

# RBI Grade B Phase-I 2020

## REASONING ABILITY

**Direction (1-5):** Study the following information carefully and answer the questions given below:

Seven persons P, Q, R, S, T, U and V have bought gifts of different costs. Each of them bought gifts of different colors i.e. Red, Orange, Blue, Yellow and Brown. Two of them bought gift of white color but not necessarily in the same order.

U bought a gift of Red color which is more expensive than the one having Blue colored gift. The person who bought gift of Blue color has more expensive gift than the one who bought Brown colored gift. P buy more expensive gift than the one who bought gift of yellow color. The one having gift of yellow color has a cost of 3k. Only three persons bought gifts which is less expensive than the one who has Brown colored gift. Brown colored gift is more expensive than 3k. R buys a gift of 2k but not of White color. R and S does not bought the least expensive gift. Gift of Q is more expensive than that of P and less expensive than that of V. V is not having the second highest expensive gift.

- What is the color of P's gift?  
(a) Blue (b) White (c) Brown  
(d) Cannot be determined (e) Orange
- How many persons are having less expensive gifts than U?  
(a) Two (b) Five (c) Four  
(d) Six (e) One
- If U is related to Blue, P is related to Yellow, then in the same way V is related to \_\_\_\_?  
(a) Red (b) Orange (c) Brown  
(d) White (e) Yellow
- If U's gift costs 3k more than that of S, and T's gift costs half of that of R, then what is the sum of the cost of the gifts of U and T?  
(a) 8k (b) 9k (c) 10k  
(d) 6k (e) 7k
- Which of the following persons is having the most expensive gift?  
(a) V  
(b) T  
(c) The one having orange colored gift  
(d) The one having Blue colored gift  
(e) Both (a) and (d)

**Directions (6-8):** In each group of questions below are two conclusions followed by some statements. You have to choose the correct set of statements that logically satisfies both the conclusions even if they seem to be at variance with commonly known facts:

- 6. Conclusion: I.** Some horror can be drama.  
**II.** Some comedy is not action.

- Statements:** (a) No drama is horror.  
no drama is action.  
All drama is comedy.  
(b) No horror is action.  
All drama is horror.  
All comedy is action.  
(c) All horror is comedy.  
All drama is comedy.  
No drama is action.  
(d) All action is horror.  
Some horror is drama.  
Some drama is comedy.  
(e) None of these

- 7. Conclusion: I.** Some dolphin is not penguin  
**II.** Some crocodile can be penguin.

- Statements:** (a) Some penguin is dolphin.  
No shark is penguin.  
Some crocodile is dolphin.  
(b) All shark is crocodile.  
All dolphin is penguin.  
Some shark is dolphin.  
(c) All shark is dolphin.  
All dolphin is crocodile.  
No crocodile is penguin.  
(d) No shark is penguin.  
Some dolphin is shark.  
No dolphin is crocodile  
(e) None of these

- 8. Conclusion: I.** Some Sizuka is Doremon.  
**II.** Some Nobita are not Sunio.

- Statements:** (a) Some Sizuka is Sunio.  
No Sunio is Doremon.  
Some Nobita is Doremon.
- (b) All Nobita is Sizuka.  
All Doremon is Nobita.  
No Doremon is Sunio.
- (c) All Doremon is Nobita.  
All Sizuka is Nobita.  
No Nobita is Sunio.
- (d) No Doremon is Sizuka.  
Some Sizuka is Nobita.  
No Nobita is Sunio.
- (e) None of these

**Direction (9-13):** Study the following information carefully and answer the questions given below:

There are two teams T1 and T2 who are participating in a game. Each team is having certain number of persons. All the persons in team T1 are facing in the north direction and all the persons in team T2 are facing in the south direction. All the persons are sitting in a row from left to right. No two persons of the same team are sitting together.

Two persons are sitting between A and D. Three persons are sitting between H and G. Both A and G are in team T1. No one is sitting between H and D. Two persons are sitting between C and F. Two persons are sitting between H and I. Only one person sits between D and F. Four persons sit between E and B. Only one person sits between B and G. Not more than five persons sit between B and A. E is an immediate neighbor of A and C. F sits towards the right side of A but not an immediate neighbor of A.

9. How many persons are sitting between G and D?  
(a) Three (b) Four (c) Five  
(d) Two (e) One
10. If A is related to D, H is related to I, then in the same manner C is related to \_\_\_\_?  
(a) F (b) G (c) E  
(d) B (e) None of these
11. If A sits at one of the extreme ends of the row, then which of the following is true?  
(a) No one is sitting to the left of A  
(b) Number of persons sitting to the left of D is five  
(c) Number of persons sitting to the right of D is three  
(d) Both (a) and (b)  
(e) Both (a) and (c)
12. What is the minimum possible number of persons sitting in the row?  
(a) Ten (b) Twelve (c) Thirteen  
(d) Nine (e) Eight

13. Which of the following pair of persons belong to T2?  
(a) E, C (b) D, H (c) E, D  
(d) B, I (e) H, F

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

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: 62 51 95 38 55 16 78 81 73 98**  
 Step I: 94 62 51 38 55 16 78 81 73 99  
 Step II: 94 80 62 51 38 55 16 73 99 79  
 Step III: 94 80 72 51 38 55 16 99 79 63  
 Step IV: 94 80 72 54 51 16 99 79 63 39  
 Step V: 94 80 72 54 50 99 79 63 39 17  
 Step VI: 25 64 25 01 25 00 04 09 36 36  
 Step VI is the last step of the given Input.

As per the rules followed in the above steps, find out in each of the following questions the appropriate step for the given input.

**Input: 94 49 85 40 33 66 56 61 73 84**

14. How many steps would be needed to complete the arrangement?  
(a) Five (b) Eight (c) Four  
(d) Six (e) None of these
15. What will be the difference between the numbers which is third from the right end in step IV and 2nd from the left end in step V?  
(a) 10 (b) 13 (c) 16  
(d) None of these (e) 20
16. In which of the following step of the given Input does '49 40 33 56 95' found in the same order?  
(a) I (b) II (c) None of these  
(d) VI (e) III
17. In step V which of the following number would be at 6<sup>th</sup> position from the right end?  
(a) 32 (b) 50 (c) 85  
(d) 48 (e) None of these
18. What will be the addition of the numbers which is third from the right end in step II and 4<sup>th</sup> from the right end in step III?  
(a) 117 (b) 112 (c) 110  
(d) 222 (e) None of these

**Directions (19-21):** Read the following information carefully and answer the questions given below it.

There are ten members in a family of four generation in which there are three married couples. V is sibling of U and she is unmarried. S is daughter-in-law of Q. W has two children. X is grandmother of U. P is father of V. W and X are

married couples. T is nephew of V. Q is mother of U. W is not father-in-law of P. Z is granddaughter of Q. R is a female member of the family.

19. How U is related to S?

- (a) Mother (b) Father (c) Husband  
(d) Wife (e) None of these

20. How R is related to son of Q?

- (a) Aunt (b) Sister (c) Sister in law  
(d) Mother (e) None of these

21. If M is married to V then how S is related to M?

- (a) Sister (b) Aunt (c) None of these  
(d) Sister-in-law (e) Mother

22. Five letters N, L, E, B, O are used to form a meaningful word then find which is the third letter from the right end. O is second to the left of E. B is an immediate neighbor of O. E is to the immediate left of L. N is placed at one of the corners. If more than one word is formed mark X as your answer.

- (a) N (b) B (c) O  
(d) X (e) L

**Direction (23-27):** Study the following information carefully and answer the questions given below:

Seven persons i.e. P, Q, R, S, T, U and V are living in a seven floor building with ground floor is numbered as 1, floor above it is numbered as 2 and so on till the topmost floor is numbered as 7. They all like different colors i.e. Blue, Pink, Red, Yellow, Grey, Orange and Black. Four of them belongs to Delhi and rest belongs to Punjab. All information is not necessarily in the same order.

The one who likes Pink color lives on an even numbered floor. The one who belongs to Punjab lives just below the one who likes Pink color. R lives on sixth floor. The one who lives on second floor belongs to Delhi. U lives on fourth floor. Two persons live between R and the one who likes Grey color. As many persons live below the one who likes grey color as lives above the one who belongs to Punjab. V lives immediately below S and likes Black color and lives on an odd numbered floor. The one who belongs to Delhi lives just below the one who likes Blue color and just above the one who likes Red Color. The one who belongs to Delhi does not like Grey color. P lives on the topmost floor. The one who likes Yellow color does not belong to Delhi. R does not like Orange color. Q lives above T.

23. Who among the following person belongs to Punjab?

- (a) P (b) R (c) Q  
(d) S (e) V

24. How many persons live between Q and the one who likes Black color?

- (a) one (b) two (c) three  
(d) four (e) None of the above

25. Which among the following statements is true regarding U?

- (a) U lives on an odd numbered floor  
(b) U belong to Delhi  
(c) U likes Black color  
(d) U likes Pink color  
(e) None of the above

26. Four of the following five are alike in certain way based from a group; find the one which does not belong to that group?

- (a) V (b) T (c) U  
(d) Q (e) P

27. Who among the following person likes Orange color?

- (a) P  
(b) Q  
(c) The one who lives on second floor  
(d) The one who lives on third floor  
(e) None of the above

**Direction (28-32):** Study the following information carefully and answer the questions given below:

Twelve persons A, B, C, D, E, F, G, H, I, J, K, L were born on six different months i.e. June, July, August, September, October, and November on two different dates i.e. 5<sup>th</sup> and 10<sup>th</sup> of different months and they like different colors i.e. Black, White, Blue, Yellow, Orange, Cyan, Brown, Grey, Purple, violet, Pink and Red but not necessarily in the same order.

No one was born between the one who like Pink colour and Violet colour. K does not like Pink colour. The one who like Black colour was born before the one who like Orange colour. F does not like Grey colour. The one who like purple was born on September. Only two persons were born between the one who like purple and the one who like Red. One who like red is born before the one who like purple. No one was born after B. The one who like Red and the one who like yellow were not born on same month. J was born on 5<sup>th</sup> of August. Two persons were born between J and C. C was born before J. The number of people born between B and J is same as number of people born between A and I. I was born before October but after A. No one was born between the one who like Red and the one who like Yellow. The one who like blue and the one who like Yellow were born on the same month. The one who like Grey and the one who like Brown were born on the same month but not on a month which have even number of days. Number of people born before the one who likes white is same as after the one who like Cyan. The one who like Cyan was not born on June. A does not like White colour. L was born on 10<sup>th</sup> of August does not like White and Cyan colour. G and F were born on the same month but after July. Two persons were born between H and K. K was

not born on an even number date. E does not like cyan colour. At least three persons were born after the one who like Grey colour.

**28.** Who among the following person was born on 10<sup>th</sup> of September ?

- (a) I (b) G (c) F  
(d) D (e) None of these

**29.** Who among the following person like Pink colour?

- (a) L (b) I (c) A  
(d) G (e) C

**30.** How many persons were born between A and H?

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

**31.** Who among the following person were born in the month of July?

- (a) J (b) H (c) K  
(d) L (e) F

**32.** How many persons were between the one who like Red and the one who like Violet?

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

**Directions (33-35):** Study the following information carefully and answer the questions given below:

A©B means A is 6m west to B

AΩB means A is 9m north to B

A%B means A is 10m east to B

A¥B means A is 5m south to B

A@B means A is 3m north to B

**33.** If N © M% OΩ Q¥ P, holds true, then find what is the total distance covered between point M and point Q?

- (a) 15m (b) 19m (c) 20m  
(d) none of these (e) 13m

**34.** If Q @ R Ω W % X ¥ Y holds true, then find in which direction is point X with respect to point R ?

- (a) North west (b) North (c) South east  
(d) South west (e) None of these

**35.** If Q @ R Ω W % X ¥ Y holds true then, find what is the shortest distance between point W and point Y?

- (a) 5m (b)  $5\sqrt{3}$ m (c)  $\sqrt{120}$ m  
(d) none of these (e)  $5\sqrt{5}$ m

**Directions (36):** Read the following information carefully and answer the questions given below it.

Several subtypes and strains of avian influenza viruses are now found around the world, some of them capable of causing death among humans and others inflicting serious losses on poultry farmers. The latest bird flu scare in New Delhi and elsewhere has been triggered by the death of some free living birds in the city's A.N. Jha Deer Park, and

15 painted storks in the Gwalior zoo. Worrying as it is, early detection and identification of the virus subtypes helps in launching containment measures. As a major agricultural nation with a large poultry industry, India has implemented an action plan formulated by the Centre's Department of Animal Husbandry, Dairying and Fisheries to deal with avian influenza. It incorporates a clear protocol for preventive checks and testing, for reporting an outbreak, removing farmed birds from an affected area and compensating farmers.

**36.** Which of the following can be **deduced** from the above paragraph?

- (I) Avian influenza virus is menacing for birds and humans may cause threat of death.  
(II) India is proficient enough to tackle with deadly Avian influenza virus.  
(III) High fever with headache are symptoms of Avian influenza virus which is more dangerous than HIV and DENV virus.  
(a) Only II and III (b) Only I and II (c) Only II  
(d) Only I and III (e) None of these

**Direction (37-38):** Study the following information carefully and answer the questions given below:

The data breach at 19 Indian banks that has led to more than 32 lakh debit cards being blocked or recalled is a wake-up call for the banking industry. While the actual number of complaints received so far, 641, and the sum of money that appears to have been fraudulently withdrawn, Rs.1.3 crore, are both small relative to the scale of the potential data theft, it is disconcerting that it has taken almost six months for the system to officially acknowledge the incidents and initiate steps to address them. A private bank appears to have been a point of entry for the data criminals who, according to reports, may have infiltrated using malware at ATMs operated by a third-party payment services vendor. The National Payments Corporation of India has been coordinating investigations into the incident, and a forensic audit is expected to reveal preliminary findings soon.

**37.** Which of the following possible **reason** of pilferage of money from Indian banks?

- (I) Account of many Indians who are using Chinese mobile are hacked by Chinese hackers.  
(II) Data regarding bank account are theft using malware at ATMs operated by third-party payment services vendor.  
(III) Information regarding bank account are leaked by officials of Indian Banks to poacher.  
(a) Only I and III (b) Only III (c) Only II and III  
(d) Only II (e) None of these

38. Which of the following is **not in line** in context of passage?

- (I) NPCI is trying to find out the reason behind leakage of information regarding bank account.
  - (II) Ministry of defense makes alert to all his officials regarding chances of larceny.
  - (III) There is lack of effort by officials of investigation agency as it has taken almost six months for the system to officially acknowledge the incidents.
- (a) Only II and III (b) Only I and III (c) Only II  
(d) Only I (e) None of these

**Direction (39-43):** Study the following information carefully and answer the questions given below:

Twelve persons i.e. J, K, L, M, N, O, P, Q, R, S, T and U are sitting in two parallel rows i.e. row 1 and row 2. Six persons are sitting in row 1 and are facing in South direction while Rest are sitting in row 2 and are facing in North direction. Persons sitting in each row likes different colors i.e. Red, Blue, Green, Pink, Yellow and Black. Persons sitting in same row or facing each other does not like the same color.

M sits third to the left of the one who faces the one who likes Black color. As many persons sits to the left of M as sits to the left of the one who like Black color. K faces the one who sits to the immediate right of M. P sits to the immediate right of K. As many persons sits to the right of P as sits to the right of the one who likes Yellow color. P does not like yellow color. R sits at one of the end of the row and to the left of P. Q sits to the left of J and does not like Black color but sit in the same row in which L is sitting. Three persons sit between M and O. K faces the one who likes Red color. L likes Black color. J likes Red color. L does not sit next to the one who likes Red color. S likes the same color as R likes. O likes Green color. S does not like Blue color. R does not like Yellow color. S sits to the left of the one who likes Red color. The one who likes Red color sits to the immediate left of the one who likes Black color. U does not like Black and Red color. P does not like Yellow color. The one who likes Blue color faces T. Q does not like Blue color. N does not sit in row 1.

39. Who among the following likes Yellow color?

- (a) P (b) R (c) U  
(d) S (e) J

40. How many persons sit between the one who likes Green color and S?

- (a) one (b) two (c) three  
(d) four (e) None of the above

41. Which among the following statement is true regarding N?

- (a) N sits in row 1  
(b) N sits at the end of the row  
(c) N likes Blue color  
(d) N likes Pink color  
(e) None of the above

42. Four of the following five are alike in certain way based from a group; find the one which does not belong to that group?

- (a) S-Red (b) P-Blue (c) T-Blue  
(d) Q-Black (e) O-Green

43. Which among the following pairs like the same color?

- (a) S-J (b) P-T (c) N-L  
(d) U-L (e) O-J

**Directions (44-45):** Read the following information carefully and answer the questions given below it.

44. A government survey released today shows that 80 % of the people who fly are satisfied with the service they receive from the airlines in this country. Three interviewers stood outside a major airport and asked people leaving the terminal, "Do you have any complaints about the flight you just got off?" Only 20 percent responded "yes!"

Which of the following, if true, would most **undermine** the conclusion of the argument above?

- (a) Sixty percent of the people coming out of the airline terminal were not people who had just gotten off a flight.
- (b) One percent of the people approached by the interviewers refused to respond to their inquiries.
- (c) The interviewers began their inquiry just after passengers were discharged from a flight that was 40 minutes late.
- (d) The interviewers were able to speak to only 70 percent of the people leaving the terminal, but those people were selected at random.
- (e) For six months following the day of the interviews, no official complaints were filled by any passenger with the Federal agency that regulated the airlines.

45. It is a truism of military science that "Generals always prepare for the last war." In the same way public officials generally spend their efforts on problems that were resolved- one way or another -years before. By the time a public issue reaches the consciousness of enough of the citizenry to become a high priority of our elected leaders, the problem is usually past the point at which government efforts can significantly affect it.

All of the following are **assumed** in the argument above except-

- (a) By the time most of the public problems tend to evolve towards a point at which the government's efforts to control them become ineffective.
- (b) Political and military leaders are both prone to react tardily to changes in their fields.
- (c) Issues attain importance for public officials when large number of citizens are concerned about them.
- (d) Planning policies, solely based on past experiences are likely to be in effective.
- (e) The government officials can generally do little to influence directly the course of public policy.

**Directions (46):** Study the following information carefully to answer the given questions.

The data breach at 19 Indian banks that has led to more than 32 lakh debit cards being blocked or recalled is a wake-up call for the banking industry. While the actual number of complaints received so far, 641, and the sum of money that appears to have been fraudulently withdrawn, Rs.1.3 crore, are both small relative to the scale of the potential data theft, it is disconcerting that it has taken almost six months for the system to officially acknowledge the incidents and initiate steps to address them. A private bank appears to have been a point of entry for the data criminals who, according to reports, may have infiltrated using malware at ATMs operated by a third-party payment services vendor. The National Payments Corporation of India has been coordinating investigations into the incident, and a forensic audit is expected to reveal preliminary findings soon.

**46. Which course of action** should be taken by investigating officials?

- (I) Recover money which have been fraudulently theft by poachers.
  - (II) Make aware to people to not use e-commerce site for online purchasing.
  - (III) Hang the culprit if it is Indian banking official who is responsible for leakage of information regarding bank account details.
- (a) Only I                      (b) Only I and III    (c) Only III  
(d) Only II and III    (e) None of these

**Direction (47-51):** Study the following information carefully and answer the questions given below:

Six persons i.e. J, K, L, M, N and O are working in a company. Their designations are Clerk (CL), Assistant officer (AO), Officer (OF), Assistant Manager (AM), Manager (MG) and General Manager (GM). Sequence of the posts is same as mentioned above with Clerk (CL) being the junior most position and General Manager (GM) being the topmost position and. They all have different experiences in the company. They all are getting different salaries i.e. 30k, 40k, 20k, 25k, 38k and 60k. No two persons have same experience or salary. All information is not necessarily in the same order.

Only two persons are senior than N. The one who is getting a salary of 38k is senior to N. Three posts are there between J and K. J is junior than K. K is having 11 years of experience. Clerk is getting a salary of 30k. M is an immediate senior of O. The one who have 11 years of experience is having salary more than 35k. As many persons are senior than the one who has salary 25k as many persons are junior than the one who has experience of 2 years. N is not having the experience of 2 years. The

one who have experience of 2 years have salary less than 25k. The sum of salary of O and M is the salary of L. The one who have experience of 13 years gets salary more than the one who gets salary of 30k. The experience of O and M are in consecutive years with M having less number of experience. The experience of J is the difference between the salary of J and N. N has 7 years of experience.

**47. Who among the following person is General Manager?**

- (a) J                      (b) K                      (c) L  
(d) M                      (e) None of the above

**48. What is the difference between the experience (years) of Assistant Manager (AM) and the one who is getting salary of 30k?**

- (a) one                      (b) two                      (c) three  
(d) four                      (e) None of the above

**49. Which among the following statement is true regarding L?**

- (a) L is clerk  
(b) L is Officer (OF)  
(c) L is having an experience of 7 years  
(d) L is getting a salary less than 30k  
(e) None of the above

**50. Who is an immediate senior to the one who is getting a salary of 38k?**

- (a) L                      (b) J                      (c) K  
(d) M                      (e) None of the above

**51. Who among the following person is getting a salary less than the one who is having an experience of 7 years?**

- (a) L                      (b) J                      (c) K  
(d) M                      (e) None of the above

**Directions (52-56):** Study the following information carefully to answer the given questions.

Eight members of a family of three generation are sitting around a circular table and all of them are facing towards the center.

T is married to Q. R is sitting second to the right of N's mother. O is the only son of M. N is sitting third to the right of P's father and she has only two children. Q sits opposite to R's brother. P's uncle is sitting third to the right of N's daughter-in-law. P is only sibling of O and sits fourth to the left of M's daughter in law. M is sibling of R and he is married to Q's only child. T sits at the immediate left of S's father in law. Q is not mother of N.

**52. Who among the following is sitting third to the right of N's daughter?**

- (a) O                      (b) Q                      (c) S  
(d) None of these    (e) M based puzzle

53. How M is related to the person who is sitting third to the left of S?  
 (a) Father (b) Brother (c) Husband  
 (d) Uncle (e) None of these based puzzle
54. Four of the following five are alike in a certain way and hence form a group, which of the following does not belong to the group?  
 (a) Q (b) M (c) R  
 (d) O (e) N based puzzle
55. Which of the following statement is not true?  
 (a) N is sitting second to the right of O's uncle.  
 (b) T is father-in-law of R  
 (c) O sits opposite to R  
 (d) S is a female member  
 (e) None is true based puzzle
55. How many persons are sitting between M and P when counting from the left of M?  
 (a) One (b) Three (c) Two  
 (d) Four (e) More than four based puzzle
57. How many such pairs of letters are there in the word 'STRENGTHEN', each of which has as many letters between them in the word, as they have in the English alphabet?  
 (a) Two (b) Three (c) Four  
 (d) One (e) None of these
58. Study the following information carefully and answer the question given below-  
 Landmark preservation laws unfairly impinge on the freedom of owners to develop their own property as they see fit. In some cases, owners of hotels and office buildings designated as landmarks have been forbidden to make changes in the original facades or interiors, even though they reasonably believe that the changes would enhance the structures and make them more valuable.  
 Which of the following statements, if true, seriously weakens the author's argument?  
 (a) Altering the appearance of a historic structure sometimes does not enhance its beauty or value.  
 (b) In traditional legal doctrine, ownership of a property implies the right to alter it at will.  
 (c) Only buildings over 75 years old are normally affected by landmark preservation laws.  
 (d) Landmark designations must be approved by a local regulatory body before taking effect.  
 (e) Historic buildings represent a cultural heritage which the community has a legitimate stake in preserving.

**Direction (59-60):** In each of the questions below are given some statements followed by some

59. Within 20 year it will probably be possible to identify the genetic susceptibility an individual may have toward any particular disease. Eventually, effective strategies will be discovered to counteract each such susceptibility. Once these effective strategies are found, therefore, the people who follow them will never get sick,  
 The argument above is based on which of the following assumptions?  
 (a) For every disease there is only one strategy that can prevent its occurrence  
 (b) In the future, genetics will be the only medical speciality of any importance  
 (c) All human sicknesses are in part the result of individuals' genetic susceptibilities  
 (d) All humans are genetically susceptible to some diseases  
 (e) None of these
60. The percentage of family income spent on entertainment has remained almost the same over the past twenty years – about twelve per cent. When new forms of entertainment become popular, they do not expand this percentage; instead, they take consumer spending away from other forms of entertainment. Therefore, film producers have observed the video boom with concern, knowing that every dollar spent on rental of videos means a dollar less spent on movie theatre admissions.  
 Which of the following, if true, most forcefully undermines the argument of the passage above?  
 (a) The cost of renting a video is generally substantially less than the price of a movie theatre admission.  
 (b) Most film producers receive a portion of the income from the sale of video rights to their movies.  
 (c) Fears of some film producers that videos would completely supersede movies have not come to pass.  
 (d) Since the start of the video boom, money spent on forms of entertainment other than videos and movies has dropped.  
 (e) Some movies that were unprofitable when shown in theatres have become successful when released in video form

## QUANTITATIVE APTITUDE

**Direction (61 – 63):** 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: compare only quantities.

**Quantity I:** Rs. 1800 invested at 10% p.a. on simple interest, while Rs. (1800 – P) invested at 20% p.a. on compound interest. If the difference between total simple interest and total compound interest after two years is Rs. 80, then find 'P'. (Compound interest > simple interest)

**Quantity II:** Marked price is 25% more than the selling price of the product and the profit earned on selling is also 25%. If the difference between profit and the difference between cost price and marked price is Rs 200, then find the cost price of the product?

- (a) Quantity I > Quantity II
- (b) Quantity I < Quantity II
- (c) Quantity I ≥ Quantity II
- (d) Quantity I ≤ Quantity II
- (e) Quantity I = Quantity II or No relation

**62. Quantity I:** A train running at speed of 's' km/hr crosses a man who is moving in same direction going along the railway track at the speed 4 km/hr. The man could see the train up to 3 min. If at time of disappearance the distance between train to man is 0.8 km & length of train is 200 meters, then find 's'?

**Quantity II:** A train crosses a man, who is running in the same direction of train at the speed of 2m/sec. in 10 seconds. The same train crosses a tunnel in 54 seconds. If speed of train is 72 km/h then what is the length of tunnel.

- (a) Quantity I > Quantity II
- (b) Quantity I < Quantity II
- (c) Quantity I ≥ Quantity II
- (d) Quantity I ≤ Quantity II
- (e) Quantity I = Quantity II or No relation

**63. Quantity I:** A bag contains x green balls, 7 blue balls and 8 red balls. When two balls are drawn from bag randomly, then the probability of one ball being green and one ball being red is  $\frac{4}{15}$ . Find value of x (number of green balls cannot be more than 18 balls).

**Quantity II:** A cistern has two pipes. One can fill it with water in 15 hours and other can empty it in 12 hours. In how many hours will the cistern be emptied if both the pipes are opened together when  $\frac{3}{5}$ th of the cistern is already full of water.

- (a) Quantity I > Quantity II
- (b) Quantity I < Quantity II
- (c) Quantity I ≥ Quantity II
- (d) Quantity I ≤ Quantity II
- (e) Quantity I = Quantity II or No relation

**Direction (64– 68):** Table given below shows five colleges in which there are five departments viz - Arts, commerce, Medical, science and vocational. Also, table tells shows total received application in department and percentage of cancel applications (Male + female) and ratio of male to female in approved application.

| Departments | Total Application received | Percentage of Cancel applications | Ratio of (male: female) Approved |
|-------------|----------------------------|-----------------------------------|----------------------------------|
| Arts        | P                          | 40%                               | 11 : 7                           |
| commerce    | 1400                       | Q                                 | 29:21                            |
| Medical     | 1600                       | 35%                               | R                                |
| Science     | S                          | 55%                               | 43:17                            |
| vocational  | 800                        | 60%                               | T                                |

**64.** If the difference between approved male applications and approved female applications in Arts department is 200, then find P is how what percent more than applications received in vocational department?

- (a) 75%
- (b) 87.5%
- (c) 62.5%
- (d)  $66\frac{2}{3}\%$
- (e) 50%

**65.** If the difference between approved male applications and approved female applications in science department is 234, then find the sum of total applications received in science, commerce and medical department together?

- (a) 4200
- (b) 4400
- (c) 4600
- (d) 3800
- (e) 5200

**66.** If the difference between approved male applications and approved female applications in Arts department is 100, then find difference between P and cancel application in medical department?

- (a) 170
- (b) 180
- (c) 190
- (d) 165
- (e) 175

**67.** If the number of approved male applications in vocational department is 40 more than that of approved female applications, then find the ratio of approved female applications to approved male applications in the same department?

- (a) 9 : 7
- (b) 5 : 7
- (c) 13 : 9
- (d) 7 : 9
- (e) 7 : 11

68. If the difference between approved male applications and approved female applications in commerce department is 112, then find sum of Q and total application received in medical department?  
 (a) 2300 (b) 2400 (c) 2700  
 (d) 2800 (e) 3200
69. To find the lateral surface area of cone which of the following statement or statements required?  
 I. Height of cone is 12 cm.  
 II. Radius of smaller sphere is  $\frac{2}{3}$ rd of that of larger sphere.  
 III. Radius of cone is  $\frac{5}{6}$ th of radius of larger sphere and difference between volume of both spheres is  $\frac{13336}{21}$  cm<sup>3</sup>.  
 (a) Either I and II or II and III are sufficient to answer the question  
 (b) Either I and II or I and III are sufficient to answer the question  
 (c) Either I and III or II and III are sufficient to answer the question  
 (d) I, II and III together are sufficient to answer the question  
 (e) All of the statements together are not sufficient to answer the question.
70. 40% of mixture of milk and water is replaced by orange juice and the ratio of milk, water and orange juice in resulting mixture becomes 4 : 5 : 6 respectively. Initial quantity of milk in mixture is 20 liters less than that of water. Then, \_\_\_\_ % of resulting mixture taken out, due to which total quantity of milk and orange juice in the final mixture becomes 66 liters.  
 (a) 40% (b) 25% (c) 35%  
 (d) 45% (e) 55%
71. Ratio of A's present age to B's present age is 3: 4 and ratio of present age of C to that of B is 5: 8. If difference between difference of C's and B's age and difference of B's and A's age is 9 years then find the average of their age twelve years ago?  
 (a) 47 years (b) 45 years (c) 46 years  
 (d) 50 years (e) 52 years
72. A bag contains 50 balls in which there are 20 white balls and some red and yellow balls. If three balls are picked up from the bag without replacement, then the probability of the first ball being white, second being red and third being yellow is  $\frac{4}{105}$ . Find the number of yellow balls in the bag.  
 (a) 16 (b) 12 (c) 10  
 (d) 14 (e) either (a) or (d)
73. A sum becomes 16 times when compounded half yearly for two years and it becomes 27 times in X years when compounded annually. Find the difference between CI (compounded annually) and SI received when Rs 15000 is invested for X years at 10% per annum?  
 (a) Rs 475 (b) Rs 465 (c) Rs 458  
 (d) Rs 463 (e) Rs 460
74. P & Q invested Rs.40000 & Rs.75000 respectively in a business. After (x + 2) months, P left the business and at the same time R joined the business by investing Rs.50000. At the end of 1 year from the beginning, Q received Rs.54000 out of total profit of Rs.87000. Then, find (x + 7).  
 (a) 11 (b) 14 (c) 15  
 (d) 12 (e) 10
75. A and B together takes 18 days to do a work while A and C together take 30 days to do that work. B is 200% more efficient than C and time taken by all three together to do the work \_\_\_\_\_ days?  
 (a) 12 (b) 20 (c) 16  
 (d) 10 (e) 15
76. Both Vikash and Vijay sold an article at 20% profit on selling price. Average of cost price of article for Vikash and Vijay is Rs.700. Profit earned by Vikash is Rs.50 less than profit earned by Vijay. What is the average of selling price of article for Vikash and Vijay?  
 (a) Rs 825 (b) Rs 875 (c) Rs 910  
 (d) Rs 925 (e) Rs 805
- Directions (77 – 80):** Each of given question is followed by two statements i.e. Statement I & II. You have to determine which statement (s) is/are sufficient/necessary to answer the question and mark answer accordingly.
- (a) Only statement II is sufficient  
 (b) Either statement I or II is sufficient  
 (c) Both statements together are not sufficient to answer  
 (d) Only statement I is sufficient  
 (e) Both statements together are necessary to answer
77. What is quantity of milk in mixture of milk & water?  
 I. if 10 lit of the mixture is taken out then water becomes 35% of total quantity of remaining mixture.  
 II. if 30 lit water is added to the initial mixture then quantity of the milk becomes equal to that of water.
78. How many balls are in the bag? Bag contains only three types of colored balls.  
 I. ratio of blue balls to red balls 4 : 5. Number of white colored ball is one more than that of red colored balls.  
 II. no. of ways of selecting 2 red balls from the bag is 10.

- 79.** In what time pipe C alone can fill the tank?
- pipe A & B together takes 4 hours to fill the tank while pipe A, B and C together takes 3 hours to fill the tank. All pipes are inlet.
  - time taken by pipe A alone to fill half of the tank is same as time taken by pipe A & B together to fill the complete tank.
- 80.** What is area of square?
- length of diagonal of square is equal to diameter of circle of area.
  - area of circle circumscribing the square is 154 sq.m.

**Direction (81 – 85):** Read the data carefully and answer the questions.

Data given regarding total brownies and cakes sold by shop on four (Monday, Tuesday, Wednesday & Friday) different days. Total brownies sold by shop is 400 and total cake sold by shop is 40% more that of brownies. 20% of total brownies sold by shop on Monday and one-fourth of the total sold brownies sold on Wednesday. 25% total brownies sold by shop on Tuesday. Total number of brownies and cake sold by shop on Wednesday together is 240. 45% of the total number of cakes sold by shop on Tuesday and ratio of total number of cakes sold by shop on Friday to Monday is 3:4.

- 81.** What is the ratio of total number brownies and cakes sold by shop on Monday to total number of brownies and cakes sold by shop on Friday?
- (a) 8:15      (b) 13:15      (c) 11:12  
(d) 22:25      (e) 5:9
- 82.** Number of brownies sold by shop on Friday is what percent of number of brownies sold by shop on Monday?
- (a) 75%      (b) 66.66%      (c) 100%  
(d) 160%      (e) 150%
- 83.** Total number of brownies sold by shop on Monday and Tuesday together are what percent more or less than the total number of brownies and cakes sold by shop on Friday?
- (a) 2.5%      (b) 6.25%      (c) 7.5%  
(d) 8%      (e) 10%

- 84.** Find the average number of brownies and cakes sold by shop on Tuesday & Wednesday?
- (a) 306      (b) 264      (c) 284  
(d) 296      (e) 218

- 85.** The difference between total number of brownies and cakes sold by shop on Monday and total number of brownies and cakes sold by shop on Tuesday is what percent total number of brownies and cakes sold by shop on all four days together?
- (a)  $18\frac{1}{3}\%$       (b)  $17\frac{1}{2}\%$       (c)  $16\frac{2}{3}\%$   
(d)  $22\frac{1}{2}\%$       (e) 20%

**Directions (86-87):** In the following questions, two equations (I) and (II) are given. You have to solve both the equations and answer the following questions.

- (a)  $x < y$       (b)  $x > y$       (c)  $x \leq y$   
(d)  $x \geq y$       (e)  $x = y$  or no relation.

**86. I.**  $(x - 6)^2 = x$       **II.**  $(y - 5)^2 = 3y - 17$

**87. I.**  $9 + \frac{5}{x^2} = \frac{13.5}{x}$       **II.**  $5y + \frac{12.25}{y} = 15.75$

- 88.** In the following questions, two statement (I) and (II) are given. You have to solve both the statement and answer the following questions.

**I.**  $x^2 - 9x + 20 = 0$

- II.** A can do a work in 12 days, while B is 50% more efficient than A. Find total time taken by both to complete the same work together.

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

- 89.** If  $x^2 - 10x + k = 0$  and its two roots are m and n. If  $m - n = 2$ , then find value of n?

- (a) 2      (b) 6      (c) 4  
(d) 3      (e) 8

- 90.** If  $x^2 + 12x + k = 0$  and its two roots are m and n and  $m - n = 2$ , then which of the following will be correct?

(I)  $(m \times n)$  is a multiple of 5

(II)  $(m \times n) > 36$

(III)  $(m + n) > 11$

(IV)  $m > 5$

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

**Directions (91-100):** Read the given passage carefully and answer the following questions. Certain parts have been highlighted to help answer the questions.

An old lion, who was too weak to hunt or fight for his food, decided that he must get it by his **wits**. He looked like a noble beast who was not so well. As he let his neighbors know about his sickness, they started to pay him visits.

*Many creatures visited the old lion. One day, the fox came too. But he was very **cautious** about visiting the old lion. Standing at a safe distance from the cave, he inquired politely about the lion's health. The lion replied that he was very ill indeed, and asked the fox to stop for a moment. But the fox very wisely stayed outside. Thanking the lion politely for the invitation he said that he was very **pleased** to be invited but he noticed that there were many footprints leading into the cave, but none of them came out. He then asked the lion how the visitors found their way out.*

*He came close **enough** to talk to the lion, but he did not go into the cave. "Please come right in, and feel how hot my head is," said Lion again. "Oh no! Lion," said the fox. "I can see many footprints going into your cave, but none come out. You are dangerous, Mr. Lion. Good bye!" And the fox ran off as fast as he could.*

The lion understood that the fox had **detected** his trick. He got angry at the fox. He howled angrily but could not do anything as he knew he could not chase down the fox. Be wise, like the fox.

91. What was the issue lion was facing during his old age days?  
(a) He was alone because nobody wanted to go nearby him.  
(b) He was unable to arrange a meal for his own starvation.  
(c) His eyesight was getting weaker day by day and he wasn't able to see.  
(d) He was not able to walk due to weakness of old age.  
(e) None of these
92. Because the lion was old and unable to hunt, what did he plan to extinguish his hunger?  
(a) The lion was clever and he made fox his friend and ate him.  
(b) He pretended to be sick and hunted those who visited him to know his health.  
(c) He asked his best friend for help in the jungle to arrange a flesh for him.  
(d) The lion was unable to arrange food for himself and died of hunger.  
(e) None of these

93. What was the reason that the footprints of other animals went into the cave but none came out?  
(a) The lion used to wipe off the claws of other animals with its claws.  
(b) The animals that used to visit the lion started living with the lion.  
(c) Footprints of animals vanished due to rain and storm.  
(d) Lion used to make animals his food those who went to him.  
(e) None of these
94. According to the passage, what was the reason fox was standing far away from the cave?  
(a) He was alert because he was familiar with the lion's strategy.  
(b) Because he didn't like the lion's behavior towards all other animals.  
(c) There was not enough space for fox in the presence of the lion.  
(d) Because he didn't know the way to enter the cave.  
(e) None of these
95. Which of the following statements can be inferred as a moral from the given passage?  
(a) A new lesson of life for a better tomorrow.  
(b) Every war can be won by courage and intelligence.  
(c) Take warning from the misfortunes of others.  
(d) Experience is better than a lesson from other.  
(e) None of these
96. Which of the following given words is similar in meaning to '**wits**' as used in the passage?  
(a) beauty (b) energy (c) glory  
(d) weapon (e) cleverness
97. Which of the following given words is similar in meaning to '**cautious**' as used in the passage?  
(a) attentive (b) bold (c) exclude  
(d) freedom (e) race
98. Which of the following given words is opposite in meaning to '**pleased**' as used in the passage?  
(a) confuse (b) strong (c) required  
(d) sorrow (e) wound
99. Which of the following given words is similar in meaning to '**detected**' as used in the passage?  
(a) search (b) relax (c) snore  
(d) recognize (e) ignore
100. Which of the following given words is opposite in meaning to '**enough**' as used in the passage?  
(a) free (b) costly (c) abundant  
(d) heap (e) insufficient

**Directions (101-105):** Read each sentence to find out whether there is any grammatical or idiomatic error in it. The error, if any, will be in one part of the sentence. The number of that part is the answer. If there is no error the answer is (e). (Ignore errors of punctuation, if any.)

**101.** If I would have been you, (A)/ I would have (B)/ bought a (C)/ house in 2012. (D)  
(a) A (b) B (c) C  
(d) D (e) No error

**102.** Not only Emily did start playing (A)/ the piano before she could speak, (B)/ but her mother also taught her to compose (C)/ music at a very early age. (D)  
(a) A (b) B (c) C  
(d) D (e) No error

**103.** These products (A)/ are inferior than (B)/ those we (C)/ bought last year. (D)  
(a) A (b) B (c) C  
(d) D (e) No error

**104.** Either of (A)/ the plan (B)/ is equally (C)/ exorbitant and dangerous. (D)  
(a) A (b) B (c) C  
(d) D (e) No error

**105.** Smokers which (A)/ inhale are likely (B)/ to become (C)/ addicted to nicotine. (D)  
(a) A (b) B (c) C  
(d) D (e) No error

**Directions (106-110):** In the following question, sentences are given with four words in bold. The given words in the bold may or may not be correctly spelled. The incorrectly spelled word will be your answer. If the words are correct then select 'All are correct' as your answer.

**106.** For some **unaccountable** reason, my sister **decided** to tell my mother about the time we broke her **antiqueu** clock while **wrestling**.  
(a) unaccountable (b) decided  
(c) antiqueu (d) wrestling (e) All are correct

**107.** **Exclusion** of the **immigrents** from **voting** meant that only two-thirds of the **population** would be going to the polls.  
(a) exclusion (b) immigrents (c) voting  
(d) population (e) All are correct

**108.** Making demand after demand, the **server** at the **restaurant** realized the **impossibility** of making the angry **customer** happy.  
(a) server (b) restaurant (c) impossibility  
(d) customer (e) All are correct

**109.** Due to the **increase** in the family's **obisity**, Jane worried about the health of her family **including** heart attacks and **diabetes**.  
(a) increase (b) obisity (c) including  
(d) diabetes (e) All are correct

**110.** The job is being **carried** out **solely** by one **technichian**, as no one else was **available** to help him do it.  
(a) carried (b) solely (c) technichian  
(d) available (e) All are correct

**Directions (111-115):** Each question below has one blank, which is indicating that something has been omitted. Find out which option can be used to fill up the blank in the sentence to make it grammatically as well as contextually correct.

**111.** I told my friend that she was \_\_\_\_\_ with her words since she continually hurt my feelings.  
(a) careless (b) intelligent (c) avoid  
(d) deliberate (e) None of the above

**112.** Immigrants \_\_\_\_\_ through large windows, pointing at the Statue of Liberty and other landmarks they view from the ship.  
(a) imitate (b) modest (c) stare  
(d) revive (e) None of the above

**113.** As a way to \_\_\_\_\_ the teen for not doing his chores, he was no longer allowed to use his iPad.  
(a) praise (b) criticise (c) annoy  
(d) punish (e) None of the above

**114.** Screaming and crying, the \_\_\_\_\_ toddler held on to her mother's leg for dear life.  
(a) offensive (b) clingy (c) tolerant  
(d) effective (e) None of the above

**115.** \_\_\_\_\_ filled the elderly couple's home as they refused to get rid of anything, they had ever bought.  
(a) aesthetic (b) envy (c) clutter  
(d) quirk (e) None of the above

**Direction (116-120):** Given sentences are not in their exact position. Rearrange them to make a coherent paragraph and then answer the questions given below.

- (A) The activities taught us the same thing that the teacher was trying to teach via the traditional method.  
(B) I still remember how difficult it was to learn Algebra; the theorems and algorithms were a nightmare.  
(C) Student engagement refers to the degree of attention, passion, interest, and optimism that students show when they are being taught.  
(D) The visuals in the video have made students learning & technology simple and intuitive as there was "STUDENT ENGAGEMENT".

- (E) Until the day our teacher brought a projector in the class and made education learning a fun activity to grasp difficult concepts.  
(F) But the only difference was attention and concentration.

- 116.** Which of the following should be the SECOND sentence after rearrangement?  
(a) C (b) A (c) B  
(d) D (e) E
- 117.** Which of the following should be the FIRST sentence after rearrangement?  
(a) B (b) D (c) A  
(d) F (e) C

- 118.** Which of the following should be the THIRD sentence after rearrangement?  
(a) A (b) D (c) F  
(d) E (e) C
- 119.** Which of the following should be the FOURTH sentence after rearrangement?  
(a) A (b) D (c) F  
(d) E (e) C
- 120.** Which of the following should be the LAST sentence after rearrangement?  
(a) B (b) D (c) A  
(d) F (e) C

## Solutions

### REASONING ABILITY

**Direction (1-5):** Only three persons bought gifts which is less expensive than the one who has Brown colored gift. U bought a gift of Red color which is more expensive than the one having Blue colored gift. The person who bought gift of Blue color has more expensive gift than the one having Brown colored gift. So we have three possible cases:

U > — > — > — > — > —  
Red Blue Brown  
case-1

U > — > — > — > — > —  
Red Blue Brown  
case-2

— > U > — > — > — > —  
Red Blue Brown  
case-3

The one having gift of yellow color has a cost of 3k. Brown colored gift is more expensive than 3k. P buy more expensive gift than the one who bought gift of yellow color. R buys a gift of 2k but not of White color. R and S does not bought the least expensive gift which means R's gift is of Orange color and S is having third lowest expensive gift. Gift of Q is more expensive than that of P and less expensive than that of V. V is not having the second highest expensive gift. So case-1 and case-2 is eliminated. So the final arrangement is:

V > U > Q > P > S(3k) > R(2k) > T  
White Red Blue Brown Yellow Orange White

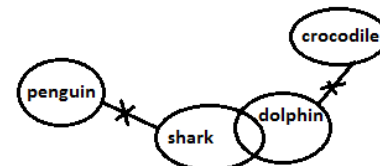
1. (c):                      2. (b):                      3. (a):  
4. (e):                      5. (a):

**Direction (6-8):**

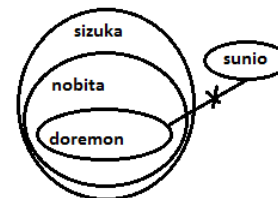
6. (c):



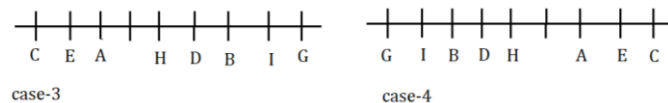
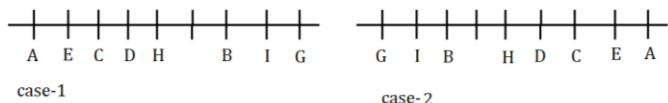
7. (d):



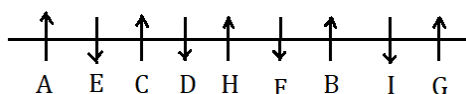
8. (b):



**Direction (9-13):** From the given statements, Two persons are sitting between A and D. No one is sitting between H and D. Three persons are sitting between H and G. Only one person sits between B and G. Not more than five persons sit between B and A. Four persons sit between E and B. E is an immediate neighbor of A and C. Two persons are sitting between H and I. So we have four possible cases:



All the persons in team T1 are facing in the north direction. Both A and G are in team T1 means both A and G faces north. Only one person sits between D and F. F sits towards the right side of A but not an immediate neighbor of A. So case-2, case-3 and case-4 gets eliminated. No two persons of the same team are sitting together. So the final arrangement is:



9. (b):                      10. (a):                      11. (e):  
12. (d):                      13. (c):

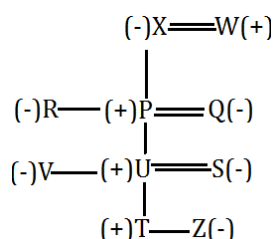
**Directions (14-18):** Logic: In the given machine arrangement two numbers are arranged in each step from both the ends. In first step- 1 is subtracted from the highest odd number and arranged from the left end and 1 is added to highest even number then arranged from the right end from left to right. In step II-1 is again subtracted from the second highest odd number and arranged from the left end and 1 is added to the second highest even number then arranged from the right end from left to right and so on... In last step the square of the difference of the digits with in the number is taken.

**Input: 94 49 85 40 33 66 56 61 73 84**  
Step I: 84 49 40 33 66 56 61 73 84 95  
Step II: 84 72 49 40 33 66 56 61 95 85  
Step III: 84 72 60 49 40 33 56 95 85 67  
Step IV: 84 72 60 48 40 33 95 85 67 57  
Step V: 84 72 60 48 32 95 85 67 57 41  
Step VI: 16 25 36 16 01 16 09 01 04 09

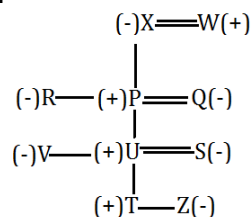
14. (d):                      15. (b):                      16. (e):  
17. (a):                      18. (a):

**Directions (19-21):**

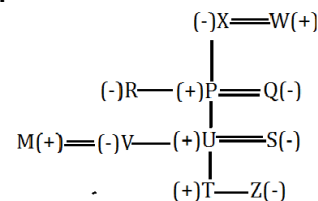
19. (c):



20. (a):



21. (d):



22. (b): The word is 'N O B E L'

**Direction (23-27):**

From the given conditions;

The one who likes Pink color lives on an even numbered floor. The one who belongs to Punjab lives just below the one who likes Pink color. R lives on sixth floor. The one who lives on second floor belongs from Delhi. P lives on the topmost floor. U lives on fourth floor. Here there are three possible cases i.e. case1, case2 and case3.

| Case1  |         |        |        |
|--------|---------|--------|--------|
| Floors | Persons | Colors | Places |
| 7      | P       |        |        |
| 6      | R       |        |        |
| 5      |         |        |        |
| 4      | U       |        |        |
| 3      |         |        |        |
| 2      |         | Pink   | Delhi  |
| 1      |         |        | Punjab |

| Case2  |         |        |        |
|--------|---------|--------|--------|
| Floors | Persons | Colors | Places |
| 7      | P       |        |        |
| 6      | R       |        |        |
| 5      |         |        |        |
| 4      | U       | Pink   |        |
| 3      |         |        | Punjab |
| 2      |         |        | Delhi  |
| 1      |         |        |        |

| Case3  |         |        |        |
|--------|---------|--------|--------|
| Floors | Persons | Colors | Places |
| 7      | P       |        |        |
| 6      | R       | Pink   |        |
| 5      |         |        | Punjab |
| 4      | U       |        |        |
| 3      |         |        |        |
| 2      |         |        | Delhi  |
| 1      |         |        |        |

Two persons live between R and the one who likes Grey color. As many persons live below the one who likes grey color as lives above the one who belongs to Punjab. V lives immediately below S and likes Black color and lives on an odd numbered floor. The one who belongs to Delhi lives just below the one who likes Blue color and just above the one who likes Red Color. The one who belongs to Delhi does not like Grey color which means the one who likes grey color belongs to Punjab.

| Case1  |         |        |        |
|--------|---------|--------|--------|
| Floors | Persons | Colors | Places |
| 7      | P       | Blue   |        |
| 6      | R       |        | Delhi  |
| 5      |         | Red    | Punjab |
| 4      | U       |        |        |
| 3      |         | Grey   | Punjab |
| 2      | S       | Pink   | Delhi  |
| 1      | V       | Black  | Punjab |

| Case2  |         |        |        |
|--------|---------|--------|--------|
| Floors | Persons | Colors | Places |
| 7      | P       | Blue   |        |
| 6      | R       |        | Delhi  |
| 5      |         | Red    | Punjab |
| 4      | U       | Pink   |        |
| 3      |         | Grey   | Punjab |
| 2      | S       |        | Delhi  |
| 1      | V       | Black  |        |

| Case3  |         |        |        |
|--------|---------|--------|--------|
| Floors | Persons | Colors | Places |
| 7      | P       | Blue   |        |
| 6      | R       | Pink   | Delhi  |
| 5      |         | Red    | Punjab |
| 4      | U       |        |        |
| 3      |         | Grey   | Punjab |
| 2      | S       |        | Delhi  |
| 1      | V       | Black  |        |

The one who likes Yellow color does not belong to Delhi. Here case 2 gets eliminated. R does not like Orange color. Here case 1 gets eliminated. Q lives above T. So the final arrangement is given below;

| Floors | Persons | Colors | Places |
|--------|---------|--------|--------|
| 7      | P       | Blue   | Delhi  |
| 6      | R       | Pink   | Delhi  |
| 5      | Q       | Red    | Punjab |
| 4      | U       | Yellow | Punjab |
| 3      | T       | Grey   | Punjab |
| 2      | S       | Orange | Delhi  |
| 1      | V       | Black  | Delhi  |

23. (c):                      24. (c):                      25. (e):  
26. (c):                      27. (c):

### Directions (28-32):

It is given that the one who like purple was born on September thus from here we have two possible cases i.e. case 1 and case 2. Only two persons were born between the one who like purple and the one who like Red .One who like red is born before the one who like purple. No one was born after B. The one who like Red and the one yellow were not born on same month. No one was born between the one who like Red and the one who like Yellow . J was born on 5<sup>th</sup> of August. Two persons were born between J and C. C was born before J. The one who like blue and the one who like Yellow were born on the same month.

|           |       | Case-1 |        | Case-2 |        |
|-----------|-------|--------|--------|--------|--------|
| Months    | Dates |        |        |        |        |
| JUNE      | 5     |        |        |        |        |
|           | 10    | C      |        | C      |        |
| JULY      | 5     |        |        |        | Blue   |
|           | 10    |        | Red    |        | Yellow |
| AUGUST    | 5     | J      | Yellow | J      | Red    |
|           | 10    |        | Blue   |        |        |
| SEPTEMBER | 5     |        | Purple |        |        |
|           | 10    |        |        |        | Purple |
| OCTOBER   | 5     |        |        |        |        |
|           | 10    |        |        |        |        |
| NOVEMBER  | 5     |        |        |        |        |
|           | 10    | B      |        | B      |        |

The number of people born between B and J is same as number of people born between A and I. I was born before October but after A The one who like Grey and the one who like Brown were born on the same month but not on a month which have even number of days. Number of people born before the one who likes white is same as after the one who like Cyan .The one who like Cyan was not born on June . A does not like White colour. L was born on 10<sup>th</sup> of August does not like White and Cyan colour. G and F were born on the same month but after July. Two persons were born between H and K. K was not born on an even number date. E does not like cyan colour. At least three persons were born after the one who like Grey colour.

|           |       | CASE 1         |        | CASE 2         |        |
|-----------|-------|----------------|--------|----------------|--------|
| Months    | Dates | PERSONS COLOUR |        | PERSONS COLOUR |        |
| JUNE      | 5     | A              |        | A              |        |
|           | 10    | C              | White  | C              | White  |
| JULY      | 5     | E              |        | E              | Blue   |
|           | 10    | H              | Red    | H              | Yellow |
| AUGUST    | 5     | J              | Yellow | J              | Red    |
|           | 10    | L              | Blue   | L              |        |
| SEPTEMBER | 5     | K              | purple | K              |        |
|           | 10    | I              |        | I              | Purple |
| OCTOBER   | 5     | G/F            | Grey   | G/F            | Grey   |
|           | 10    | F/G            | Brown  | F/G            | Brown  |
| NOVEMBER  | 5     | D              | Cyan   | D              | Cyan   |
|           | 10    | B              |        | B              |        |

No one was born between the one who like Pink colour and Violet colour. Thus case 1 get eliminated and we have case 2. K does not like Pink colour. The one who like Black colour was born before the one who like Orange colour. F does not like Grey colour. So the final arrangement is:

| Months    | Dates | PERSONS | COLOUR |
|-----------|-------|---------|--------|
| JUNE      | 5     | A       | Black  |
|           | 10    | C       | White  |
| JULY      | 5     | E       | Blue   |
|           | 10    | H       | Yellow |
| AUGUST    | 5     | J       | Red    |
|           | 10    | L       | Pink   |
| SEPTEMBER | 5     | K       | Violet |
|           | 10    | I       | Purple |
| OCTOBER   | 5     | G       | Grey   |
|           | 10    | F       | Brown  |
| NOVEMBER  | 5     | D       | Cyan   |
|           | 10    | B       | Orange |

28. (a):

29. (a):

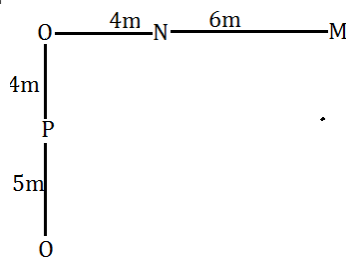
30. (b):

31. (b):

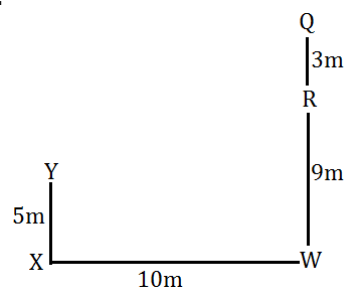
32. (a):

Directions (33-35):

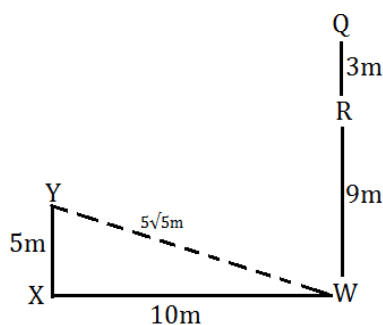
33. (b):



34. (d):



35. (e):



36. (b):

Directions (37-38):

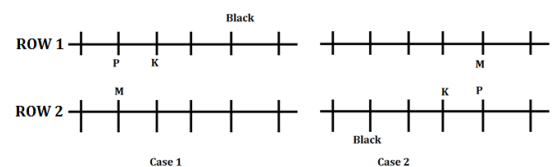
37. (d): We have to identify possible reason regarding context of the passage and reason which is mentioned in (I) and (III) is nowhere discuss in above passage. So Only II will be the possible reason of pilferage of money from Indian Banks.

38. (c): As NPCI is investigating into the matter and trying to reveal preliminary findings and it is also mentioned that officials takes almost six months to acknowledge the incidents but information of Ministry of defense is nowhere mentioned in the above passage.

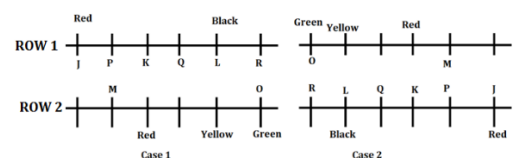
Direction (39-43):

From the given conditions;

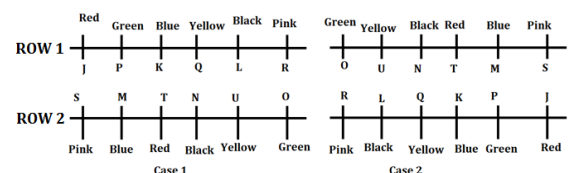
M sits third to the left of the one who faces the one who likes Black color. As many persons sits to the left of M as sits to the left of the one who like Black color. K faces the one who sits to the immediate right of M. P sits to the immediate right of K. Here there are two cases possible i.e. case 1 and case2.



As many persons sits to the right of P as sits to the right of the one who likes Yellow color. P does not like yellow color. R sits at one of the end of the row and to the left of P. Three persons sit between M and O. K faces the one who likes Red color. O likes Green color. Q sits to the left of J and does not like Black color but sit in the same row in which L is sitting. L likes Black color. J likes Red color. L does not sit next to the one who likes Red color.



S likes the same color as R likes. S does not like Blue color. R does not like Yellow color. S sits to the left of the one who likes Red color. The one who likes Red color sits to the immediate left of the one who likes Black color. U does not like Black and Red color. P does not like Yellow color. The one who likes Blue color faces T. Q does not likes Blue color.



N does not sit in row 1. Here case 2 gets eliminated. So the final arrangement is given below;

|       |      |       |      |        |        |       |
|-------|------|-------|------|--------|--------|-------|
|       | Red  | Green | Blue | Yellow | Black  | Pink  |
| ROW 1 | J    | P     | K    | Q      | L      | R     |
|       | S    | M     | T    | N      | U      | O     |
| ROW 2 |      |       |      |        |        |       |
|       | Pink | Blue  | Red  | Black  | Yellow | Green |

39. (c):                      40. (d):                      41. (e):

42. (e):                      43. (c):

**Directions (44-45):**

**44. (a):** The question was put to people who were coming out of the terminal about the services aboard the flight. If it was shown that a majority of people coming out of the terminal were not passengers, Then the conclusion would really be jeopardized. (a) does just that.

**45. (e):** The paragraph is really an argument for the position that government leaders should act more quickly to address problems. So, the passage is committed to the idea that public policy is under the control of the government. It just has not been effectively used in the past.so (e) cannot be the valid argument.

**46. (a):** Only I is effective course of action and not using e-commerce site is not a solution and hanging the culprit is a harsh course of action.

Direction (47-51):

From the given conditions;

Only two persons are senior than N. The one who is getting a salary of 38k is senior to N.Clerk is getting a salary of 30k. Here there are two possible cases i.e. case1 and case2.

| Case 1                |         |        |                    |
|-----------------------|---------|--------|--------------------|
| Posts                 | Persons | Salary | Experience (Years) |
| Clerk(CL)             |         | 30K    |                    |
| Assistant officer(AO) |         |        |                    |
| Officer(OF)           |         |        |                    |
| Assistant Manager(AM) | N       |        |                    |
| Manager(MG)           |         | 38K    |                    |
| General Manager(GM)   |         |        |                    |

| Case 2                |         |        |                    |
|-----------------------|---------|--------|--------------------|
| Posts                 | Persons | Salary | Experience (Years) |
| Clerk(CL)             |         | 30K    |                    |
| Assistant officer(AO) |         |        |                    |
| Officer(OF)           |         |        |                    |
| Assistant Manager(AM) | N       |        |                    |
| Manager(MG)           |         |        |                    |
| General Manager(GM)   |         | 38K    |                    |

Three posts are there between J and K. J is junior than K. K is having 11 years of experience.M is an immediate senior of O.The one who have 11 years of experience is having salary more than 35k. As many persons are senior than the one who have salary 25k as many persons are junior than the one who has experience of 2 years.N is not having experience of 2 years.

| Case 1                |         |        |                    |
|-----------------------|---------|--------|--------------------|
| Posts                 | Persons | Salary | Experience (Years) |
| Clerk(CL)             | J       | 30K    |                    |
| Assistant officer(AO) | O       |        |                    |
| Officer(OF)           | M       |        | 2                  |
| Assistant Manager(AM) | N       | 25K    |                    |
| Manager(MG)           | K       | 38K    | 11                 |
| General Manager(GM)   |         |        |                    |

| Case 2                |         |        |                    |
|-----------------------|---------|--------|--------------------|
| Posts                 | Persons | Salary | Experience (Years) |
| Clerk(CL)             | J       | 30K    |                    |
| Assistant officer(AO) | O       |        |                    |
| Officer(OF)           | M       |        | 2                  |
| Assistant Manager(AM) | N       | 25K    |                    |
| Manager(MG)           | K       |        | 11                 |
| General Manager(GM)   |         | 38K    |                    |

The one having experience of 2 years have salary less than 25k.The experience of O and M are in consecutive years with M having less number of experience. The experience of J is the difference between the salary of J and N.

| Case 1                |         |        |                    |
|-----------------------|---------|--------|--------------------|
| Posts                 | Persons | Salary | Experience (Years) |
| Clerk(CL)             | J       | 30K    | 5                  |
| Assistant officer(AO) | O       |        | 3                  |
| Officer(OF)           | M       | 20K    | 2                  |
| Assistant Manager(AM) | N       | 25K    |                    |
| Manager(MG)           | K       | 38K    | 11                 |
| General Manager(GM)   | L       |        |                    |

| Case 2                |         |        |                    |
|-----------------------|---------|--------|--------------------|
| Posts                 | Persons | Salary | Experience (Years) |
| Clerk(CL)             | J       | 30K    | 5                  |
| Assistant officer(AO) | O       |        | 3                  |
| Officer(OF)           | M       | 20K    | 2                  |
| Assistant Manager(AM) | N       | 25K    |                    |
| Manager(MG)           | K       |        | 11                 |
| General Manager(GM)   | L       | 38K    |                    |

The sum of salary of O and M is the salary of L which means salary of O is 40K and salary of L is 60K. Here case 2 gets eliminated. The one who have experience of 13 years gets salary more than the one who have salary of 30k. N has 7 years of experience. So the final arrangement is given below;

| Posts                 | Persons | Salary | Experience (Years) |
|-----------------------|---------|--------|--------------------|
| Clerk(CL)             | J       | 30k    | 5                  |
| Assistant officer(AO) | O       | 40k    | 3                  |
| Officer(OF)           | M       | 20k    | 2                  |
| Assistant Manager(AM) | N       | 25k    | 7                  |
| Manager(MG)           | K       | 38k    | 11                 |
| General Manager(GM)   | L       | 60k    | 13                 |

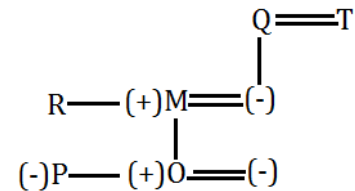
47. (c):                      48. (b):                      49. (e):

50. (a):                      51. (d):

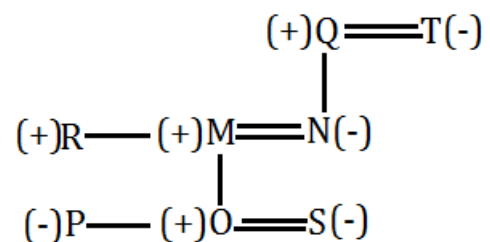
#### Directions (52-56):

First, we have to find out the blood relation.

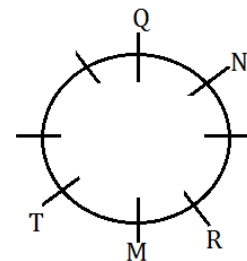
From the given statements, O is the only son of M. P is only sibling of O which means P is sister of O and sits fourth to the left of M's daughter in law which means O is married. M is sibling of R and he is married to Q's only child. T is married to Q.



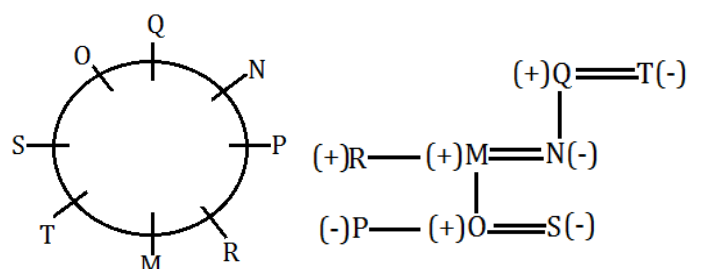
N is sitting third to the right of P's father and she has only two children which means N is wife of M. Q is not mother of N which means Q is father of N and T is mother of N. T sits at the immediate left of S's father in law which means S is also the member of the family so, S is wife of O. P's uncle is sitting third to the right of N's daughter-in-law which means R is uncle of P. So, the final arrangement is:



Now, we find the sitting arrangement. From the given statements, R is sitting second to the right of N's mother which means R is sitting second to the right of T. T sits at the immediate left of S's father in law which means T sits at the immediate left of M. N is sitting third to the right of P's father and she has only two children which means N is sitting third to the right of M. Q sits opposite to R's brother which means Q sits opposite to M.



P's uncle is sitting third to the right of N's daughter-in-law which means R is sitting third to the right of S. P is only sibling of O and sits fourth to the left of M's daughter in law which means P sits fourth to the left of S. The only member left is O so, O sits opposite to R. So, the final arrangement is:



52. (a):                      53. (c):                      54. (e):  
 55. (b):                      56. (e):  
 57. (e): The conclusion of the argument is that landmark preservation laws deprive landlords of their right to use their own property. (e) comes to grip with this assumption by nothing that a landmark building may not be purely private property and some part of building may belong to the community at large. (a) is not valid as it represents only a partial attack on argument. (b) strengthens the claims that landmark preservation laws represent an unwanted interference with the rights of the landlord.

Directions (58-59):

58. (c): The argument states that people who follow the appropriate strategies for counteracting their

genetic susceptibilities to disease will never get sick. How can it be that they would never get sick? The argument requires an assumption about the cause of all sickness that every known disease of humans must correspond to some genetic susceptibilities. So (c) is the correct option.

59. (d): The author states the following connection: videos take money away from movies. What choices (d) asserts, in effect, is that the money spent on other forms of entertainment has dropped. So, (d) statement undermines the given passage.

60. (a):

S T R E N G T H E N  
 [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ]

## QUANTITATIVE APTITUDE

61. (a): **Quantity I** - Total simple interest =  $1800 \times \frac{10}{100} \times 2 = 360$   
 Equivalent compound interest at the rate of 20% for two years =  $20 + 20 + \frac{20 \times 20}{100} = 44\%$   
 So, total compound interest after two years =  $(1800 - P) \times \frac{44}{100} = 792 - 0.44P$   
 ATQ -  
 $792 - 0.44P - 360 = 0$   
 $.44P = 432$   
 $P = 800$   
**Quantity II** - Let the selling price be Rs 100x  
 Then Marked price = Rs 125x  
 Cost price =  $100x \div 1.25 = \text{Rs } 80x$   
 ATQ  
 $45x - 20x = 200$   
 $x = 8$   
 Cost price = Rs 640  
**So, Quantity I > Quantity II**
62. (b): **Quantity I** - Distance covered by man in 3 min  
 $= 4 \times \frac{5}{18} \times 3 \times 60 = 200\text{m}$   
 Total distance travelled by train =  $200 + 800 + 200 = 1200\text{ meter}$   
 Speed of train (s)  
 $= \frac{1.2}{\frac{3}{60}} = 1.2 \times 20 = 24\text{ km/hr}$   
**Quantity II** - Speed of man = 2 m/sec  
 Speed of train =  $72 \times \frac{5}{18} = 20\text{ m/sec}$   
 $\therefore$  Length of train =  $(20 - 2) \times 10 = 180\text{ m}$   
 $\therefore$  Length of tunnel =  $54 \times 20 - 180 = 900\text{ m}$   
**So, Quantity I < Quantity II**

63. (b): **Quantity I** - ATQ,

$$\frac{x_{C_1} \times 8_{C_1}}{x+15_{C_2}} = \frac{4}{15}$$

$$\frac{x \times 8}{(x+15)(x+14)} = \frac{4}{15}$$

$$\Rightarrow \frac{16x}{x^2 + 29x + 210} = \frac{4}{15}$$

$$\Rightarrow x^2 + 29x + 210 = 60x$$

$$\Rightarrow x^2 - 31x + 210 = 0$$

$$x^2 - 21x - 10x + 210 = 0$$

$$x(x-21) - 10(x-21) = 0$$

$$(x-21)(x-10) = 0$$

$$x = 10, 21$$

Required answer = 10

**Quantity II** - Let the capacity of cistern is 60l.

Given

$\frac{3}{5}$ th of cistern capacity i.e. 36l of the cistern is already full of water.

$$\text{Filling rate} = \frac{60}{15} = 4 \frac{l}{hr}$$

$$\text{Emptying rate} = \frac{60}{12} = 5 \frac{l}{hr}$$

$$\text{So Effective emptying rate} = \frac{36}{5-4} = 1 \frac{l}{hr}$$

So, the cistern will get empty in 36 hr

**So, Quantity I < Quantity II**

64. (b): Let approved male applications and approved female applications be 11x and 7x respectively  
 Given,  $11x - 7x = 4x = 200$   
 So,  $x = 50$   
 And,  $18x = 900$ .  
 So,  $P = 900 \times \frac{100}{60} = 1500$   
 Required percentage =  $\frac{1500-800}{800} \times 100 = 87.5\%$

**65. (a):** Let approved male applications and approved female applications be  $43x$  and  $17x$  respectively  
Given,  $43x - 17x = 234$

$$x = 9$$

$$60x = 540$$

$$S = 540 \times \frac{100}{45} = 1200$$

$$\text{Required sum} = 1200 + 1400 + 1600 = 4200$$

**66. (c):** Let approved male applications and approved female applications be  $11x$  and  $7x$  respectively  
Given,  $11x - 7x = 4x = 100$

$$\text{So, } x = 25$$

$$\text{And, } 18x = 450.$$

$$\text{So, } P = 450 \times \frac{100}{60} = 750$$

$$\text{Cancel application in medical department} = 1600 \times \frac{35}{100} = 560$$

$$\text{Required difference} = 750 - 560 = 190$$

**67. (d):** Total approved application in vocational department =  $800 \times \frac{40}{100} = 320$

Given, approved male applications is 40 more than approved female application

Let approved female application be ' $x$ '

So, approved male application =  $x + 40$

$$x + x + 40 = 320$$

$$x = 140$$

$$\text{And } (x + 40) = 180$$

$$\text{Required ratio} = 140 : 180 = 7 : 9$$

**68. (a):** Let approved male applications and approved female applications be  $29x$  and  $21x$  respectively  
 $29x - 21x = 112$

$$x = 14$$

$$50x = 700$$

$$Q = 1400 - 700 = 700$$

$$\text{Required sum} = 700 + 1600 = 2300$$

**69. (d): From I -** Cone height = 12 cm

**From II -**

Let radius of larger sphere be ' $3x$ '

So, radius of smaller sphere be ' $2x$ '

**From III -**

$$\text{Radius of cone} = 3x \times \frac{5}{6} = \frac{15x}{6}$$

And, difference between volume of both spheres is  $\frac{13336}{21} \text{ cm}^3$

**From II & III -**

$$\frac{4}{3} \pi (27x^3 - 8x^3) = \frac{13336}{21}$$

$$x = 2 \text{ cm}$$

using I, II, III lateral surface area of cone can be determined

So, all given statements together are required to answer

**70. (d):** Given,  $(40\% = \frac{2}{5} \text{th})$  of mixture of milk and water is replaced by orange juice and the ratio of milk, water and orange juice in resulting mixture becomes  $4 : 5 : 6$  respectively.

So, ratio of milk and water in initial mixture will be same =  $4 : 5$

$$\text{Milk} = \frac{4}{5} \times \text{water}$$

$$\text{Water} - \text{Milk} = 20$$

$$\text{Water} - 0.8\text{Water} = 20$$

$$\text{Water} = 100 \text{ liters}$$

$$\text{And milk} = 80 \text{ liters}$$

$$\text{Total quantity of mixture} = 100 + 80 = 180 \text{ liters}$$

$$\text{New quantity of milk} = 80 \times \frac{60}{100} = 48 \text{ liters}$$

$$\text{New quantity of water} = 100 \times \frac{60}{100} = 60 \text{ liters}$$

$$\text{Quantity of orange juice in resulting mixture} = 180 - (48 + 60) = 72 \text{ liters}$$

Let ' $x$ '% of mixture taken from resulting mixture so, quantity of milk and orange juice becomes 66 liters

$$(48 + 72) \times \frac{(100-x)}{100} = 66$$

$$120 \times \frac{(100-x)}{100} = 66$$

$$600 - 6x = 330$$

$$6x = 270$$

$$x = 45\%$$

**71. (b):** Let present age of A and B be  $6x$  years and  $8x$  years respectively

And present age of C =  $5x$  years

ATQ

$$8x - 5x - (8x - 6x) = 9$$

$$x = 9$$

$$\text{Required average} = 45 \text{ years}$$

**72. (e):** Total balls = 50

Let red balls in the bag be  $x$

Then number of yellow balls in the bag =  $(30 - x)$

$$\text{Then, } \frac{20}{50} \times \frac{x}{49} \times \frac{30-x}{48} = \frac{4}{105}$$

$$\Rightarrow x = 16 \text{ or } 14$$

$$\therefore \text{No. of yellow balls} = 30 - 16 = 14$$

$$\text{Or, } 30 - 14 = 16$$

**73. (b):** Let the sum be Rs  $P$  and rate be  $R\%$  per annum.

ATQ,

$$16P = P \left( 1 + \frac{R}{200} \right)^4$$

$$\Rightarrow R = 200\%$$

$$\text{and, } 27P = P \left( 1 + \frac{R}{100} \right)^x$$

$$\Rightarrow 27 = (3)^x \Rightarrow x = 3$$

Equivalent rate of interest at  $10\%$  per annum in 3 years =  $33.1\%$

$$\text{Required difference} = \frac{(33.1-30)}{100} \times 15000 = \text{Rs } 465$$

**74. (e):** Profit sharing ratio of P, Q & R

$$= ((40000 \times (x + 2)) : (75000 \times 12) : (50000 \times (12 - x - 2)))$$

$$= (4x + 8) : 90 : (50 - 5x)$$

ATQ,

$$\frac{90}{148-x} = \frac{54000}{87000}$$

$$x = 3$$

So, value of  $(x + 7) = 10$

**75. (e):** Let total work be 90 units (LCM of 18 and 30)

Then efficiency of A and B together =  $\frac{90}{18} = 5 \text{ units/day}$

Efficiency of A and C together =  $\frac{90}{30} = 3 \text{ units/day}$

Let efficiency of C be  $x \text{ unit/day}$

Then efficiency of B =  $3x \times \frac{300}{100} = 3x \text{ units/day}$

ATQ

$$5 - 3x = 3 - x$$

$$x = 1$$

Required days =  $\frac{90}{6} = 15 \text{ days}$

**76. (b):** Let the selling price of article for Vikash be Rs.100x

Let selling price of article for Vijay be Rs.100y

Cost price of article for Vikash =  $100x \times 0.8 = \text{Rs } 80x$

Cost price of article for Vijay =  $100y \times 0.8 = \text{Rs } 80y$

ATQ

$$80x + 80y = 1400$$

$$x + y = 17.5 \dots \dots \dots (i)$$

$$\text{Also, } 20y - 20x = 50$$

$$y - x = 2.5 \dots \dots \dots (ii)$$

from (i) and (ii),

$$y = 10 \text{ and } x = 7.5$$

$$\text{Required average} = \frac{100 \times 7.5 + 100 \times 10}{2} = \text{Rs. } 875$$

**77. (e):** from statement I,

Let initial quantity of mixture be  $100x \text{ lit}$

Ratio of milk to water =  $65 : 35 = 13 : 7$

From statement II,

$$35x + 30 = 65x$$

$$x = 1$$

initial quantity of the milk =  $65 \text{ lit}$

and initial quantity of the water =  $35 \text{ lit}$

So, both the statements together are necessary to answer the questions.

**78. (e):** From statement I & II,

Let no. of red & blue balls be  $5x$  &  $4x$  respectively

No. of white balls =  $5x + 1$

$$5x_{C_2} = 10$$

$$5x(5x - 1) = 20$$

$$5x^2 - x - 4 = 0$$

$x = 1$  (neglecting negative value of  $x$ )

total balls =  $5x + 4x + 5x + 1 = 15$

clearly, both statements together are necessary to answer.

**79. (d):** from statement I,

1 hour work of pipe C =  $\frac{1}{3} - \frac{1}{4} = \frac{1}{12}$  units

Required time = 12 hours

From statement II, since no value of time taken is given

Clearly, only statement I alone is sufficient to answer

**80. (a):** from statement I, diagonal length = diameter of circle

From statement II, circle circumscribing the square means diameter of circle is diagonal of square

Let radius be  $r \text{ m}$

$$\text{ATQ, } \pi r^2 = 154$$

$$r = 7 \text{ m}$$

diagonal of square =  $14 \text{ m}$

Side of square =  $7\sqrt{2} \text{ m}$

area of square =  $98 \text{ sq.m.}$

clearly, only statement II alone is sufficient to answer

**(81 - 85)**

Total brownies sold by shop = 400

Total cakes sold by shop =  $400 \times 1.4 = 560$

Total brownies sold by shop on Monday =  $400 \times \frac{20}{100} = 80$

Total brownies sold by shop on Wednesday =  $400 \times \frac{1}{4} = 100$

Total brownies sold by shop on Tuesday =  $400 \times \frac{25}{100} = 100$

Total brownies sold by shop on Friday =  $400 - (80 + 100 + 100) = 120$

Total cakes sold by shop on Wednesday =  $240 - 100 = 140$

Total number of cakes sold by shop on Tuesday =  $560 \times 0.45 = 252$

Total cakes sold by shop on Friday =  $168 \times \frac{3}{7} = 72$

Total cakes sold by shop on Monday =  $168 - 72 = 96$

|              | Monday | Tuesday | Wednesday | Friday | Total |
|--------------|--------|---------|-----------|--------|-------|
| Brownies     | 80     | 100     | 100       | 120    | 400   |
| Cakes        | 96     | 252     | 140       | 72     | 560   |
| <b>Total</b> | 176    | 352     | 240       | 192    |       |

**81. (c):** Required ratio =  $\frac{176}{192} = 11 : 12$

**82. (e):** Required percentage =  $\frac{120}{80} \times 100 = 150\%$

83. (b): Required percentage =  $\frac{192 - 180}{192} \times 100$   
 = 6.25%

84. (d): Required average =  $\frac{(352 + 240)}{2} = 296$

85. (a): Required difference =  $(352 - 176) = 176$   
 Total brownies and cakes sold by shop on all four days =  $(400 + 560) = 960$   
 Required percentage =  $\frac{176}{960} \times 100$   
 =  $18\frac{1}{3}\%$

86. (e): I.  $(x - 6)^2 = x$   
 $x^2 + 36 - 12x = x$   
 $\Rightarrow x^2 - 13x + 36 = 0$   
 $x^2 - 9x - 4x + 36 = 0$   
 $x(x - 9) - 4(x - 9) = 0$   
 $(x - 9)(x - 4) = 0$   
 $x = 4, 9$

II.  $(y - 5)^2 = 3y - 17$   
 $y^2 + 25 - 10y = 3y - 17$   
 $\Rightarrow y^2 - 13y + 42 = 0$   
 $y^2 - 7y - 6y + 42 = 0$   
 $y(y - 7) - 6(y - 7) = 0$   
 $(y - 7)(y - 6) = 0$   
 $y = 6, 7$   
 So, no relation.

87. (a): I.  $9 + \frac{5}{x^2} = \frac{13.5}{x}$   
 $\Rightarrow \frac{9x^2 + 5}{x^2} = \frac{27}{2x}$   
 $\Rightarrow 18x^2 + 10 = 27x$   
 $18x^2 - 27x + 10 = 0$   
 $18x^2 - 12x - 15x + 10 = 0$   
 $6x(3x - 2) - 5(3x - 2) = 0$   
 $(3x - 2)(6x - 5) = 0$   
 $x = \frac{2}{3}, \frac{5}{6}$

II.  $5y + \frac{12.25}{y} = 15.75$   
 $\Rightarrow \frac{5y^2 + 12.25}{y} = 15.75$   
 $\Rightarrow 20y^2 + 49 = 63y$   
 $20y^2 - 63y + 49 = 0$   
 $20y^2 - 35y - 28y + 49 = 0$   
 $5y(4y - 7) - 7(4y - 7) = 0$   
 $(4y - 7)(5y - 7) = 0$   
 $y = \frac{7}{4}, \frac{7}{5}$   
 So,  $x < y$

88. (e): I.  $x^2 - 9x + 20 = 0$   
 $x^2 - 5x - 4x + 20 = 0$   
 $x(x - 5) - 4(x - 5) = 0$   
 $x = 5 \& 4$

II. Time taken by B alone to complete the work  
 =  $12 \times \frac{100}{150} = 8 \text{ days}$   
 Total work = 24 units  
 Required time =  $\frac{24}{2+3} = 4.8 \text{ days}$   
 So, no relation

89. (c): Given, If  $x^2 - 10x + k = 0$   
 Then the sum of these two roots = 10  
 $m + n = 10$   
 and  $m - n = 2$   
 $m = 6$   
 $n = 4$

90. (a): Given, If  $x^2 + 12x + k = 0$   
 So, sum of two roots m and n will be - 12  
 So,  $m + n = -12$   
 $m - n = 2$   
 So,  $m = -5$   
 $n = -7$   
 Only I follow

## ENGLISH LANGUAGE

91. (b): Option (b) is the correct option as per the information given in the first line of the first paragraph which mentions, "An old lion, who was too weak to hunt or fight for his food, decided that he must get it by his wits."

92. (b): Refer to the third paragraph which mentions, "Oh no! Lion," said the fox. "I can see many footprints going into your cave, but none come out. You are dangerous, Mr. Lion. Good bye!" And the fox ran off as fast as he could."

93. (d): Throughout the passage, we can infer that 'lion used to make animals his food those who went to

him'. Therefore, there were footprints that went into the cave but didn't come out.

94. (a): Refer to the second paragraph which mentions, "One day, the fox came too. But he was very cautious about visiting the old lion. Standing at a safe distance from the cave, he inquired politely about the lion's health."

95. (c): The correct answer is option (c). In the story, all animals were misfortunate and eaten by the lion while the fox was clever and used other's misfortune as his warning. Hence, the correct answer is option (c).

**96. (e):** The word 'wits' means 'the ability to use words in a clever and amusing way' and 'cleverness' is synonym.

Glory means fame or honour.

Beauty means a combination of qualities, such as shape, colour, or form, that pleases the aesthetic senses, especially the sight.

Energy means the strength and vitality required for sustained physical or mental activity.

Weapon means a thing designed or used for inflicting bodily harm or physical damage.

**97. (a):** The word 'cautious' means 'taking great care to avoid possible danger or problems' and 'attentive' is synonym which means 'watching, listening to or thinking about somebody/something carefully'.

Bold means not hesitating or fearful in the face of actual or possible danger.

Exclude means deny (someone) access to a place, group, or privilege.

Freedom means the power or right to act, speak, or think as one wants.

Race means a competition between runners, horses, vehicles, etc. to see which is the fastest in covering a set course.

**98. (d):** The word 'pleased' means 'happy or satisfied about something' and 'sorrow' is antonym which means 'a feeling of great sadness'.

Wound means an injury to part of your body.

Confuse means to make (someone) bewildered or perplexed.

Strong means able to withstand force, pressure, or wear.

Required means officially compulsory, or otherwise considered essential; indispensable.

**99. (d):** The word 'detected' means 'to notice or discover something that is difficult to see' and 'recognize' is synonym which means 'to know again somebody/something'.

Snore means to breathe noisily through your nose and mouth while you are asleep.

Search means try to find something by looking or otherwise seeking carefully and thoroughly.

Relax means make or become less tense or anxious.

Ignore means refuse to take notice of or acknowledge; disregard intentionally.

**100. (e):** The word 'enough' means 'as much or as many of something as necessary' and 'insufficient' is antonym which means 'not as much as necessary'. Abundant means existing in very large quantities; more than enough.

Heap means an untidy pile of something.

Free means able to act or be done as one wishes; not under the control of another.

Costly means costing a lot; expensive.

**101. (a):** Part (A) of the given sentence contains an error. "would have been" should be replaced by "had been" as it is type 3 conditional sentence. The type 3 conditional refers to an impossible condition in the past and its probable result in the past. These sentences are truly hypothetical and unreal, because it is now too late for the condition or its result to exist. There is always some implication of regret with type 3 conditional sentences. The reality is the opposite of, or contrary to, what the sentence expresses. In type 3 conditional sentences, the time is the past and the situation is hypothetical. The correct sentence structure should be:

***If + subject + had + V3 [or Had + subject + V3], + subject + would + have + V3***

**102. (a):** There is an error in Part (A) of the sentence. To add emphasis, we can use not only at the beginning of a clause. When we do this, we invert the subject and the verb. Hence, the correct phrase should be "Not only did Emily start playing".

**103. (b):** Part (B) of the sentence is grammatically incorrect. It should be noted that the adjectives inferior, superior, senior, junior, prior etc. take the preposition 'to', not 'than'.

**104. (b):** The error is in Part (B) of the sentence. "plan" should be replaced by "plans". It should be noted that nouns after the phrases such as 'one of', 'either of', 'neither of', 'every one of' etc should be plural.

**105. (a):** The error lies in part (A) of the sentence. "which" should be replaced by "who" as 'who' is mainly used for people while 'which' is used for animals or things in general.

**106. (c):** The incorrectly spelled word is 'antiqueu'. The correct spelling is 'antique'.

**107. (b):** The incorrectly spelled word is 'immigrents'. The correct spelling is 'immigrants'.

**108. (e):** All the given highlighted words given in the sentence are correct hence option (e) is correct.

**109. (b):** The incorrectly spelled word is 'obisity'. The correct spelling is 'obesity'.

**110. (c):** The incorrectly spelled word is 'technichian'. The correct spelling is 'technician'.

**111. (a):** The correct choice for the answer is option (a): *careless*.

The appropriate fit for the blank is 'careless' since it means being reckless; negligent.

Intelligent means having or showing the ability to easily learn or understand things or to deal with new or difficult situations.

Avoid means keep away from or stop oneself from doing (something).

Deliberate means to carefully think or talk something through.

**112. (c):** The correct choice for the answer is option (c): *stare*.

The appropriate fit for the blank is 'stare' since it means to gaze at something intently.

Imitate means to copy (a person's speech or mannerisms), especially for comic effect.

Modest means having or showing a moderate or humble estimate of one's merits, importance, etc.

Revive means to restore to life or consciousness.

**113. (d):** The correct choice for the answer is option (d): *punish*.

The appropriate fit for the blank is 'punish' as it means to put a penalty or consequence in place.

Praise means to express warm approval or admiration of.

Criticise means indicate the faults of (someone or something) in a disapproving way.

Annoy means make (someone) a little angry; irritate.

**114. (b):** The correct choice for the answer is option (b): *clingy*.

The appropriate fit for the blank is 'clingy' as it means to hold fast or adhere to something, as by grasping, sticking, embracing, or entwining.

Offensive means causing someone to feel resentful, upset, or annoyed.

Tolerant means showing willingness to allow the existence of opinions or behaviour that one does not necessarily agree with.

Effective means successful in producing a desired or intended result.

**115. (c):** The correct choice for the answer is option (c): *clutter*.

The appropriate fit for the blank is 'clutter' as it means a messy collection of things lying around.

Aesthetic means relating to beauty or refined taste.

Envy means to admire and be jealous of.

Quirk means a strange habit.

**116. (e):** Sentence (E) should be the second statement of the rearranged paragraph. We can deduce this by arranging the sentences in the sequence of BEAFDC to form a coherent paragraph.

Statement (B) should be the first statement as it has introduced the subject matter of the paragraph which is about a remembrance of the author's childhood tutoring. He has described the struggle of learning algebra through conventional methods.

Sentence (E) should be the second statement in the sequence, as it has continued his memory of learning algebra. He has illustrated that his struggles were reduced soon after his teacher had introduced several innovative approaches of learning.

Sentence (A) should be the third statement. This sentence has described about the improved results of the activities introduced by his teacher. Statement (A) should follow statement (E) as it mentions about the aforesaid activities.

Sentence (F) should be the fourth statement as it provides a comparison between the traditional approaches and the modern approaches of teaching. The keyword "but" in the given sentence is used as a preposition which imparts the meaning as "except; apart from; other than".

Sentence (D) should be the fifth statement as it introduces the term "student engagement" which was the gist of the instance described in the previous sentences.

Sentence (C) stands as a concluding statement as which provides the definition of the term "student engagement" mentioned in statement (D).

**117. (a):** Sentence (B) should be the first statement of the rearranged paragraph. We can deduce this by arranging the sentences in the sequence of BEAFDC to form a coherent paragraph.

Statement (B) should be the first statement as it has introduced the subject matter of the paragraph which is about a remembrance of the author's childhood tutoring. He has described the struggle of learning algebra through conventional methods.

Sentence (E) should be the second statement in the sequence, as it has continued his memory of learning algebra. He has illustrated that his struggles were reduced soon after his teacher had

introduced several innovative approaches of learning.

Sentence (A) should be the third statement. This sentence has described about the improved results of the activities introduced by his teacher. Statement (A) should follow statement (E) as it mentions about the aforesaid activities.

Sentence (F) should be the fourth statement as it provides a comparison between the traditional approaches and the modern approaches of teaching. The keyword “but” in the given sentence is used as a preposition which imparts the meaning as “except; apart from; other than”.

Sentence (D) should be the fifth statement as it introduces the term “student engagement” which was the gist of the instance described in the previous sentences.

Sentence (C) stands as a concluding statement as which provides the definition of the term “student engagement” mentioned in statement (D).

**118. (a):** Sentence (A) should be the third statement of the rearranged paragraph. We can deduce this by arranging the sentences in the sequence of BEAFDC to form a coherent paragraph.

Statement (B) should be the first statement as it has introduced the subject matter of the paragraph which is about a remembrance of the author’s childhood tutoring. He has described the struggle of learning algebra through conventional methods.

Sentence (E) should be the second statement in the sequence, as it has continued his memory of learning algebra. He has illustrated that his struggles were reduced soon after his teacher had introduced several innovative approaches of learning.

Sentence (A) should be the third statement. This sentence has described about the improved results of the activities introduced by his teacher. Statement (A) should follow statement (E) as it mentions about the aforesaid activities.

Sentence (F) should be the fourth statement as it provides a comparison between the traditional approaches and the modern approaches of teaching. The keyword “but” in the given sentence is used as a preposition which imparts the meaning as “except; apart from; other than”.

Sentence (D) should be the fifth statement as it introduces the term “student engagement” which was the gist of the instance described in the previous sentences.

Sentence (C) stands as a concluding statement as which provides the definition of the term “student engagement” mentioned in statement (D).

**119. (c):** Sentence (F) should be the fourth statement of the rearranged paragraph. We can deduce this by arranging the sentences in the sequence of BEAFDC to form a coherent paragraph.

Statement (B) should be the first statement as it has introduced the subject matter of the paragraph which is about a remembrance of the author’s childhood tutoring. He has described the struggle of learning algebra through conventional methods.

Sentence (E) should be the second statement in the sequence, as it has continued his memory of learning algebra. He has illustrated that his struggles were reduced soon after his teacher had introduced several innovative approaches of learning.

Sentence (A) should be the third statement. This sentence has described about the improved results of the activities introduced by his teacher. Statement (A) should follow statement (E) as it mentions about the aforesaid activities.

Sentence (F) should be the fourth statement as it provides a comparison between the traditional approaches and the modern approaches of teaching. The keyword “but” in the given sentence is used as a preposition which imparts the meaning as “except; apart from; other than”.

Sentence (D) should be the fifth statement as it introduces the term “student engagement” which was the gist of the instance described in the previous sentences.

Sentence (C) stands as a concluding statement as which provides the definition of the term “student engagement” mentioned in statement (D).

**120. (e):** Sentence (C) should be the last statement of the rearranged paragraph. We can deduce this by arranging the sentences in the sequence of BEAFDC to form a coherent paragraph.

Statement (B) should be the first statement as it has introduced the subject matter of the paragraph which is about a remembrance of the

author's childhood tutoring. He has described the struggle of learning algebra through conventional methods.

Sentence (E) should be the second statement in the sequence, as it has continued his memory of learning algebra. He has illustrated that his struggles were reduced soon after his teacher had introduced several innovative approaches of learning.

Sentence (A) should be the third statement. This sentence has described about the improved results of the activities introduced by his teacher. Statement (A) should follow statement (E) as it mentions about the aforesaid activities.

Sentence (F) should be the fourth statement as it provides a comparison between the traditional approaches and the modern approaches of teaching. The keyword "but" in the given sentence is used as a preposition which imparts the meaning as "except; apart from; other than".

Sentence (D) should be the fifth statement as it introduces the term "student engagement" which was the gist of the instance described in the previous sentences.

Sentence (C) stands as a concluding statement as which provides the definition of the term "student engagement" mentioned in statement (D).



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