouse.

All Pen are Paper.

Only a few Drawer are Paper.

No Silicon is Drawer.

**Conclusion:**

I. Some Mouse are not Drawer.

II. Some Paper are not Silicon.

III. All Drawer are not Paper is a possibility.

(a) If only conclusion II follows.

(b) If both conclusion I and II follows.

(c) If all conclusion I, II and III follows.

(d) If only conclusion I follows.

(e) If both conclusions II and III follow.

**Q113. Statements:**

All Online are Zip.

Only a few Folder are Zip.

No Folder is Flash.

No Flash is Pen drive.

**Conclusion:**

I. Some Zip are not Flash.

II. All Flash being Online is a possibility.

III. Some Zip are not Pen drive.

(a) If only conclusion I follows.

(b) If only conclusion III follows.

(c) If both conclusion I and II follows.

(d) If both conclusions II and III follow.

(e) None of these

**Q114. Statements:**

All Cherry are Kiwi.

Only a few Plum are Cherry.

Some Plum are not Lychee.

Only a few Peach are Lychee.

No Cherry is Lychee.

**Conclusion:**

I. Some Peach neither Cherry nor Plum.

II. Some Plum are not Lychee.

III. All Lychee being Peach is a possibility.

(a) If only conclusion II follows.

(b) If both conclusion I and II follows.

(c) If all conclusion I, II and III follows.

(d) None of these

(e) If both conclusions II and III follow.

**Q115. Statement:**

Start to think of travelling by train for a holiday. A train journey can give one a better view of places on the way which an air journey cannot give. You can walk around whenever you want, meet other travelers and locals, relax and watch the landscape go peacefully by. Train travel is both a beautiful and affordable way to see the country, and no trip is more scenic than the trip by trains.

**Conclusions:**

I. While going for a holiday, people want to enjoy the view of the places on the way.

II. People should not travel by air when they are going for a holiday.

Which of the following can be concluded from the given statement?

(a) Only I follows

(b) Only II follows

(c) Both I and II follow

(d) Neither I nor II follows

(e) None of these

**Q116. Statement:**

Through interest rate subvention scheme government of India will provide Crop loan to farmers at just 4%.

Which of the following can be **concluded** from the above statement?

(a) Financial condition of farmers will improve

(b) Repayment of loan will be done timely by the farmers.

(c) Only (A) and (D)

(d) Farmers will have to pay less interest on their loan.

(e) None of these

**Directions (117-120):** In the following questions, the symbols @, #, %, \$ and © are used with the following meaning as illustrated below-

'P#Q' means 'Q is neither greater than nor equal to P'

'P©Q' means 'Q is neither equal to nor smaller than P'

'P%Q' means 'Q is neither smaller than nor greater than P'

'P\$Q' means 'Q is not smaller than P'

'P@Q' means 'Q is not greater than P'

Now in each of the following questions assuming the given statement to be true, find which of the three conclusions I, II and III given below them is/are definitely true and give your answer accordingly.

**Q117. Statements:**

D@E#M%L©O; C#M\$Q; T#Y%E

**Conclusions:**

I. Y#L

II. Q@M

III. Q©M

(a) None is true

(b) Both I and II is true

(c) Only III is true

(d) Both I and III is true

(e) Only I and either II or III is true

**Q118. Statements:**

P\$Q%R\$T%S#G; H@I#J%Q

**Conclusions:**

I. I#T

II. S#Q

III. I\$T

(a) Only I and III are true

(b) Only II and III are true

(c) Only I and II are true

(d) All are true

(e) Either I or III is true

**Q119. Statements:**

W%X©Y\$B@C; M\$N©O%R©B

**Conclusions:**

I. R©Y

II. W©C

III. X#B

(a) None is true

(b) Only II is true

(c) Only I and II are true

(d) Only II and III are true

(e) Only I and III are true

**Q120. Statements:**

G%L\$T©Q\$R; M#P#L; R©S%A

**Conclusions:**

I. A#G

II. P#Q

III. M%G

- (a) None follows
- (b) Only I is true
- (c) Only III is true
- (d) Either I or II is true
- (e) All are true

**Directions (121-125): Study the information carefully and answer the questions given below.**

Six persons stay at different step of a stair of 40 steps facing to the 40<sup>th</sup> step. P stay at step which is a multiple of 9 but above the 20<sup>th</sup> step. The number of steps ahead P is same as the number of steps behind S. There are seven steps gap between S and Q which is not stay at even numbered position. The number of steps between Q and S is half the number of steps between T and R. The number of steps between R and U is one more than the number of steps behind S. U stay below the step 25. Both T and U stay in somewhere between P and Q. T stay at step which is a multiple of 7 but above 15<sup>th</sup> step.

Now, all the persons play a Ludo game and move according to the given conditions-

1. If the dice throw and get the number more than 5 then the person move 13 positions behind with his actual position if not possible than move 4 steps ahead.
2. If the dice throw and get the number 3 then the person move to the step which is a multiple of 19 but above the one who throw a dice first.
3. If the dice throw and get the number less than 3 then the person move to 7 positions ahead of his actual position
4. If the dice throw and get the number 4 then the person move to the just below step of the 2<sup>nd</sup> person who throw a dice.

Throw:

1. T throw and gets 6
2. U throw and gets 3
3. R throw and gets 2
4. Q throw and gets 4

\*Note- All the persons throw a dice in a serial way as given above.

(ex- First T draws then U throw .....so on.....)

**Q121. The number of steps gap between U and S?**

- (a) 9
- (b) 8
- (c) 12
- (d) 17
- (e) 13



**Q122. How many steps are behind T after the rearrangement?**

- (a) 21
- (b) 24
- (c) 34
- (d) 27
- (e) 26

**Q123. What is the sum of the number of steps of R and T after the rearrangement?**

- (a) 34
- (b) 47
- (c) 41
- (d) 48
- (e) None of these

**Q124. Who among the following is behind to all in the re arrangement?**

- (a) U
- (b) R
- (c) Q
- (d) T
- (e) None of these

**Q125. How many persons stay in between Q and R in the initial arrangement?**

- (a) One
- (b) None
- (c) Two
- (d) Three
- (e) None of these

**Q126.** If we form a meaningful word by the first, second, fourth and ninth letter of the word **'MANIPULATED'**, then which of the following will be the first letter of the word thus formed? If more than one word is formed mark Y as your answer. If no meaningful word is formed, mark X as your answer.

- (a) Y
- (b) X
- (c) A
- (d) T
- (e) M

**Directions (127-130): Study the information carefully and answer the questions given below.**

Ten persons A, B, C, D, E, F, G, H, I and J sit around a circular table facing the center but not necessarily in the same order. No immediate neighbour sits according to the alphabetical order like- A does not sit near B and B does not sit near A and C and so on.

D sits 3<sup>rd</sup> to the right of H. One person sits between E and D. Two persons sit between C and E. One person sits between G and F. Both E and G are not an immediate neighbour to each other. Both I and C are immediate neighbours. F sits 2<sup>nd</sup> to the right of A. J does not sit 4<sup>th</sup> to the left of B.

**Q127. If A and G interchanged their positions then, who among the following sits 3<sup>rd</sup> to the left of G?**

- (a) H
- (b) J
- (c) D
- (d) F
- (e) None of these

**Q128. How many persons sit between C and H when counted to the left of C?**

- (a) More than five
- (b) As many persons sit between F and C
- (c) Three
- (d) As many persons sit between D and E, when counted to the left of E
- (e) Both (a) and (d)

**Q129. Which of the following statement is true?**

- (a) I sits 5<sup>th</sup> right of A
- (b) J sits 2<sup>nd</sup> to the right of E
- (c) A is not an immediate neighbour of D
- (d) B sits 3<sup>rd</sup> to the right of C
- (e) All are true

**Q130. If all the persons sit according to the alphabetical order in clockwise direction from A then, how many persons remain the same position (excluding A)?**

- (a) One
- (b) More than three
- (c) Two
- (d) None
- (e) Three

**Directions (131-132):** Amid mounting pressure over the Centre to postpone the CBSE Board exams scheduled for next month, Prime Minister will hold a meeting with Education Minister and other important officials at 12 pm to discuss the issue. The government is likely to consider postponing the exams as Covid-19 cases continue to rise across states. Several state governments and Opposition leaders such as Arvind Kejriwal and Rahul Gandhi have been appealing to the Centre to postpone board exams.

**Q131. Which of the following substantiates the demand raised by Opposition leaders?**

- (I) Several crowded markets in many states have been closed after Covid-19 guidelines.
  - (II) Many state governments have postponed the state board exams for X and XII classes as cases of Covid-19 continue to rise.
  - (III) Cases has been rising but elections in many states are conducted.
- (a) Only II and III
  - (b) Only III
  - (c) Only I and II
  - (d) Only I and III
  - (e) All of three

**Q132. What may be the repercussions if board exam will be conducted?**

- (I) Many students may get infected and this will be tough situation for government to handle.
  - (II) Every student will get good marks and they will move ahead in academic.
  - (III) There may be sudden rise in number of cases of Covid-19.
- (a) Only II and III
  - (b) Only I and III
  - (c) Only II
  - (d) Only I and II
  - (e) All of three

**Directions (133-137): Study the information carefully and answer the questions given below.**

Eight boxes A, B, C, D, E, F, G and H are arranged one above the other but not necessarily in the same order. Each of the box has same height of 2 inch. Different number of books are in each box- 12, 13, 14, 15, 17, 18, 21 and 28 but not necessarily in the same order. Two boxes gap between D and E and in both boxes the difference of number of books are 4. Box A is placed two places below the box which has 21 books. Box A is placed just above the box D. Box B is placed just above the box which has 13 books. Box B contains 17 books. The box which has 15 books is placed just below box H and just above the box which has 14 books. Box F is placed two places above the box which has 12 books. Box C contain the number of books which is a multiple of 7 but not placed at the topmost position.

**Q133. How many boxes are placed between box B and the box which is placed just above box H?**

- (a) Three
- (b) More than three
- (c) Two
- (d) One
- (e) None

**Q134. What is the average number of books in box A, B and G?**

- (a) 15
- (b) 12
- (c) 14
- (d) 13
- (e) None of these

**Q135. Four of the following five are alike in a certain way and so form a group. Find the one which does not belong to that group?**

- (a) F-21
- (b) H-15
- (c) B-17
- (d) G-18
- (e) D-17

**Q136. The number of boxes placed between A and G is same as the number of boxes placed between \_\_\_\_\_ and \_\_\_\_\_**

- (a) H, B
- (b) D, H
- (c) F, H
- (d) G, E
- (e) None of these

**Q137. What is the sum of the number of books in box G and H?**

- (a) 30
- (b) 49
- (c) 25
- (d) 27
- (e) 33

**Directions (138-140): Study the information carefully and answer the questions given below.**

Seven members M, P, Q, R, S, T and U are living in the family in which two married couples and arranged in descending order from left according to their age but not necessarily in the same order. The one who is 36 years old is married with P who is the son of T's father's wife M. R is 54 years old and younger to only M. U is sister of Q who is not elder to U. S is sister-in-law of U's uncle. The number of males in the family is more than the number of females. T is just older to U who is 20 years younger to S. Q's father is just younger to the one who is 54 years old.

**Q138. How many persons are older to the one who is daughter in law of R?**

- (a) One
- (b) None
- (c) Three
- (d) More than four
- (e) Two

**Q139. Find the average age of R and the one who is just younger to P?**

- (a) 45 years
- (b) 26 years
- (c) 35 years
- (d) Can't be determined
- (e) None of these

**Q140. How many persons are older and younger to T's brother respectively?**

- (a) 3, 3
- (b) 1, 5
- (c) 2, 4
- (d) 5, 1
- (e) None of these

## Solutions

### S1. Ans.(c)

**Sol.** The correct choice is option (c) which can be inferred from second paragraph which mentions, "Discussions and brainstorming sessions lead to innovative solutions and quick results."

### S2. Ans.(e)

**Sol.** The correct choice is option (e) which can be inferred from first paragraph which mentions, "Managers need to know their employees well to expect them to contribute their level best and also to remain loyal towards the organization." And "Managers connect with their team members and employees tend to know each other better."

### S3. Ans.(d)

**Sol.** The correct choice is option (d) which can be inferred from second paragraph which mentions, "Trust me; you will be elated to see employees striving hard to accomplish assigned targets within the shortest possible time frame." And also "Knowing each other well leads to better understanding among employees and they seldom fight with each other, eventually leading to a healthy and positive work culture."

### S4. Ans.(c)

**Sol.** The correct choice is option (c) which can be inferred from last paragraph which mentions, "Let them open up. Knowing each other well leads to better understanding among employees and they seldom fight with each other, eventually leading to a healthy and positive work culture."

### S5. Ans.(e)

**Sol.** The correct choice is option (e) which can be inferred from last paragraph which mentions, "Knowing employees helps managers to understand how he can motivate his team members and use them to the best of their abilities. It helps you to understand which team member would fit into which particular role and which employee would not do justice to his work. Knowing employees helps you judge your subordinates well and hence there is no question of confusions at the workplace. There is seldom any overlapping of work and everyone knows what he/she is supposed to do."

### S6. Ans.(c)

**Sol.** The correct choice is option (c) which can be inferred from first paragraph which mentions, "But the majority of the papers also underlined the fact that this straddling of the rural-urban divide is usually ignored by policy makers, and that the rigid division between "rural" and "urban" on the part of sectoral strategies actually makes life more difficult for low-income groups."

### S7. Ans.(b)

**Sol.** The correct choice is option (b) which can be inferred from first paragraph which mentions, "forming not so much a bridge over a divide as a complex web of connections in a landscape where much is neither "urban" nor "rural", but has features of both, especially in the areas around urban centres or along the roads out of such centres what can be termed the peri-urban interface. "

**S8. Ans.(d)**

**Sol.** The correct choice is option (d) which can be inferred from second paragraph which mentions, “Decreasing incomes from farming, especially for small-scale producers who, because of a lack of land, water or capital, are unable to intensify and switch to higher value crops, means that increasing numbers of rural residents engage in non-farm activities that are often located in urban centres. “

**S9. Ans.(e)**

**Sol.** The correct choice is option (e) which can be inferred from last paragraph which mentions, “ For those who continue farming, direct access to markets is essential in the wake of the demise of parastatal marketing boards – and markets are also usually located in urban centres. Better access to markets can increase farming incomes and encourage shifts to higher value crops or livestock.”

**S10. Ans.(c)**

**Sol.** The correct choice is option (c) which can be inferred from last paragraph which mentions, “ With the expansion of urban centres, land uses change from agricultural to residential and industrial”

**S11. Ans.(a)**

**Sol.** The correct choice is option (a).

For falsity of statement (i), refer to last paragraph which mentions, “ Better access to markets can increase farming incomes and encourage shifts to higher value crops or livestock.”

For statement (ii), refer to second paragraph which mentions, “ But there are also conflicts between many urban interests and the needs of most of the urban population.”

For statement (iii), refer to first paragraph which mentions, “ The first, which came out in 1998, described the reliance of many low-income households on both rural-based and urban-based resources in constructing their livelihoods.”

**S12. Ans.(d)**

**Sol.** The correct choice is option (d). ‘intensive’ means ‘involving a lot of work or care in a short period of time’ and ‘superficial’ is an antonym which means ‘not studying or thinking about something in a deep or complete way’

anew means again; in a new or different way

retard means to delay something or make its development or progress slower

caveat means a warning or proviso of specific stipulations, conditions, or limitations

**S13. Ans.(e)**

**Sol.** Sentence (F) will be the introductory sentence as it best presents the theme of the given paragraph which is the impact of Covid-19 pandemic on reduction of emission. The next sentence (A) will be the next sentence as it mentions the collection of data to study the extent of the impact. Now, it has already been highlighted in the question that sentence (C) will be the third sentence. Further, sentence (C) will be followed by sentence (D) as it further describes the offset of a cooling trend which has already been described in statement (C). Now, sentence (D) will be followed by sentence (B) as it further describes the result of pandemic-driven response which is negligible. Further, sentence (E) will be followed by sentence (B) because it states the contradictory statement which is a possibility of reduction in future warming by reducing fossil fuels and stimulating green. Therefore, the correct rearrangement of the given sentences would be “FACDBE”.

**S14. Ans.(c)**

**Sol.** Sentence (F) will be the introductory sentence as it best presents the theme of the given paragraph which is the impact of Covid-19 pandemic on reduction of emission. The next sentence (A) will be the next sentence as it mentions the collection of data to study the extent of the impact. Now, it has already been highlighted in the question that sentence (C) will be the third sentence. Further, sentence (C) will be followed by sentence (D) as it further describes the offset of a cooling trend which has already been described in statement (C). Now, sentence (D) will be followed by sentence (B) as it further describes the result of pandemic-driven response which is negligible. Further, sentence (E) will be followed by sentence (B) because it states the contradictory statement which is a possibility of reduction in future warming by reducing fossil fuels and stimulating green. Therefore, the correct rearrangement of the given sentences would be "FACDBE".

**S15. Ans.(e)**

**Sol.** Sentence (F) will be the introductory sentence as it best presents the theme of the given paragraph which is the impact of Covid-19 pandemic on reduction of emission. The next sentence (A) will be the next sentence as it mentions the collection of data to study the extent of the impact. Now, it has already been highlighted in the question that sentence (C) will be the third sentence. Further, sentence (C) will be followed by sentence (D) as it further describes the offset of a cooling trend which has already been described in statement (C). Now, sentence (D) will be followed by sentence (B) as it further describes the result of pandemic-driven response which is negligible. Further, sentence (E) will be followed by sentence (B) because it states the contradictory statement which is a possibility of reduction in future warming by reducing fossil fuels and stimulating green. Therefore, the correct rearrangement of the given sentences would be "FACDBE".

**S16. Ans.(b)**

**Sol.** Sentence (F) will be the introductory sentence as it best presents the theme of the given paragraph which is the impact of Covid-19 pandemic on reduction of emission. The next sentence (A) will be the next sentence as it mentions the collection of data to study the extent of the impact. Now, it has already been highlighted in the question that sentence (C) will be the third sentence. Further, sentence (C) will be followed by sentence (D) as it further describes the offset of a cooling trend which has already been described in statement (C). Now, sentence (D) will be followed by sentence (B) as it further describes the result of pandemic-driven response which is negligible. Further, sentence (E) will be followed by sentence (B) because it states the contradictory statement which is a possibility of reduction in future warming by reducing fossil fuels and stimulating green. Therefore, the correct rearrangement of the given sentences would be "FACDBE".

**S17. Ans.(d)**

**Sol.** Sentence (F) will be the introductory sentence as it best presents the theme of the given paragraph which is the impact of Covid-19 pandemic on reduction of emission. The next sentence (A) will be the next sentence as it mentions the collection of data to study the extent of the impact. Now, it has already been highlighted in the question that sentence (C) will be the third sentence. Further, sentence (C) will be followed by sentence (D) as it further describes the offset of a cooling trend which has already been described in statement (C). Now, sentence (D) will be followed by sentence (B) as it further describes the result of pandemic-driven response which is negligible. Further, sentence (E) will be followed by sentence (B) because it states the contradictory statement which is a possibility of reduction in future warming by reducing fossil fuels and stimulating green. Therefore, the correct rearrangement of the given sentences would be "FACDBE".

**S18. Ans.(d)**

**Sol.** The correct choice is option (d). We need to swap (A)-(C) to make sentences grammatically correct and contextually meaningful. Thus, the meaningful sentences will be (I) Drug **compounds**, when released into waterbodies even in **minuscule** amounts, can harm human beings and the ecosystem in the long term. (II) If you allow banks to fail, depositors who **operated** under the **presumption** that the regulatory framework would protect their money would be **undermined**

**S19. Ans.(b)**

**Sol.** The correct choice is option (b). We need to swap (A)- (E) and (B)- (C) to make sentences grammatically correct and contextually meaningful. Thus, the meaningful sentences will be (I) A proposal to build a **boundary** wall around the Lake by **awaiting** funds. (II) The judges directed the government to issue a **comprehensive** circular, **incorporating** all guidelines for the **effective** functioning of the committees.

**S20. Ans.(a)**

**Sol.** The correct choice is option (a). We need to swap (A)-(E) to make sentences grammatically correct and contextually meaningful. Thus, the meaningful sentences will be (I) Fire and Rescue Services personnel **extinguished** a fire that broke out in a shop in an operation that **lasted** several hours. (II) Issues **pertaining** to manufacturing of **affordable** cloth and paper bags are **expected** to be discussed at the meeting. (II) The Nobel winners this year have handled such **complex (C)** systems and **developed** tools to get meaningful, **quantitative** results out of them.

**S21. Ans.(b)**

**Sol.** The correct choice is option (b). We need to swap (A)-(D) to make sentences grammatically correct and contextually meaningful. Thus, the meaningful sentences will be (I) Data showed that the vaccine was not only **feasible** to introduce but that it also **improves** health and saves lives. (II) The **triumphs** of science are best **appreciated** when they make human lives easier or safer, or **simply**, offer hope

**S22. Ans.(d)**

**Sol.** The correct choice is option (b). We need to swap (A)-(D) and (B)-(E) to make sentences grammatically correct and contextually meaningful. Thus, the meaningful sentences will be: (I) The farmer and the **improvement** of farmers' **livelihood** is the aim of the policy.

**S23. Ans.(b)**

**Sol.** The correct choice is option (b). 'Scourge', 'menace' and 'lash' depict the same meaning.

Scourge means a person or thing that causes a lot of trouble or suffering

hinge means a piece of metal that joins two sides of a box, door, etc. together and allows it to be opened or closed

menace means a danger or threat

salient means most important or noticeable

lash means to hit something with great force



**S24. Ans.(d)**

**Sol.** The correct choice is option (d). 'Mammoth', 'enormous' and 'colossal' depict the same meaning.  
Alleviation means to make something less grievous  
Mammoth means very big  
enormous means very big or very great  
colossal means extremely large  
skirmish means a short fight between groups of people

**S25. Ans.(e)**

**Sol.** The correct choice is option (e). 'Reclusive' and 'solitary' are synonyms.  
perilous means dangerous or very risky  
reclusive means person who is withdrawn from society or seeks solitude  
irrefutable means that cannot be proved wrong and must be accepted  
resilient means strong enough to deal with illness, a shock, change, etc.  
solitary means enjoying being alone; frequently spending time alone

**S26. Ans.(d)**

**Sol.** The correct sequence to make meaningful sentence is 'BECAD'. Hence the sentence formed is "The Bain report is a data-based prediction on agri-business scenarios, anchored to the agricultural set-up at present and predicting its future trajectories in another 20 years."

**S27. Ans.(c)**

**Sol.** The error lies in part (A). Here 'it's' should be 'its' because 'It's' is a contraction, meaning a shorter form of "it is" while 'Its' is a possessive pronoun meaning, "belonging to it".

**S28. Ans.(a)**

**Sol.** The correct sequence to make meaningful sentence is 'AECBD'. Hence the sentence formed is "Banks are the core of the settlements system and the credit pipe and allowing them to go down would be a problem."

**S29. Ans.(b)**

**Sol.** The error lies in part (B). 'It' should be replaced with 'them' as the subject 'banks' is plural.

**S30. Ans.(c)**

**Sol.** The correct choice is option (c). The correct connector is 'even as their' therefore the sentence will be "The farmers are also willing to continue the protest indefinitely even as their methods have come to the unfavorable notice of Supreme Court judges."

**S31. Ans.(e)**

**Sol.** The correct choice is option (e). The correct connector is 'and they also' therefore the sentence will be "Covering nearly 30% land surface of the earth, forests around the globe provide a wide variety of ecosystem services and they also stabilize the climate, sequester carbon and regulate the water regime."

**S32. Ans.(b)**

**Sol.** The correct choice is option (b). The correct connector is 'while the' therefore the sentence will be "The government's focus on cash transfer and other welfare schemes continues to draw the support of the electorate, while the issues of violence and corruption raised by the opposition did not strike a chord with them."

**S33. Ans.(c)**

**Sol.** The correct choice is option (c). In statement (c), 'incarnation' is incorrect and it should be 'incineration'.

incarnation means a period of life on earth in a particular form

incineration means the destruction of something, especially waste material, by burning.

constrain means to limit somebody/something; to force somebody/something to do something

aspect means one of the qualities or parts of a situation, idea, problem, etc.

robust means strong and healthy

**S34. Ans.(d)**

**Sol.** The correct choice is option (d). In statement (d), 'signaled' is incorrect and it should be 'singled' signaled means indicated,

singled out means to treat or to speak about (someone or something in a group) in a way that is different from the way one treats or speaks about others

collaborate means to work together (with somebody), especially to create or produce something

rationale means the principles or reasons which explain a particular decision, course of action, belief, etc.

inaugurated means to introduce a new official, leader, etc. at a special formal ceremony

**S35. Ans.(e)**

**Sol.** The correct choice is option (e). All the words given in sentences are contextually and grammatically correct.

conference means a large official meeting, often lasting several days, at which members of an organization, profession, etc. meet to discuss important matters

stumbling block means something that causes trouble or a difficulty, so that you cannot achieve what you want

inherent means that is a basic or permanent part of somebody/something and that cannot be removed

restoring means to put somebody/something back into his/her/its former condition or position

**S36. Ans.(c)**

**Sol.** The correct choice is option (c). 'Eminence' is incorrect and it should be 'immense' eminence means fame or acknowledged superiority within a particular sphere.

immense means extremely large or great, especially in scale or degree.

focal means central; very important; connected with or providing a focus

rationalize means make a business or a system better organized

degradation means causing the condition of something to become worse

**S37. Ans.(b)**

**Sol.** The correct choice is option (b), which can be inferred from second paragraph which mentions, "When one is driving and talking on his cell phone, his or her attention is naturally diverted. Talking on mobile phones affect a person in several ways. For example, the emotional stress involved in a conversation can lead to lessened awareness of what is happening on the road. Having to dial phone numbers and answering calls takes one's attention from the road."

**S38. Ans.(e)**

**Sol.** The correct choice is option (e), which can be inferred from first paragraph which mentions, "In this country, there are more than 40 million subscribers who rely on their cellular phones to conduct their business or just talk to friends and family."

**S39. Ans.(b)**

**Sol.** The correct choice is option (b), which can be inferred from last paragraph which mentions, "No law, no committee, no state or government can stop this danger unless people wake up and come to realize that for a little convenience, they are endangering themselves and others. If a very important call is ringing or they have an important call to make, they can easily stop, finish the call and start again. No law or fine can make them realize this fact."

**S40. Ans.(b)**

**Sol.** The correct choice is option (b). "*no use crying over the spilt milk*" means "no use in being upset over situations that have already happened and cannot be changed"

**S41. Ans.(a)**

**Sol.**

$$\text{Total female who went to mall} = 320 - 145 = 175$$

$$\text{Total population who got discount on Sunday} = 20$$

$$\text{So, total population who went to mall on Sunday} = 20 \times \frac{100}{25} = 80$$

Similarly, total population who went to mall on Monday and Wednesday are 120 and 80.

$$\text{Total population who went to mall on Tuesday} = 320 - 80 - 120 - 80 = 40$$

$$\text{Male who went to mall on Monday} = \frac{7}{12} \times 120 = 70$$

$$\text{Female who went to mall on Monday} = 120 - 70 = 50$$

$$\text{Male who went to mall on Tuesday} = \frac{3}{8} \times 40 = 15$$

$$\text{Female who went to mall on Tuesday} = 40 - 15 = 25$$

As population who went to mall on Sunday and Wednesday is same, so common ratio of male and female who went to mall on Sunday and Wednesday will be same.

Let male and female who went to mall on Sunday and Wednesday be  $3x$ ,  $Px$ ,  $3x$  and  $Px$  respectively.

$$\text{Total males} = 3x + 70 + 15 + 3x = 145$$

$$x = 10$$

So, number of males who went to mall on Sunday and Wednesday is 30 and 30 respectively.

$$\text{Number of females who went to mall on Sunday or Wednesday} = 80 - 30 = 50$$

$$\text{Therefore, } \frac{3}{p} = \frac{30}{50}$$

$$P = 5$$

$$P = 5$$

**S42. Ans.(d)****Sol.**

$$\text{Total female who went to mall} = 320 - 145 = 175$$

$$\text{Total population who got discount on Sunday} = 20$$

$$\text{So, total population who went to mall on Sunday} = 20 \times \frac{100}{25} = 80$$

Similarly, total population who went to mall on Monday and Wednesday are 120 and 80.

$$\text{Total population who went to mall on Tuesday} = 320 - 80 - 120 - 80 = 40$$

$$\text{Male who went to mall on Monday} = \frac{7}{12} \times 120 = 70$$

$$\text{Female who went to mall on Monday} = 120 - 70 = 50$$

$$\text{Male who went to mall on Tuesday} = \frac{3}{8} \times 40 = 15$$

$$\text{Female who went to mall on Tuesday} = 40 - 15 = 25$$

As population who went to mall on Sunday and Wednesday is same, so common ratio of male and female who went to mall on Sunday and Wednesday will be same.

Let male and female who went to mall on Sunday and Wednesday be  $3x$ ,  $Px$ ,  $3x$  and  $Px$  respectively.

$$\text{Total males} = 3x + 70 + 15 + 3x = 145$$

$$x = 10$$

So, number of males who went to mall on Sunday and Wednesday is 30 and 30 respectively.

$$\text{Number of females who went to mall on Sunday or Wednesday} = 80 - 30 = 50$$

$$\text{Therefore, } \frac{3}{P} = \frac{30}{50}$$

$$P = 5$$

$$\text{Total population who got discount coupon on Tuesday} = 40 \times \frac{25}{100} = 10$$

**S43. Ans.(b)****Sol.**

$$\text{Total female who went to mall} = 320 - 145 = 175$$

$$\text{Total population who got discount on Sunday} = 20$$

$$\text{So, total population who went to mall on Sunday} = 20 \times \frac{100}{25} = 80$$

Similarly, total population who went to mall on Monday and Wednesday are 120 and 80.

$$\text{Total population who went to mall on Tuesday} = 320 - 80 - 120 - 80 = 40$$

$$\text{Male who went to mall on Monday} = \frac{7}{12} \times 120 = 70$$

$$\text{Female who went to mall on Monday} = 120 - 70 = 50$$

$$\text{Male who went to mall on Tuesday} = \frac{3}{8} \times 40 = 15$$

$$\text{Female who went to mall on Tuesday} = 40 - 15 = 25$$

As population who went to mall on Sunday and Wednesday is same, so common ratio of male and female who went to mall on Sunday and Wednesday will be same.

Let male and female who went to mall on Sunday and Wednesday be  $3x$ ,  $Px$ ,  $3x$  and  $Px$  respectively.

$$\text{Total males} = 3x + 70 + 15 + 3x = 145$$

$$x = 10$$

So, number of males who went to mall on Sunday and Wednesday is 30 and 30 respectively.

$$\text{Number of females who went to mall on Sunday or Wednesday} = 80 - 30 = 50$$

$$\text{Therefore, } \frac{3}{P} = \frac{30}{50}$$

$$P = 5$$

$$\text{Required amount} = 4 \times 50 + 26 \times 100$$

$$= 200 + 2600$$

$$= \text{Rs. } 2800$$

**S44. Ans.(c)****Sol.**

$$\text{Total female who went to mall} = 320 - 145 = 175$$

$$\text{Total population who got discount on Sunday} = 20$$

$$\text{So, total population who went to mall on Sunday} = 20 \times \frac{100}{25} = 80$$

Similarly, total population who went to mall on Monday and Wednesday are 120 and 80.

$$\text{Total population who went to mall on Tuesday} = 320 - 80 - 120 - 80 = 40$$

$$\text{Male who went to mall on Monday} = \frac{7}{12} \times 120 = 70$$

$$\text{Female who went to mall on Monday} = 120 - 70 = 50$$

$$\text{Male who went to mall on Tuesday} = \frac{3}{8} \times 40 = 15$$

$$\text{Female who went to mall on Tuesday} = 40 - 15 = 25$$

As population who went to mall on Sunday and Wednesday is same, so common ratio of male and female who went to mall on Sunday and Wednesday will be same.

Let male and female who went to mall on Sunday and Wednesday be  $3x$ ,  $Px$ ,  $3x$  and  $Px$  respectively.

$$\text{Total males} = 3x + 70 + 15 + 3x = 145$$

$$x = 10$$

So, number of males who went to mall on Sunday and Wednesday is 30 and 30 respectively.

$$\text{Number of females who went to mall on Sunday or Wednesday} = 80 - 30 = 50$$

$$\text{Therefore, } \frac{3}{P} = \frac{30}{50}$$

$$P = 5$$

Total population who got discount on Wednesday = 20

$$\text{Population who redeemed discount} = \frac{20}{5} = 4$$

$$\text{Females who got discount coupons} = 4 \times 2 = 8$$

$$\text{So, number of males who got discount coupons} = 20 - 8 = 12$$

**S45. Ans.(d)****Sol.**

$$\text{Total female who went to mall} = 320 - 145 = 175$$

$$\text{Total population who got discount on Sunday} = 20$$

$$\text{So, total population who went to mall on Sunday} = 20 \times \frac{100}{25} = 80$$

Similarly, total population who went to mall on Monday and Wednesday are 120 and 80.

$$\text{Total population who went to mall on Tuesday} = 320 - 80 - 120 - 80 = 40$$

$$\text{Male who went to mall on Monday} = \frac{7}{12} \times 120 = 70$$

$$\text{Female who went to mall on Monday} = 120 - 70 = 50$$

$$\text{Male who went to mall on Tuesday} = \frac{3}{8} \times 40 = 15$$

$$\text{Female who went to mall on Tuesday} = 40 - 15 = 25$$

As population who went to mall on Sunday and Wednesday is same, so common ratio of male and female who went to mall on Sunday and Wednesday will be same.

Let male and female who went to mall on Sunday and Wednesday be  $3x$ ,  $Px$ ,  $3x$  and  $Px$  respectively.

$$\text{Total males} = 3x + 70 + 15 + 3x = 145$$

$$x = 10$$

So, number of males who went to mall on Sunday and Wednesday is 30 and 30 respectively.

$$\text{Number of females who went to mall on Sunday or Wednesday} = 80 - 30 = 50$$

$$\text{Therefore, } \frac{3}{P} = \frac{30}{50}$$

$$P = 5$$

$$\text{Population who got discount on Thursday} = 20 \times \frac{115}{100} = 23$$

$$\text{Population who did not get any discount on Thursday} = (120 - 30) \times \frac{80}{100} = 72$$

$$\text{So, required population} = 23 + 72 = 95$$

### S46. Ans.(b)

**Sol.**

$$\text{Total population} = A + \frac{A}{2} + (A - 5) + (A + 35) = 100$$

$$3.5A + 30 = 100$$

$$A = 20$$

So, distribution of total population of A, B, C and D is 20%, 10%, 15% and 55% respectively.

Now,

$$25 + 10 + Y + Z = 100$$

$$Y + Z = 65$$

Also given,  $Z - Y = 25$

So,  $Z = 45, Y = 20$

$$\text{Total males} = 80 \times \frac{100}{25} = 320$$

$$\text{Males in B} = 320 \times \frac{10}{100} = 32$$

$$\text{Males in C} = 320 \times \frac{20}{100} = 64$$

$$\text{Males in D} = 320 \times \frac{45}{100} = 144$$

$$\text{Females in C} = 64 \times \frac{7}{8} = 56$$

$$\text{Total population in C} = 56 + 64 = 120$$

$$\text{Total population of B} = 120 \times \frac{10}{15} = 80$$

$$\text{Total population of A} = 80 \times \frac{20}{10} = 160$$

$$\text{Total population of D} = 160 \times \frac{55}{20} = 440$$

$$\text{Females in A} = 160 - 80 = 80$$

$$\text{Females in B} = 80 - 32 = 48$$

$$\text{Females in D} = 440 - 144 = 296$$

City	Total population	Male population	Female population
A	160	80	80
B	80	32	48
C	120	64	56
D	440	144	296
<b>Total</b>	800	320	480

$$\text{Required ratio} = 64 : 296$$

$$= 8 : 37$$

### S47. Ans.(b)

**Sol.**

$$\text{Total population} = A + \frac{A}{2} + (A - 5) + (A + 35) = 100$$

$$3.5A + 30 = 100$$

$$A = 20$$

So, distribution of total population of A, B, C and D is 20%, 10%, 15% and 55% respectively.

Now,

$$25 + 10 + Y + Z = 100$$

$$Y + Z = 65$$

Also given,  $Z - Y = 25$

So,  $Z = 45, Y = 20$

$$\text{Total males} = 80 \times \frac{100}{25} = 320$$

$$\text{Males in B} = 320 \times \frac{10}{100} = 32$$

$$\text{Males in C} = 320 \times \frac{20}{100} = 64$$

$$\text{Males in D} = 320 \times \frac{45}{100} = 144$$

$$\text{Females in C} = 64 \times \frac{7}{8} = 56$$

$$\text{Total population in C} = 56 + 64 = 120$$

$$\text{Total population of B} = 120 \times \frac{10}{15} = 80$$

$$\text{Total population of A} = 80 \times \frac{20}{10} = 160$$

$$\text{Total population of D} = 160 \times \frac{55}{20} = 440$$

$$\text{Females in A} = 160 - 80 = 80$$

$$\text{Females in B} = 80 - 32 = 48$$

$$\text{Females in D} = 440 - 144 = 296$$

City	Total population	Male population	Female population
A	160	80	80
B	80	32	48
C	120	64	56
D	440	144	296
<b>Total</b>	<b>800</b>	<b>320</b>	<b>480</b>

$$\text{Female Engineers in city A} = \frac{75}{100} \times 80 = 60$$

$$\text{Male Engineers in city A} = 80 \times \frac{80}{100} = 64$$

$$\text{So, total Engineers in city A} = 60 + 64 = 124$$

### S48. Ans.(a)

Sol.

$$\text{Total population} = A + \frac{A}{2} + (A - 5) + (A + 35) = 100$$

$$3.5A + 30 = 100$$

$$A = 20$$

So, distribution of total population of A, B, C and D is 20%, 10%, 15% and 55% respectively.

Now,

$$25 + 10 + Y + Z = 100$$

$$Y + Z = 65$$

Also given,  $Z - Y = 25$

So,  $Z = 45, Y = 20$

$$\text{Total males} = 80 \times \frac{100}{25} = 320$$

$$\text{Males in B} = 320 \times \frac{10}{100} = 32$$

$$\text{Males in C} = 320 \times \frac{20}{100} = 64$$

$$\text{Males in D} = 320 \times \frac{45}{100} = 144$$

$$\text{Females in C} = 64 \times \frac{7}{8} = 56$$

$$\text{Total population in C} = 56 + 64 = 120$$

$$\text{Total population of B} = 120 \times \frac{10}{15} = 80$$

$$\text{Total population of A} = 80 \times \frac{20}{10} = 160$$

$$\text{Total population of D} = 160 \times \frac{55}{20} = 440$$

$$\text{Females in A} = 160 - 80 = 80$$

$$\text{Females in B} = 80 - 32 = 48$$

$$\text{Females in D} = 440 - 144 = 296$$



City	Total population	Male population	Female population
A	160	80	80
B	80	32	48
C	120	64	56
D	440	144	296
<b>Total</b>	<b>800</b>	<b>320</b>	<b>480</b>

Number of migrated males from city C =  $\frac{64}{8} = 8$

So, new male population of city B =  $32 + 8 = 40$

**S49. Ans.(d)**

**Sol.**

$$\text{Total population} = A + \frac{A}{2} + (A - 5) + (A + 35) = 100$$

$$3.5A + 30 = 100$$

$$A = 20$$

So, distribution of total population of A, B, C and D is 20%, 10%, 15% and 55% respectively.

Now,

$$25 + 10 + Y + Z = 100$$

$$Y + Z = 65$$

Also given,  $Z - Y = 25$

So,  $Z = 45, Y = 20$

$$\text{Total males} = 80 \times \frac{100}{25} = 320$$

$$\text{Males in B} = 320 \times \frac{10}{100} = 32$$

$$\text{Males in C} = 320 \times \frac{20}{100} = 64$$

$$\text{Males in D} = 320 \times \frac{45}{100} = 144$$

$$\text{Females in C} = 64 \times \frac{7}{8} = 56$$

$$\text{Total population in C} = 56 + 64 = 120$$

$$\text{Total population of B} = 120 \times \frac{10}{15} = 80$$

$$\text{Total population of A} = 80 \times \frac{20}{10} = 160$$

$$\text{Total population of D} = 160 \times \frac{55}{20} = 440$$

$$\text{Females in A} = 160 - 80 = 80$$

$$\text{Females in B} = 80 - 32 = 48$$

$$\text{Females in D} = 440 - 144 = 296$$

City	Total population	Male population	Female population
A	160	80	80
B	80	32	48
C	120	64	56
D	440	144	296
<b>Total</b>	<b>800</b>	<b>320</b>	<b>480</b>

$$\text{Required angle} = \frac{144}{320} \times 360 = 162^\circ$$



**S50. Ans.(a)****Sol.**

$$\text{Total population} = A + \frac{A}{2} + (A - 5) + (A + 35) = 100$$

$$3.5A + 30 = 100$$

$$A = 20$$

So, distribution of total population of A, B, C and D is 20%, 10%, 15% and 55% respectively.

Now,

$$25 + 10 + Y + Z = 100$$

$$Y + Z = 65$$

Also given,  $Z - Y = 25$

So,  $Z = 45, Y = 20$

$$\text{Total males} = 80 \times \frac{100}{25} = 320$$

$$\text{Males in B} = 320 \times \frac{10}{100} = 32$$

$$\text{Males in C} = 320 \times \frac{20}{100} = 64$$

$$\text{Males in D} = 320 \times \frac{45}{100} = 144$$

$$\text{Females in C} = 64 \times \frac{7}{8} = 56$$

$$\text{Total population in C} = 56 + 64 = 120$$

$$\text{Total population of B} = 120 \times \frac{10}{15} = 80$$

$$\text{Total population of A} = 80 \times \frac{20}{10} = 160$$

$$\text{Total population of D} = 160 \times \frac{55}{20} = 440$$

$$\text{Females in A} = 160 - 80 = 80$$

$$\text{Females in B} = 80 - 32 = 48$$

$$\text{Females in D} = 440 - 144 = 296$$

City	Total population	Male population	Female population
A	160	80	80
B	80	32	48
C	120	64	56
D	440	144	296
<b>Total</b>	800	320	480

$$\begin{aligned} \text{Required percentage} &= \frac{80-32}{80} \times 100 \\ &= 60\% \end{aligned}$$

**S51. Ans.(c)****Sol.**

$$x\% = \frac{90}{360} \times 100 = 25\%$$

$$\text{Non-Technical application} = 2m\% + m\% + x\% + 2m\% = 100\%$$

$$5m\% = 100\% - 25\%$$

$$m\% = 15\%$$

$$\text{Technical Application} = x\% + 2y\% + y\% + m\% = 100\%$$

$$3y\% = 100\% - 25\% - 15\%$$

$$y\% = 20\%$$

Let total technical application be 100a.

So, non-technical application = 150a

$$\text{Number of technical north zone application} = \frac{25}{100} \times 100a = 25a$$

$$\text{Number of technical east zone application} = 40a$$

$$\text{Number of technical west zone application} = 20a$$

$$\text{Number of technical south zone application} = 15a$$

$$\text{Number of non-technical north zone application} = \frac{30}{100} \times 150a = 45a$$

$$\text{Number of non-technical east zone application} = 22.5a$$

$$\text{Number of non-technical west zone application} = 37.5a$$

$$\text{Number of non-technical south zone application} = 45a$$

$$\text{Given, } 25a + 45a = 280$$

$$\text{So, } a = 4$$

Therefore,

Zone	Technical	Non-Technical
North	100	180
East	160	90
West	80	150
South	60	180
Total	400	600

$$\text{Female candidates who applied for technical from east zone} = 160 \times \frac{3}{8} = 60$$

$$\begin{aligned} \text{So, required percentage} &= \frac{60}{600} \times 100 \\ &= 10\% \end{aligned}$$

## S52. Ans.(a)

Sol.

$$x\% = \frac{90}{360} \times 100 = 25\%$$

$$\text{Non-Technical application} = 2m\% + m\% + x\% + 2m\% = 100\%$$

$$5m\% = 100\% - 25\%$$

$$m\% = 15\%$$

$$\text{Technical Application} = x\% + 2y\% + y\% + m\% = 100\%$$

$$3y\% = 100\% - 25\% - 15\%$$

$$y\% = 20\%$$

Let total technical application be 100a.

So, non-technical application = 150a

$$\text{Number of technical north zone application} = \frac{25}{100} \times 100a = 25a$$

$$\text{Number of technical east zone application} = 40a$$

$$\text{Number of technical west zone application} = 20a$$

$$\text{Number of technical south zone application} = 15a$$

$$\text{Number of non-technical north zone application} = \frac{30}{100} \times 150a = 45a$$

$$\text{Number of non-technical east zone application} = 22.5a$$

$$\text{Number of non-technical west zone application} = 37.5a$$

$$\text{Number of non-technical south zone application} = 45a$$

$$\text{Given, } 25a + 45a = 280$$

$$\text{So, } a = 4$$

Therefore,

Zone	Technical	Non-Technical
North	100	180
East	160	90
West	80	150
South	60	180
Total	400	600

$$\begin{aligned} \text{Required amount} &= 80 \times 500 + 150 \times 300 \\ &= 40000 + 45000 \\ &= \text{Rs. } 85000 \end{aligned}$$

### S53. Ans.(b)

**Sol.**

$$x\% = \frac{90}{360} \times 100 = 25\%$$

$$\text{Non-Technical application} = 2m\% + m\% + x\% + 2m\% = 100\%$$

$$5m\% = 100\% - 25\%$$

$$m\% = 15\%$$

$$\text{Technical Application} = x\% + 2y\% + y\% + m\% = 100\%$$

$$3y\% = 100\% - 25\% - 15\%$$

$$y\% = 20\%$$

Let total technical application be  $100a$ .

So, non-technical application =  $150a$

$$\text{Number of technical north zone application} = \frac{25}{100} \times 100a = 25a$$

$$\text{Number of technical east zone application} = 40a$$

$$\text{Number of technical west zone application} = 20a$$

$$\text{Number of technical south zone application} = 15a$$

$$\text{Number of non-technical north zone application} = \frac{30}{100} \times 150a = 45a$$

$$\text{Number of non-technical east zone application} = 22.5a$$

$$\text{Number of non-technical west zone application} = 37.5a$$

$$\text{Number of non-technical south zone application} = 45a$$

$$\text{Given, } 25a + 45a = 280$$

$$\text{So, } a = 4$$

Therefore,

Zone	Technical	Non-Technical
North	100	180
East	160	90
West	80	150
South	60	180
<b>Total</b>	<b>400</b>	<b>600</b>

$$\text{Total students in technical after new join} = 400 + 250 = 650$$

$$\text{Total students in non-technical after new join} = 600 + 360 = 960$$

$$\text{So, required ratio} = 650 : 960$$

$$= 65:96$$

### S54. Ans.(b)

**Sol.**

$$x\% = \frac{90}{360} \times 100 = 25\%$$

$$\text{Non-Technical application} = 2m\% + m\% + x\% + 2m\% = 100\%$$

$$5m\% = 100\% - 25\%$$

$$m\% = 15\%$$

$$\text{Technical Application} = x\% + 2y\% + y\% + m\% = 100\%$$

$$3y\% = 100\% - 25\% - 15\%$$

$$y\% = 20\%$$

Let total technical application be  $100a$ .

So, non-technical application =  $150a$

$$\text{Number of technical north zone application} = \frac{25}{100} \times 100a = 25a$$

$$\text{Number of technical east zone application} = 40a$$

$$\text{Number of technical west zone application} = 20a$$

$$\text{Number of technical south zone application} = 15a$$

$$\text{Number of non-technical north zone application} = \frac{30}{100} \times 150a = 45a$$

$$\text{Number of non-technical east zone application} = 22.5a$$

$$\text{Number of non-technical west zone application} = 37.5a$$

$$\text{Number of non-technical south zone application} = 45a$$

$$\text{Given, } 25a + 45a = 280$$

$$\text{So, } a = 4$$

Therefore,

Zone	Technical	Non-Technical
North	100	180
East	160	90
West	80	150
South	60	180
Total	400	600

$$15 + 25 - ? = 20$$

$$? = 20$$

### S55. Ans.(a)

Sol.

$$x\% = \frac{90}{360} \times 100 = 25\%$$

$$\text{Non-Technical application} = 2m\% + m\% + x\% + 2m\% = 100\%$$

$$5m\% = 100\% - 25\%$$

$$m\% = 15\%$$

$$\text{Technical Application} = x\% + 2y\% + y\% + m\% = 100\%$$

$$3y\% = 100\% - 25\% - 15\%$$

$$y\% = 20\%$$

Let total technical application be  $100a$ .

So, non-technical application =  $150a$

$$\text{Number of technical north zone application} = \frac{25}{100} \times 100a = 25a$$

$$\text{Number of technical east zone application} = 40a$$

$$\text{Number of technical west zone application} = 20a$$

$$\text{Number of technical south zone application} = 15a$$

$$\text{Number of non-technical north zone application} = \frac{30}{100} \times 150a = 45a$$

$$\text{Number of non-technical east zone application} = 22.5a$$

$$\text{Number of non-technical west zone application} = 37.5a$$

$$\text{Number of non-technical south zone application} = 45a$$

$$\text{Given, } 25a + 45a = 280$$

$$\text{So, } a = 4$$

Therefore,

Zone	Technical	Non-Technical
North	100	180
East	160	90
West	80	150
South	60	180
Total	400	600

Number of male candidates who applied for non-technical in north zone =  $180 - 75 = 105$

Number of male candidates who applied for technical in north zone =  $120 - 105 = 15$

Number of female candidates who applied for technical in north zone =  $100 - 15 = 85$

So, required difference =  $105 - 85 = 20$

**S56. Ans.(d)**

**Sol.**

Total spare parts of company A =  $3000 \times \frac{100}{15} = 20000$

So, number of spare parts of company A which came for refurbishing

$$= (20000 - 3000) \times \frac{7}{20}$$

$$= 5950$$

**S57. Ans.(e)**

**Sol.**

Manufactured spare parts of company C =  $\frac{2}{3} \times 24000 = 16000$

Refurbished spare parts of company C =  $16000 \times \frac{3}{8} = 6000$

So, imported spare parts of company C =  $24000 - (16000 + 6000)$   
= 2000

So, required percentage =  $\frac{6000-2000}{2000} \times 100$

$$= 200\%$$

**S58. Ans.(a)**

**Sol.**

Manufactured spare parts of company D =  $4500 \times \frac{7}{5} = 6300$

Imported spare parts of company D =  $18000 - (6300 + 4500)$   
= 7200

Spare parts imported from Russia of company D =  $7200 \times \frac{7}{9} = 5600$

So, required percentage =  $\frac{5600}{18000} \times 100$

$$= 31.11\% \approx 31\%$$

**S59. Ans.(b)**

**Sol.**

Total spare parts of company E =  $18000 \times \frac{7}{6} = 21000$

Imported spare parts of company E =  $\frac{13}{100} \times 21000 = 2730$

Manufactured spare parts of company E =  $21000 - 2730$   
= 18270

Refurbished spare parts of company D =  $18270 \times \frac{20}{100} = 3654$

**S60. Ans.(c)****Sol.**

$$\begin{aligned} \text{Refurbished spare parts of company C} &= (24000 - 3100) \times \frac{3}{11} \\ &= 5700 \end{aligned}$$

$$\text{Refurbished spare parts of company B} = 5700 \times \frac{24}{19} = 7200$$

$$\text{Imported spare parts of company B} = 25000 \times \frac{12.5}{100} = 3125$$

$$\begin{aligned} \text{Manufactured spare parts of company B} &= 25000 - 7200 - 3125 \\ &= 14675 \end{aligned}$$

**S61. Ans.(c)****Sol.**

As in round 2, all seats are full in V1, so passenger in round 2 of V1 = 8

Let number of passengers in bus V1 and V2 in round 3 are  $2a$  and  $3a$  respectively.

Number of passengers in bus V1 in round 1 =  $19 - 8 - 2a = 11 - 2a$

When  $a = 1$ ,

Number of passengers in bus V1 in round 1 =  $11 - 2 = 9$  (which is not possible as bus is 8-seater)

When  $a = 2$

Number of passengers in bus V1 in round 1 =  $11 - 4 = 7$

Number of passengers in bus V1 in round 3 =  $2a = 4$

Number of passengers in bus V2 in round 3 =  $3a = 6$

When  $a = 3$

Number of passengers in bus V2 in round 3 =  $3a = 9$  (which is not possible as bus is 7-seater)

Sum of number of passengers in round 1 in both is equal to that in round 2.

So, when number of passengers in round 2 in V2 = 6

Total passengers in round 2 in both bus = 14

Passenger in round 1 of bus V1 =  $14 - 7$  (which is not possible as no seats are full)

When number of passengers in round 2 in V2 = 5

Total passengers in round 2 in both bus = 13

Passenger in round 1 of bus V1 =  $13 - 7 = 6$

When number of passengers in round 2 in V2 = 4

Total passengers in round 2 in both bus = 12

Passenger in round 1 of bus V1 =  $12 - 7 = 5$  (not possible as number of passengers in two of the three rounds of bus V2 are equal)

So,

Bus	Passengers in Round 1	Passengers in Round 2	Passengers in Round 3	Total
V1	7	8	4	19
V2	6	5	6	17
<b>Total</b>	13	13	10	33

$$\begin{aligned} \text{Required amount} &= [(7 \times 120) + (8 \times 175 + 4 \times 225)] \times \frac{80}{100} \\ &= \text{Rs. 2512} \end{aligned}$$

**S62. Ans.(a)****Sol.**

As in round 2, all seats are full in V1, so passenger in round 2 of V1 = 8

Let number of passengers in bus V1 and V2 in round 3 are  $2a$  and  $3a$  respectively.

Number of passengers in bus V1 in round 1 =  $19 - 8 - 2a = 11 - 2a$

When  $a = 1$ ,

Number of passengers in bus V1 in round 1 =  $11 - 2 = 9$  (which is not possible as bus is 8-seater)

When  $a = 2$

Number of passengers in bus V1 in round 1 =  $11 - 4 = 7$

Number of passengers in bus V1 in round 3 =  $2a = 4$

Number of passengers in bus V2 in round 3 =  $3a = 6$

When  $a = 3$

Number of passengers in bus V2 in round 3 =  $3a = 9$  (which is not possible as bus is 7-seater)

Sum of number of passengers in round 1 in both is equal to that in round 2.

So, when number of passengers in round 2 in V2 = 6

Total passengers in round 2 in both bus = 14

Passenger in round 1 of bus V1 =  $14 - 7$  (which is not possible as no seats are full)

When number of passengers in round 2 in V2 = 5

Total passengers in round 2 in both bus = 13

Passenger in round 1 of bus V1 =  $13 - 7 = 6$

When number of passengers in round 2 in V2 = 4

Total passengers in round 2 in both bus = 12

Passenger in round 1 of bus V1 =  $12 - 7 = 5$  (not possible as number of passengers in two of the three rounds of bus V2 are equal)

So,

Bus	Passengers in Round 1	Passengers in Round 2	Passengers in Round 3	Total
V1	7	8	4	19
V2	6	5	6	17
<b>Total</b>	13	13	10	33

$$\begin{aligned} \text{Passengers in V2 who made payment online} &= 6 \times \frac{2}{3} + 5 \times \frac{1}{5} + 6 \times \frac{1}{2} \\ &= 4 + 1 + 3 = 8 \end{aligned}$$

$$\text{Passengers in V2 who made payment offline} = 17 - 8 = 9$$

$$\text{So, required difference} = 9 - 8 = 1$$

**S63. Ans.(c)****Sol.**

As in round 2, all seats are full in V1, so passenger in round 2 of V1 = 8

Let number of passengers in bus V1 and V2 in round 3 are  $2a$  and  $3a$  respectively.

Number of passengers in bus V1 in round 1 =  $19 - 8 - 2a = 11 - 2a$

When  $a = 1$ ,

Number of passengers in bus V1 in round 1 =  $11 - 2 = 9$  (which is not possible as bus is 8-seater)



When  $a = 2$

Number of passengers in bus V1 in round 1 =  $11 - 4 = 7$

Number of passengers in bus V1 in round 3 =  $2a = 4$

Number of passengers in bus V2 in round 3 =  $3a = 6$

When  $a = 3$

Number of passengers in bus V2 in round 3 =  $3a = 9$  (which is not possible as bus is 7-seater)

Sum of number of passengers in round 1 in both is equal to that in round 2.

So, when number of passengers in round 2 in V2 = 6

Total passengers in round 2 in both bus = 14

Passenger in round 1 of bus V1 =  $14 - 7$  (which is not possible as no seats are full)

When number of passengers in round 2 in V2 = 5

Total passengers in round 2 in both bus = 13

Passenger in round 1 of bus V1 =  $13 - 7 = 6$

When number of passengers in round 2 in V2 = 4

Total passengers in round 2 in both bus = 12

Passenger in round 1 of bus V1 =  $12 - 7 = 5$  (not possible as number of passengers in two of the three rounds of bus V2 are equal)

So,

Bus	Passengers in Round 1	Passengers in Round 2	Passengers in Round 3	Total
V1	7	8	4	19
V2	6	5	6	17
Total	13	13	10	33

Required sum =  $4 + 6 = 10$

### S64. Ans.(b)

Sol.

As in round 2, all seats are full in V1, so passenger in round 2 of V1 = 8

Let number of passengers in bus V1 and V2 in round 3 are  $2a$  and  $3a$  respectively.

Number of passengers in bus V1 in round 1 =  $19 - 8 - 2a = 11 - 2a$

When  $a = 1$ ,

Number of passengers in bus V1 in round 1 =  $11 - 2 = 9$  (which is not possible as bus is 8-seater)

When  $a = 2$

Number of passengers in bus V1 in round 1 =  $11 - 4 = 7$

Number of passengers in bus V1 in round 3 =  $2a = 4$

Number of passengers in bus V2 in round 3 =  $3a = 6$

When  $a = 3$

Number of passengers in bus V2 in round 3 =  $3a = 9$  (which is not possible as bus is 7-seater)

Sum of number of passengers in round 1 in both is equal to that in round 2.

So, when number of passengers in round 2 in V2 = 6

Total passengers in round 2 in both bus = 14

Passenger in round 1 of bus V1 =  $14 - 7$  (which is not possible as no seats are full)

When number of passengers in round 2 in V2 = 5

Total passengers in round 2 in both bus = 13

Passenger in round 1 of bus V1 =  $13 - 7 = 6$

When number of passengers in round 2 in V2 = 4

Total passengers in round 2 in both bus = 12

Passenger in round 1 of bus V1 =  $12 - 7 = 5$  (not possible as number of passengers in two of the three rounds of bus V2 are equal)

So,



Bus	Passengers in Round 1	Passengers in Round 2	Passengers in Round 3	Total
V1	7	8	4	19
V2	6	5	6	17
<b>Total</b>	13	13	10	33

Total empty seats in bus V1 =  $8 \times 3 - 19 = 5$

Total empty seats in bus V2 =  $7 \times 3 - 17 = 4$

So, required sum =  $5 + 4 = 9$

### S65. Ans.(d)

**Sol.**

Total cost for Riya for  $2N$  cards =  $2N \times s^2 \times 2.5 = 6400$

$$Ns^2 = 1280$$

$$\text{And } \frac{N \times s^2 \times 2.5}{N \times (s+2)^2 \times 2.5} = \frac{16}{25}$$

$$\frac{s}{s+2} = \frac{4}{5}$$

$$5s = 4s + 8$$

$$s = 8$$

$$\text{So, } N = \frac{1280}{64} = 20$$

$$s = 8$$

### S66. Ans.(d)

**Sol.**

Total cost for Riya for  $2N$  cards =  $2N \times s^2 \times 2.5 = 6400$

$$Ns^2 = 1280$$

$$\text{And } \frac{N \times s^2 \times 2.5}{N \times (s+2)^2 \times 2.5} = \frac{16}{25}$$

$$\frac{s}{s+2} = \frac{4}{5}$$

$$5s = 4s + 8$$

$$s = 8$$

$$\text{So, } N = \frac{1280}{64} = 20$$

ATQ

$$5 \times 5b \times 2.5 = 225$$

$$b = \frac{9}{2.5} = 3.6$$

### S67. Ans.(e)

**Sol.**

Let income of Trisha and Amrita be Rs.100x and Rs.100y respectively.

Amount spent by Trisha on Grocery =  $20x$

Amount spent by Trisha on Electricity bill =  $8x$

Amount spent by Trisha on Rent =  $12x$

So, savings of Trisha =  $100x - (20x + 8x + 12x) = 60x$

Amount spent by Amrita on Grocery =  $20y = 20x - 3000$

$$x - y = 150 \quad \dots(i)$$

Savings of Amrita =  $52y$

So,  $60x - 52y = 11160$

$$15x - 13y = 2790 \quad \dots(ii)$$

From (i) and (ii)

$$x = 420, y = 270$$

$$\begin{aligned} \text{Required difference} &= 100x - 100y \\ &= 42000 - 27000 \\ &= \text{Rs. } 15000 \end{aligned}$$

**S68. Ans.(a)**

**Sol.**

Let income of Trisha and Amrita be Rs.100x and Rs.100y respectively.

Amount spent by Trisha on Grocery =  $20x$

Amount spent by Trisha on Electricity bill =  $8x$

Amount spent by Trisha on Rent =  $12x$

So, savings of Trisha =  $100x - (20x + 8x + 12x) = 60x$

Amount spent by Amrita on Grocery =  $20y = 20x - 3000$

$$x - y = 150 \quad \dots(i)$$

Savings of Amrita =  $52y$

So,  $60x - 52y = 11160$

$$15x - 13y = 2790 \quad \dots(ii)$$

From (i) and (ii)

$$x = 420, y = 270$$

Amount spent on electricity bill by Amrita =  $28 \times \frac{4}{7} \times 270 = \text{Rs. } 4320$

$$\begin{aligned} \text{So, required ratio} &= \frac{5040}{4320} \\ &= \frac{7}{6} \end{aligned}$$

**S69. Ans.(e)**

**Sol.**

**Quantity I:** a, b and c are three consecutive whole numbers and their sum is 3.

$$\text{So, } a = 0, b = 1, c = 2$$

Therefore,

$$28x^c - 15x^b + 2x^a = 0$$

$$28x^2 - 15x^1 + 2x^0 = 0$$

$$28x^2 - 15x + 2 = 0$$

$$28x^2 - 7x - 8x + 2 = 0$$

$$7x(4x - 1) - 2(4x - 1) = 0$$

$$(4x - 1)(7x - 2) = 0$$

$$x = \frac{2}{7}, \frac{1}{4}$$

**Quantity II:**  $y^2 = 4y$

$$y(y - 4) = 0$$

$$y = 0, 4$$

So, no relation

**S70. Ans.(a)**

**Sol.**

As sum of a and b is divisible by 2 and remainder is 1, so sum of a and b will be an odd number. And Odd number = odd number + even number

As both prime numbers are prime number, 2 is the only prime number.

**Quantity I:**  $b = 2$

**Quantity I:** common factor by which both numbers can be divisible is 1 as HCF for every two prime numbers is always 1.

So, Quantity I > Quantity II

**S71. Ans.(b)****Sol.**

$$\text{Total balls} = 7 + 3 + y = 10 + y$$

ATQ -

$$\frac{y}{10+y} = \frac{3}{8}$$

$$8y = 30 + 3y$$

$$y = 6$$

**Quantity I -**

Probability of drawn three balls = 560

$$\begin{aligned} \text{Required probability} &= \frac{7 \times 3 \times 6}{560} \\ &= \frac{126}{560} \\ &= \frac{9}{40} \end{aligned}$$

**Quantity II -**  $\frac{11}{40}$ 

So, Quantity I &lt; Quantity II

**S72. Ans.(c)****Sol.**

ATQ

$$\frac{P \times R \times 5}{100} = 5P$$

$$R = 100\%$$

$$\text{Now, } \frac{(P+150) \times 52 \times 5}{100} = 3640$$

$$P = \text{Rs. } 1250$$

**S73. Ans.(a)****Sol.**

Let efficiency of male and female are d and c respectively.

ATQ

$$(8d + 22c) \times 16 = (49d + 20c) \times 4$$

$$68c = 17d$$

$$\frac{d}{c} = \frac{4}{1}$$

Let efficiency of a male and a female is 4a and a respectively and required time be T days.

So, efficiency of a child = 2a

$$\text{Therefore, } (8 \times 4a + 22 \times a) \times 16 = 6 \times 2a \times T$$

$$54a \times 16 = 12a \times T$$

$$T = 72 \text{ days}$$

**S74. Ans.(a)****Sol.**

Let efficiency of a woman be W.

$$20W \times 2X = 57W \times 20$$

$$X = \frac{57}{2}$$

$$\text{So, time taken by 9 men to complete the work} = \frac{57}{2} \times \frac{15}{9}$$

$$= 47.5 \text{ days}$$

**S75. Ans.(c)**

**Sol.**

ATQ

$$X \times \frac{4}{3} \pi \times 3 \times 3 \times 3 = \pi \times 4 \times 4 \times 36$$
$$X = 16$$

**S76. Ans.(d)**

**Sol.**

$$\begin{aligned} \text{Ratio of profit share of P, Q and R} &= \\ &= 2000 \times 12 : 2500 \times 8 : 25Y \times 8 \\ &= 120 : 50 : Y \end{aligned}$$

ATQ

$$\frac{120}{170+Y} = \frac{2400}{7500}$$
$$375 = 170 + Y$$
$$Y = 205$$

**S77. Ans.(e)**

**Sol.**

Let speed of boat in still water and speed of current be  $5a$  and  $a$  respectively.

ATQ

$$\frac{D+40}{5a-a} = 2 \times \frac{D}{5a+a}$$
$$3D + 120 = 4D$$
$$D = 120 \text{ km}$$

As common ratio 'a' is cancelled, both sides, we can calculate the speed of boat and speed of stream.

**S78. Ans.(b)**

**Sol.**

ATQ

$$(X - 150) \times \frac{125}{100} - (X + 150) \times \frac{80}{100} = 750$$
$$25x - 3750 - 16x - 2400 = 15000$$
$$9x = 21150$$
$$x = 2350$$

So, cost price of B =  $X - 150 = \text{Rs. } 2200$

**S79. Ans.(c)**

**Sol.**

ATQ

$$\frac{165+X}{X+120} = \frac{5}{4}$$
$$660 + 4X = 5X + 600$$
$$X = 60$$

So, required ratio =  $60 + 30 : 60 - 15$   
 $= 2 : 1$

**S80. Ans.(a)****Sol.**

ATQ

$$\frac{180}{x+10} = \frac{86}{14}$$

$$x \approx 19.3$$

So, resultant quantity of water =  $19.3 + 10 = 29.3$  liter**S81. Ans.(d)****Sol.**Let population of town B be  $100a$ .Population of town A =  $75a$ 

$$\text{Females in town A} = 75a \times \frac{40}{100} = 30a$$

$$\text{Males in town A} = 75a - 30a = 45a$$

$$\text{Males in town B} = 45a + 1320$$

$$\text{Females in town B} = \frac{46}{100} \times 75a = 34.5a$$

$$\text{So, } 45a + 1320 = 100a - 34.5a$$

$$20.5a = 1320$$

$$a \approx 64$$

So, sum of population of town A and B =  $175 \times 64 = 11200$ **S82. Ans.(c)****Sol.**Let length of train A =  $L$  metersAnd length of platform =  $3L$  meters

So, ATQ

$$\frac{(L+3L)}{36} = 180 \times \frac{5}{18}$$

$$L=450 \text{ meters}$$

$$\text{Length of train B} = 54 \times \frac{5}{18} \times 50 = 750 \text{ m}$$

$$\text{Required time} = \frac{450+750}{(180-54) \times \frac{5}{18}} = 34\frac{2}{7} \text{ sec}$$

**S83. Ans.(d)****Sol.**let present age of Father, Mother, Son & Daughter be  $F, M, S$  &  $D$  years respectively.

$$\frac{F}{M} = \frac{8}{7}; \frac{F}{S} = \frac{5}{1}$$

$$F : M : S = 40 : 35 : 8 \text{ or } F = 40x, M = 35x, S = 8x$$

$$\frac{F-4}{D-4} = \frac{12}{1}$$

$$D = \frac{10x+11}{3}$$

$$S + D = \frac{20}{100} (F + M)$$

$$8x + \frac{10x+11}{3} = \frac{1}{5} (40x + 35x) = 15x$$

$$10x + 11 = 21x \Rightarrow x = 1$$

$$F = 40 \text{ years}, M = 35 \text{ years}, S = 8 \text{ years}, D = 7 \text{ years}$$

$$\text{Required ratio} = \frac{35}{7} = 5 : 1$$

**S84. Ans.(c)**

**Sol.**

ATQ

$$3x^2 + 11x + 10 = 0$$

$$3x^2 + 6x + 5x + 10 = 0$$

$$3x(x + 2) + 5(x + 2) = 0$$

$$(x + 2)(3x + 5) = 0$$

$$x = -2, -\frac{5}{3}$$

$$\text{So, required product} = -2 \times -\frac{5}{3} = \frac{10}{3}$$

**S85. Ans.(e)**

**Sol.**

ATQ

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

$$x^2 - 2x + x - 2 = 0$$

$$x(x - 2) + 1(x - 2) = 0$$

$$(x + 1)(x - 2) = 0$$

$$x = -1, 2$$

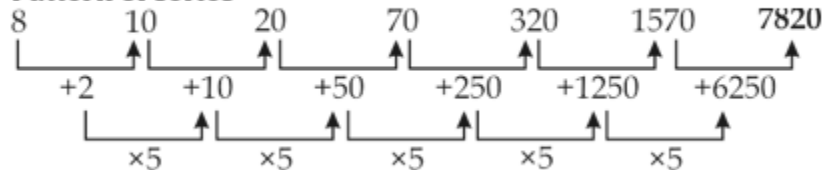
$$\text{So, required sum} = -1 + 2 = 1$$

**S86. Ans.(a)**

**Sol.**

Wrong number = 7830

Pattern of series -



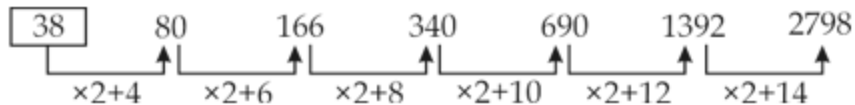
So, there should be 7820 in place of 7830.

**S87. Ans.(b)**

**Sol.**

Wrong number = 36

Pattern of series -



So, there should be 38 in place of 36.

**S88. Ans.(a)**

**Sol.**

$$\frac{32}{100} \times 800 + \frac{87}{100} \times 600 = ? + 250$$

$$? = 256 - 250 + 522$$

$$? = 528$$

S89. Ans.(a)

Sol.

$$\left(\frac{6000}{75} + 20\right) \times 7 = \left(\frac{2197}{169} \times 25\right) + ?$$

$$? = (80 + 20) \times 7 - (13 \times 25)$$

$$? = 700 - 325$$

$$? = 375$$

S90. Ans.(e)

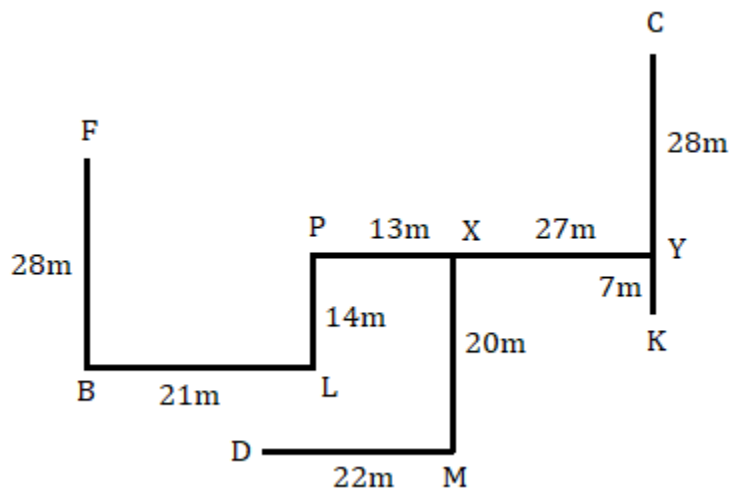
Sol.

$$1396 + 412 - 2704 + 961 = ?$$

$$? = 65$$

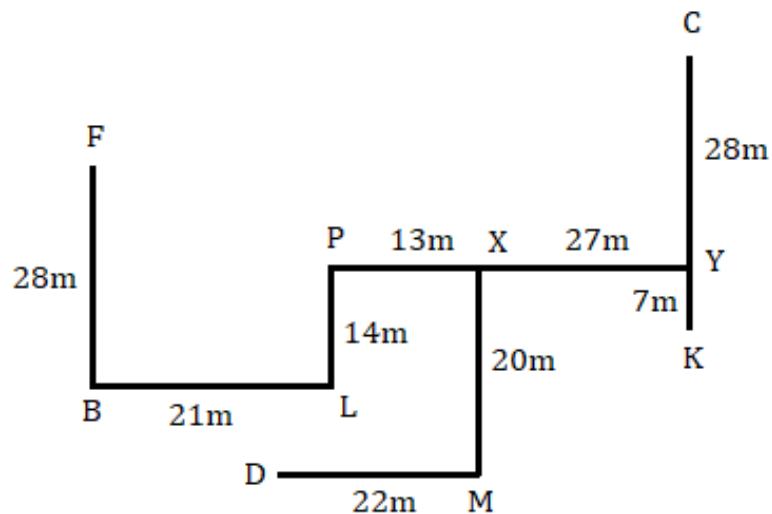
S91. Ans.(c)

Sol.



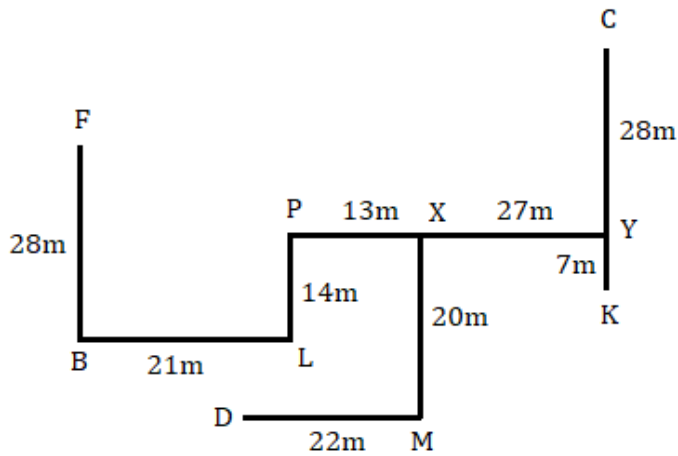
S92. Ans.(a)

Sol.



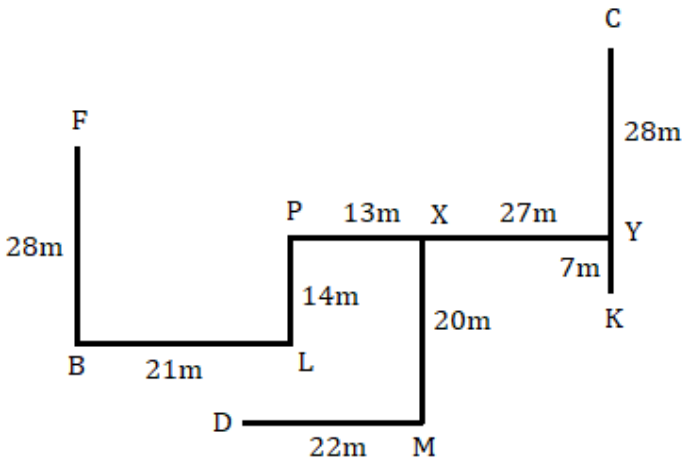
S93. Ans.(d)

Sol.



S94. Ans.(e)

Sol.



S95. Ans.(c)

Sol. Legal action and fix rate is proper course of action but life imprisonment will be extreme course of action.

S96. Ans.(c)

Sol. There are more probable chance that there will be gathering at party office, so it must be closed and section 144 will also prevent gathering.

S97. Ans.(b)

Sol.

Years	Months	Persons	Cities
2009	January	U	Shimla
	April	R	Manali
	July	X	Chandigarh
	October	T	Delhi
2010	January	W	Jaipur
	April	S	Goa
	July	Y	Gurugram
	October	V	Raipur



**S98. Ans.(c)**

**Sol.**

Years	Months	Persons	Cities
2009	January	U	Shimla
	April	R	Manali
	July	X	Chandigarh
	October	T	Delhi
2010	January	W	Jaipur
	April	S	Goa
	July	Y	Gurugram
	October	V	Raipur

**S99. Ans.(a)**

**Sol.**

Years	Months	Persons	Cities
2009	January	U	Shimla
	April	R	Manali
	July	X	Chandigarh
	October	T	Delhi
2010	January	W	Jaipur
	April	S	Goa
	July	Y	Gurugram
	October	V	Raipur

**S100. Ans.(d)**

**Sol.**

Years	Months	Persons	Cities
2009	January	U	Shimla
	April	R	Manali
	July	X	Chandigarh
	October	T	Delhi
2010	January	W	Jaipur
	April	S	Goa
	July	Y	Gurugram
	October	V	Raipur

**S101. Ans.(c)**

**Sol.**

Years	Months	Persons	Cities
2009	January	U	Shimla
	April	R	Manali
	July	X	Chandigarh
	October	T	Delhi
2010	January	W	Jaipur
	April	S	Goa
	July	Y	Gurugram
	October	V	Raipur

**S102. Ans.(e)****Sol.**

From both I and II, we get that B lives just above U's floor.

Floor	Persons
7	T
6	
5	Q
4	B
3	U
2	R
1	Y

**S103. Ans.(c)****Sol.**

Months	From I.	From II.
	Persons	Persons
January	N	N/M
March	Q	Q
June	O	O
July	L	L
October	P	P
November	M	M/N

**S104. Ans.(c)****Sol.**

From I.  $V > Q > S > P > T > U > R$

From II.  $S > U > Q > V > P > R > T$

**S105. Ans.(b)**

**Sol.** Logic: Step I: Each of number is divided into two parts in which first part is the '1<sup>st</sup> digit' itself given in the input numbers. After that second part is placed which is the resultant of subtraction between input numbers and the 1<sup>st</sup> digit of input numbers. (Ex. 45=441; first part=4, second part= 45-4=41)

Step II. First two digits written as it is which is mention in Step I and the third digit is the resultant of subtraction between 2<sup>nd</sup> and 3<sup>rd</sup> digits of Step I.

Step III. All the numbers are arranged in ascending order from left.

Step IV. Digit sum of all the numbers given in step III.

Step V. Odd number is multiplied by 2 and even number is multiplied by 3.

**Input: 19 27 78 48 57**

Step I: 118 225 771 444 552

Step II: 117 223 776 440 553

Step III: 117 223 440 553 776

Step IV: 9 7 8 13 20

Step V: 18 14 24 26 60

**S106. Ans.(d)**

**Sol.** Logic: Step I: Each of number is divided into two parts in which first part is the '1<sup>st</sup> digit' itself given in the input numbers. After that second part is placed which is the resultant of subtraction between input numbers and the 1<sup>st</sup> digit of input numbers. (Ex. 45=441; first part=4, second part= 45-4=41)

Step II. First two digits written as it is which is mention in Step I and the third digit is the resultant of subtraction between 2<sup>nd</sup> and 3<sup>rd</sup> digits of Step I.

Step III. All the numbers are arranged in ascending order from left.

Step IV. Digit sum of all the numbers given in step III.

Step V. Odd number is multiplied by 2 and even number is multiplied by 3.

**Input: 19 27 78 48 57**

Step I: 118 225 771 444 552

Step II: 117 223 776 440 553

Step III: 117 223 440 553 776

Step IV: 9 7 8 13 20

Step V: 18 14 24 26 60

**S107. Ans.(c)**

**Sol.** Logic: Step I: Each of number is divided into two parts in which first part is the '1<sup>st</sup> digit' itself given in the input numbers. After that second part is placed which is the resultant of subtraction between input numbers and the 1<sup>st</sup> digit of input numbers. (Ex. 45=441; first part=4, second part= 45-4=41)

Step II. First two digits written as it is which is mention in Step I and the third digit is the resultant of subtraction between 2<sup>nd</sup> and 3<sup>rd</sup> digits of Step I.

Step III. All the numbers are arranged in ascending order from left.

Step IV. Digit sum of all the numbers given in step III.

Step V. Odd number is multiplied by 2 and even number is multiplied by 3.

**Input: 19 27 78 48 57**

Step I: 118 225 771 444 552

Step II: 117 223 776 440 553

Step III: 117 223 440 553 776

Step IV: 9 7 8 13 20

Step V: 18 14 24 26 60

**S108. Ans.(b)**

**Sol.** Logic: Step I: Each of number is divided into two parts in which first part is the '1<sup>st</sup> digit' itself given in the input numbers. After that second part is placed which is the resultant of subtraction between input numbers and the 1<sup>st</sup> digit of input numbers. (Ex. 45=441; first part=4, second part= 45-4=41)

Step II. First two digits written as it is which is mention in Step I and the third digit is the resultant of subtraction between 2<sup>nd</sup> and 3<sup>rd</sup> digits of Step I.

Step III. All the numbers are arranged in ascending order from left.

Step IV. Digit sum of all the numbers given in step III.

Step V. Odd number is multiplied by 2 and even number is multiplied by 3.

**Input: 19 27 78 48 57**

Step I: 118 225 771 444 552

Step II: 117 223 776 440 553

Step III: 117 223 440 553 776

Step IV: 9 7 8 13 20

Step V: 18 14 24 26 60

**S109. Ans.(e)**

**Sol.** Logic: Step I: Each of number is divided into two parts in which first part is the '1<sup>st</sup> digit' itself given in the input numbers. After that second part is placed which is the resultant of subtraction between input numbers and the 1<sup>st</sup> digit of input numbers. (Ex. 45=441; first part=4, second part= 45-4=41)

Step II. First two digits written as it is which is mention in Step I and the third digit is the resultant of subtraction between 2<sup>nd</sup> and 3<sup>rd</sup> digits of Step I.

Step III. All the numbers are arranged in ascending order from left.

Step IV. Digit sum of all the numbers given in step III.

Step V. Odd number is multiplied by 2 and even number is multiplied by 3.

**Input: 19 27 78 48 57**

Step I: 118 225 771 444 552

Step II: 117 223 776 440 553

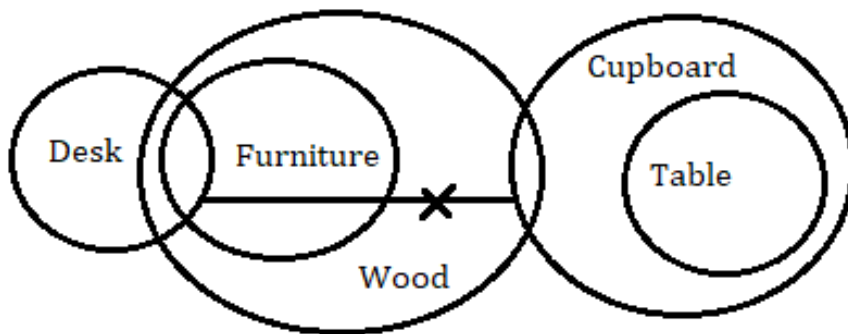
Step III: 117 223 440 553 776

Step IV: 9 7 8 13 20

Step V: 18 14 24 26 60

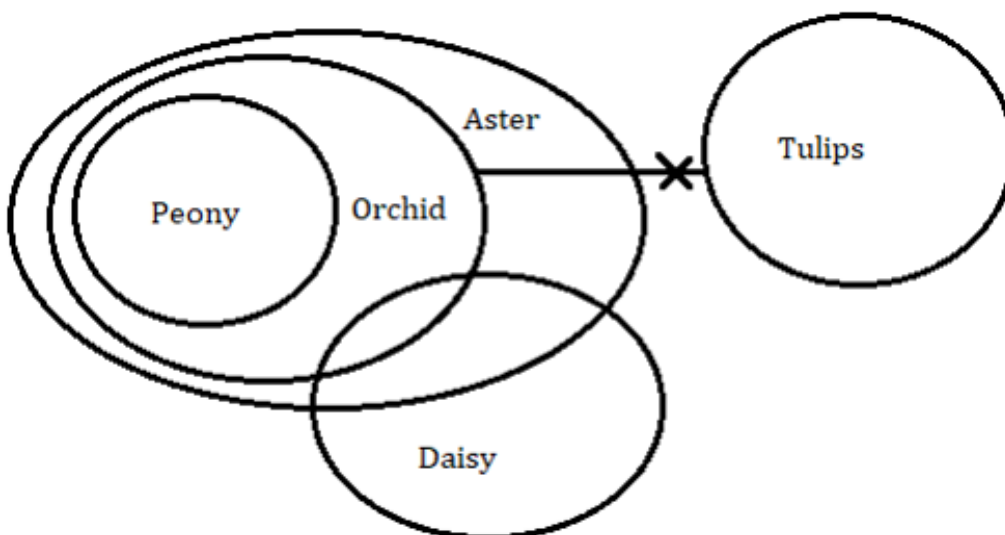
**S110. Ans.(e)**

**Sol.**



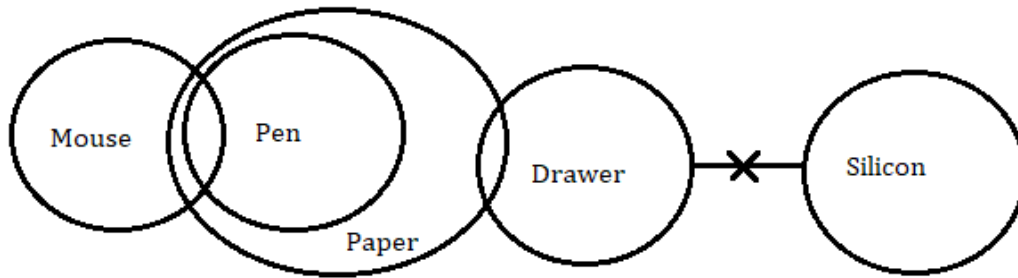
**S111. Ans.(c)**

**Sol.**



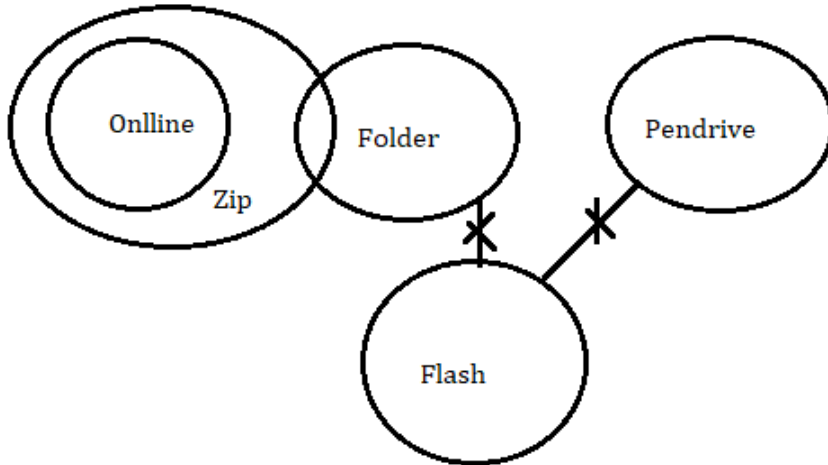
S112. Ans.(a)

Sol.



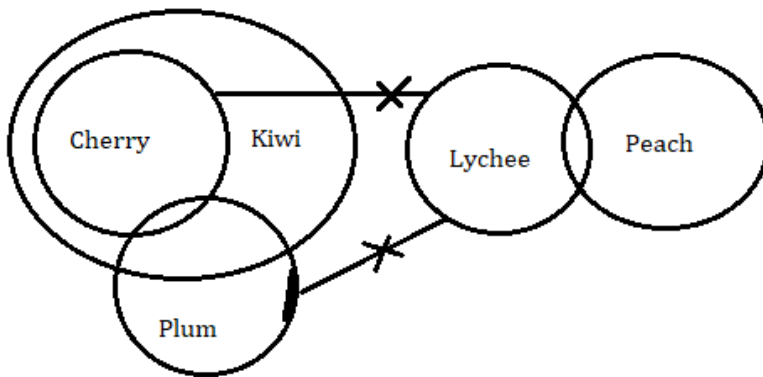
S113. Ans.(c)

Sol.



S114. Ans.(d)

Sol.



S115. Ans.(d)

Sol. I is an assumption. II is a suggestion but not a conclusion. Hence, neither I nor II follows.

S116. Ans.(c)

Sol. The subvention scheme will lead to less interest. Hence (d) follows. If the burden of interest lessens, farmers will prosper. Hence (a) follows.

S117. Ans.(b)

Sol. I. Y#L (True)

II. Q@M (True)

III. Q©M (False)

**S118. Ans.(e)****Sol.** I. I#T (False)

II. S#Q (False)

III. I\$T (False)

**S119. Ans.(a)****Sol.** I. R©Y (False)

II. W©C (False)

III. X#B (False)

**S120. Ans.(b)****Sol.** I. A#G (True)

II. P#Q (False)

III. M%G (False)

**S121. Ans.(b)****Sol.**

Steps	Persons	After rearrangement
40		
39		
38		U
37		Q
36	P	
35	T	
34		
33		
32		
31		
30		
29		
28		
27		R
26		
25		
24		
23		
22		T
21		
20	R	
19		
18		
17		
16		
15		
14	U	
13	Q	
12		
11		
10		
9		
8		
7		
6		
5	S	
4		
3		
2		
1		

S122. Ans.(a)

Sol.

Steps	Persons	After rearrangement
40		
39		
38		U
37		Q
36	P	
35	T	
34		
33		
32		
31		
30		
29		
28		
27		R
26		
25		
24		
23		
22		T
21		
20	R	
19		
18		
17		
16		
15		
14	U	
13	Q	
12		
11		
10		
9		
8		
7		
6		
5	S	
4		
3		
2		
1		

S123. Ans.(e)

Sol.

Steps	Persons	After rearrangement
40		
39		
38		U
37		Q
36	P	
35	T	
34		
33		
32		
31		
30		
29		
28		
27		R
26		
25		
24		
23		
22		T
21		
20	R	
19		
18		
17		
16		
15		
14	U	
13	Q	
12		
11		
10		
9		
8		
7		
6		
5	S	
4		
3		
2		
1		



**S124. Ans.(d)****Sol.**

Steps	Persons	After rearrangement
40		
39		
38		U
37		Q
36	P	
35	T	
34		
33		
32		
31		
30		
29		
28		
27		R
26		
25		
24		
23		
22		T
21		
20	R	
19		
18		
17		
16		
15		
14	U	
13	Q	
12		
11		
10		
9		
8		
7		
6		
5	S	
4		
3		
2		
1		

**S125. Ans.(a)**

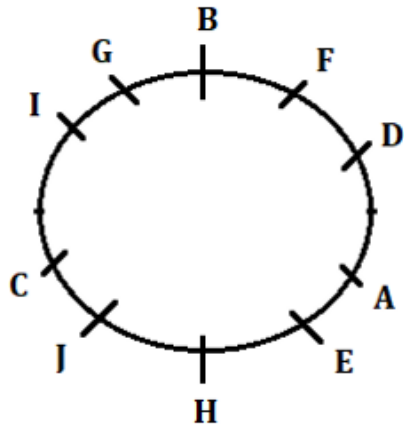
**Sol.**

Steps	Persons	After rearrangement
40		
39		
38		U
37		Q
36	P	
35	T	
34		
33		
32		
31		
30		
29		
28		
27		R
26		
25		
24		
23		
22		T
21		
20	R	
19		
18		
17		
16		
15		
14	U	
13	Q	
12		
11		
10		
9		
8		
7		
6		
5	S	
4		
3		
2		
1		

**S126. Ans.(b)**

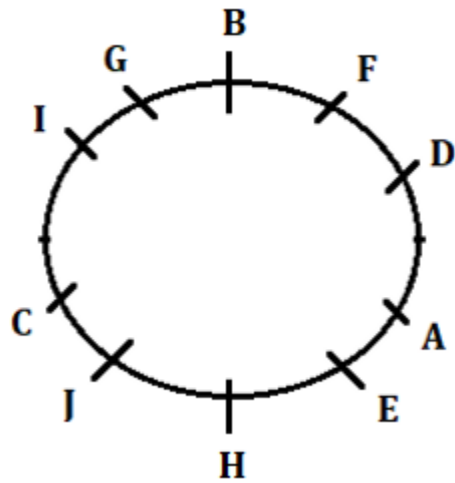
S127. Ans.(b)

Sol.



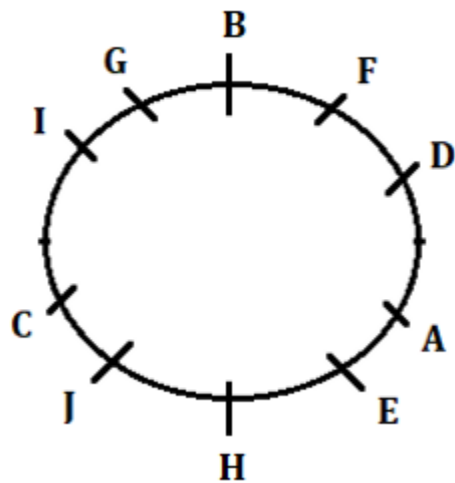
S128. Ans.(e)

Sol.



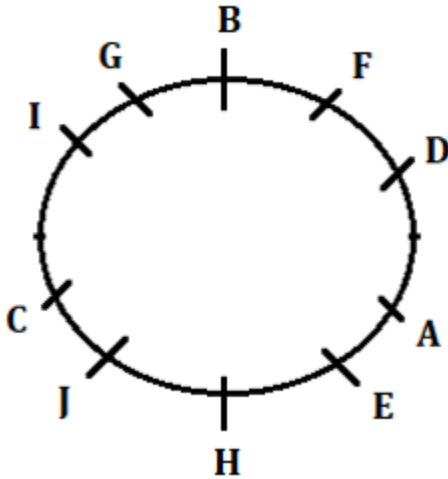
S129. Ans.(a)

Sol.



**S130. Ans.(a)**

**Sol.**



**S131. Ans.(c)**

**Sol.** Statement (I)-True-Reason: If exam will be conducted, crowd will be there. So, opposition are demanding to postpone the exam to avoid crowd as it may result to more rise in case. And statement I is supporting the demand as crowded markets has been closed.

Statement (II)-True-Reason: As state governments has postponed the exams, so it's a supporting statement for demand by opposition.

Statement (III)-False-Reason: It's not a supporting statement because as case is rising, but election is being conducted due to which crowd cannot be avoided.

**S132. Ans.(b)**

**Sol.** Statement (I)-True-Reason: This one is the one of the highest possibility due to peak in cases of corona, many of the students get infected.

Statement (II)-False-Reason: We can't say, that everyone will get good marks.

Statement (III)-True-Reason: Yes, examination centre may become the hotspot if exam will be conducted and there may be sudden increase in case.

**S133. Ans.(a)**

**Sol.**

Boxes	Books
F	28
C	21
H	12
A	15
D	14
B	17
G	13
E	18

**S134. Ans.(a)**

**Sol.**

Boxes	Books
F	28
C	21
H	12
A	15
D	14
B	17
G	13
E	18

**S135. Ans.(c)**

**Sol.**

Boxes	Books
F	28
C	21
H	12
A	15
D	14
B	17
G	13
E	18

**S136. Ans.(a)**

**Sol.**

Boxes	Books
F	28
C	21
H	12
A	15
D	14
B	17
G	13
E	18

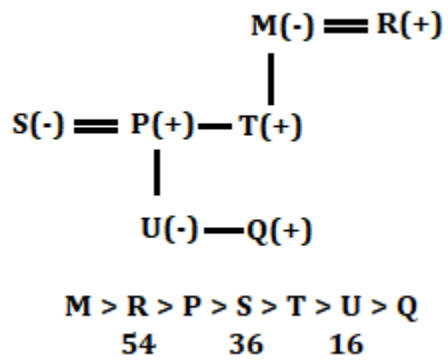
**S137. Ans.(c)**

**Sol.**

Boxes	Books
F	28
C	21
H	12
A	15
D	14
B	17
G	13
E	18

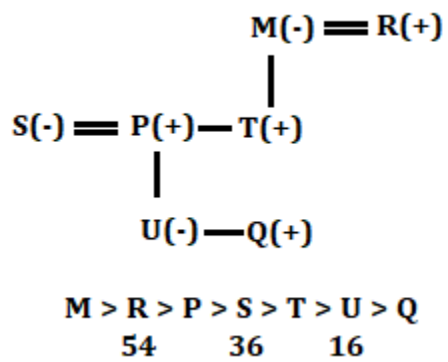
S138. Ans.(c)

Sol.



S139. Ans.(a)

Sol.



S140. Ans.(c)

Sol.

