

19 Year-wise SBI

Clerk Prelim & Mains Previous

Solved Papers
(2023 - 2009)



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DISHA Publication Inc.

A-23 FIEE Complex, Okhla Phase II

New Delhi-110020

Tel: 49842349/ 49842350

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SBI Clerk (Junior Associates) Mains Solved Paper-2023

(Based on Memory)

Time : 160 minutes

Max. Marks : 200

Reasoning Ability & Computer Aptitude

- Six friends Deepak, Sachin, Dinesh, Dharm, Anup, Firoj are sitting around a circular table facing towards the centre. Sachin is sitting at an alternate place with respect to Deepak. Dinesh is to the immediate right of Sachin. Dharm can't sit adjacent to Deepak and Anup. Anup is to the immediate right of Deepak. Firoj is at the alternate place to the left of Anup. Who is sitting opposite of Deepak?
(a) Dinesh (b) Sachin
(c) Dharm (d) Firoj
(e) Anup
- In the following question assuming the given statements to be true, find which of the conclusion among given conclusions is/are definitely true and then give your answers accordingly.
Statements: $N \geq K < T$; $M > L \leq H$; $I \geq J \leq T$; $M = G \leq I$; $Z = F \leq H$
Conclusions:
I. $G > L$ II. $F > L$ III. $F = L$
(a) Only I is True
(b) Only I and Either II or III are True
(c) Only II and Either I or III are True
(d) Only III and Either II or I are True
(e) None is true
- In the following question assuming the given statements to be true, find which of the conclusion among given conclusions is/are definitely true and then give your answers accordingly.
Statements: $J > I \leq G$; $T \geq L \geq K$; $A = M \geq G$; $J = N > T$; $K > U \leq H$
Conclusions:
I. $M > I$ II. $L < H$ III. $I = M$
(a) Either II or III is True
(b) Either I or III is True
(c) Either I or II is True
(d) All are True
(e) None is True
- In the following question assuming the given statements to be true, find which of the conclusion among given conclusions is/are definitely true and then give your answers accordingly.
Statements: $K \leq N < R$; $U = F \leq T$; $H = I \leq U$; $R = T$; $X = B > H$
Conclusions:
I. $T > H$ II. $R \geq U$ III. $H = T$
(a) Only I is True
(b) Both I and III are True
(c) Only II and Either I or III are True
(d) Only III and Either I or II is True
(e) Only II is True

DIRECTIONS (Qs. 5-9): Read the information carefully and answer the questions given below:

There are few Buses travelling to some points. There are two junctions, 1 and 2 where 1 is west of 2. Point K is north, J is west and I is south of Junction 1. Point C is north, A is east and B is south of Junction 2.

Note: To reach one point to another, one must pass through at least one junction. In an expression movement is from left to right. Also distance between each point is unknown.

T\$S: Bus T is at a certain point and moves left from the junction to reach point S.

T@S: Bus S is at a certain point and moves right from the junction to reach point T.

T%S: Bus T is at point S and moves left from the junction to reach a certain point.

T#S: Bus S is at point T and moves right from the junction to reach a certain point.

T&S: Bus T is at point S and moves straight through all the junctions to reach a certain point.

T+S: Bus S is at a certain point and moves straight through all the junctions to reach point T.

T!S: Bus T is at a point H and moves through the 1st junction then takes left turn at the 2nd junction to reach a certain point.

T*S: Bus S is at a certain point and moves through the 1st junction then takes left turn at the 2nd junction to reach point T.

- In the given below expression, what is the final position of W with respect to its initial position?

$A+W\$B$, $W\&B$

- North-East
- North-West
- South-East
- West
- South

- In the given below expression what is the initial position of bus Q with respect to initial position of bus G?

$Q\%B+G$

- West
- South
- North
- East
- None

- In the given below expression, what is the final position of N with respect to initial position of P?

$N!A\#P\&C$

- North-West
- North
- South-West
- South-East
- North-East

- In the given below expression what is the initial position of bus U with respect to final position of bus Y

$U\%I\#Y\%A$

- West
- South
- North
- South-West
- Can't be determined

9. 1 is added to the first digit, subtracted from the second digit, added to the third digit, and so on in the number '778446748284'. The final number is formed by interchanging the digits of the resulting number, that is the first and the second digits are interchanged, the third and the fourth digits are interchanged and so on. What is the difference between the largest two digit number in the number system and the sum of all the digits of the final number thus obtained?
- (a) 30 (b) 33 (c) 35 (d) 41
(e) 36

DIRECTIONS (Qs. 10-14): Read the following information carefully and answer the questions.

A family of nine members – Z, X, V, T, R, P, N, L and J, which consists of three generations, went out for a winter picnic to a garden. All of them sat on a straight bench present in the garden, with an equal amount of distance between them, but not necessarily in the same order. Some of them sat facing the south whereas some of them sat facing the north. The number of people facing north is exactly half the number of people facing south. Also, the number of males in the family exceeds the number of females in the family by the smallest positive integer.

T, who is the brother-in-law of J, sat at one of the ends of the bench. Z, who is sat third from the right end of the row facing north, is the mother of V. L, who is married to J, sits second to the right of C, who is seated at the left end of the row and is an unmarried male. J, who is the son of Z, sits at the exact middle of the bench and faces the south. R, who is the son of L, sits second from the right end of the row and faces the same direction as his mother that is south. V, who is the wife of T, sits seventh to the right of her husband and faces south. The persons who are sat at the extreme ends of the row, face the opposite directions. X is the elder brother of J and V. Z is married to P, who sits to the immediate right of J. N sits second to the right of her grandfather P and third to the right of his father T.

10. How is Z related to N?
- (a) Mother (b) Aunt
(c) Cousin (d) Cannot be determined
(e) Grandmother
11. Who among the following sits third to the right of J?
- (a) T (b) Z (c) R (d) P
(e) V
12. In which position the grandchildren of P are seated with respect to him?
- (a) Second to the left and fourth to the right
(b) Immediate neighbours
(c) Third to the left and third to the right
(d) Second and fourth to the right
(e) Fourth to the left and second to the right
13. The two persons sitting at the extreme ends of the row are related as _____
- (a) Cousins (b) Sisters
(c) Brothers-in-law (d) Cannot be determined
(e) Brothers
14. Which of the following statements is/are not Correct?
- Statement I:** No married couple is seated side by side.
Statement II: R and N are cousins.

Statement III: Z is the mother-in-law of L.

- (a) All of the above
(b) Both statements II and III
(c) Only statement I
(d) None of the above
(e) Both statements I and III

DIRECTIONS (Qs. 15-18): Study the following information carefully to answer the given questions:

If 'P + Q' means 'P is the father of Q'

If 'P \$ Q' means 'P is the mother of Q'

If 'P % Q' means 'P is the brother of Q'

If 'P & Q' means 'P is the sister of Q'

If 'P # Q' means 'P is the daughter of Q'

15. In the following expression: 'A # O + N & M ? B'. What should come in the place of the question mark (?), to establish that 'M is the daughter of B'?
- (a) + (b) \$ (c) % (d) #
(e) None of these
16. Which of the following options is true if the expression 'B & A + W # H & N % G' is definitely true?
- (a) W is the nephew of G.
(b) A is the brother in law of G.
(c) B is the uncle of N.
(d) N is the aunt of W.
(e) None of the above
17. Which of the given expressions indicates that U is the uncle of V?
- (a) U & A + B # O & V
(b) U % A \$ B # O + V
(c) U # A + B % O \$ V
(d) U % A \$ B & O + V
(e) None of these
18. How is J related to A in the expression 'C + B \$ A & K # J % T'?
- (a) Brother (b) Father
(c) Mother (d) Grandfather
(e) None of these

DIRECTIONS (Qs. 19): A passage is given and then three conclusions – I, II & III are given. You have to consider the information given in passage as true though it seems to be different from the actual facts. Then give your answer regarding the given passage that which of the conclusion/s is/are followed by it properly.

The newly opened bookstore "White Whale" has quickly gained popularity among the city's book lovers. Its extensive collection of books from various genres and periods has attracted readers of all ages. The bookstore's cozy reading books and tea shop have added to its charm. The store owner, Aakash, who has studied literature at a prestigious university, ensures that every book on the shelves is a gem.

19. **Conclusions:**

- I. "White Whale" only sells new books.
II. The bookstore's success is due to its book collection and cozy atmosphere.
III. Akash's expertise is in management rather than literature.

- (a) Only I (b) Only II
(c) Both I and II (d) Both I and III
(e) Only III
20. In each question below is given a statement followed by two assumptions numbered I and II. An assumption is something supposed or taken for granted. You have to consider the statement and the following assumptions and decide which of the assumptions is implicit in the statement.

Statement: Deepak the increasing reliance on AI-driven decision-making tools in the financial sector, a recent study warns that automated financial advisors may inadvertently perpetuate biased financial practices, potentially exacerbating existing disparities. These AI systems, trained on vast datasets, have shown tendencies to offer biased advice, leading to concerns about the reinforcement of discriminatory financial practices.

Assumption:

- I. The integration of AI-driven financial advisors may contribute to reinforcing biased financial practices.
II. Financial institutions are actively working to eliminate biases in AI systems used for decision-making in the financial sector.
- (a) Only I implicit
(b) Only II implicit
(c) Both I and II implicit
(d) Either I or II implicit
(e) Neither I nor II implicit
21. Read the following information carefully and answer the questions.
In a certain code language, words and phrases are coded in accordance with the following set of rules-
- All the consonants except N, M, and I are coded as the numbers of the even number series starting from 2. For example, Y is coded as 2, X is coded as 4, W is coded as 6 and so on.
 - N, M, and R are coded as \$, @ and % respectively.
 - The vowels are coded as the position of letter we get by reversing the English alphabetical series. The codes for vowels are-
 - If the third or the fourth letter of a word is a vowel, then that vowel is coded as '#'.
If the number of letters in a particular word is even, then the code for that particular word starts with an 'C' and if the number of letters is odd, then the code for that word starts with a 'A'.
- The word 'BUSINESS' is coded as?
- C2624#&242422
 - Z2426#&222424
 - Z2624#&222424
 - C2624#&222424
 - C2426#&222424
22. The first part of the code for the word 'INTERMEDIATE' is C18&26#%@. What is the remaining part of the code for the given word?
- (a) 22618262622 (b) 22186262622
(c) 22618222626 (d) 22626182622
(e) 22186222626

23. The positive difference between the sum of individual digits present in the code for the first word and for the second word in the phrase 'DOCTOR ENGINEER' is?
(a) 9 (b) 11 (c) 13 (d) 1
(e) 3
24. If all the vowels in the word 'DEPOSIT' are shifted by two forward places according to the English alphabet series and all the consonants are shifted by four backward places according to the English alphabet series, the alphabets thus obtained are then placed in alphabetical order, starting from the left to the right. What is the difference between the position in the alphabetical series of the second letter from the right end and the fourth letter from the left end of the newly formed arrangement?
(a) 10 (b) 12 (c) 11 (d) 2
(e) 9

DIRECTIONS (Qs. 25-29): Study the given information carefully and answer the following questions.

Nine people Z, Y, X, W, V, U, T, S and Q are living on the different floors of a hotel not necessarily in the same order such that four floors remains vacant. Ground floor is numbered one, first floor is numbered two and so on.

Top and bottom floor of the hotel are Vacant. There are four floors between Z and T. Z lives above T. Two persons live between the floors on which S and W live. Z lives immediate below S. T is not living in odd number floor. T lives immediately above Vacant floor. Number of floors between the floors on which X and Q live is same as the number of floors between the ones on which T and Y live. X lives in one of the floor above Q and T. W lives immediately below vacant floor. No two vacant floor are immediate next to each other. At most three floor are there in between two vacant floor. Difference between Floor in which U and V lives is prime number with U lives above V.

25. Who lives immediately two floor below one of the vacant floor?
(a) U (b) V (c) T (d) Y
(e) W
26. How many persons live between Z and T?
(a) Three (b) One (c) Four (d) Six
(e) Five
27. How many floor are there in between Y and W?
(a) 2 (b) 3 (c) 4 (d) 1
(e) 5
28. Which floors are vacant?
(a) 6, 2 (b) 2, 4 (c) 5, 1 (d) 6, 3
(e) 2, 5
29. Four among the five are the same and thus forms a group. Who among the following does not belong to that group?
(a) S (b) X (c) T (d) V
(e) Z

DIRECTIONS (Qs. 30-32): Study the following information and answer the following questions.

P # Q means All P is Q.

P @ Q means Some P is not Q.

P * Q means Only a few P is Q.

P \$ Q means Some P is Q.

P ^ Q means No P is Q.

% means possibility e.g. P \$% Q means Some P can be Q.

30. **Statements:** Book @ Table # Mobile \$ Pen * Copy

Conclusions:

- I. Table # % Pen
II. Book @ Mobile
III. Copy * Pen

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

31. **Statements:** H4 # G3 * S6 ^ Y4 # Q7

Conclusions:

- I. G3 @ Y4 II. H4 # % S6
III. S6 # % Q7

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

32. **Statements:** Man * Woman ^ House @ Car # Bike

Conclusions:

- I. Car @ Woman II. Man # % Bike
III. Bike @ Woman

- (a) Only I follows
(b) Only II and III follows
(c) None follows
(d) Only I and III follows
(e) Only II follows

33. In the question, the statement is given followed by some inferences. You must consider the statement to be true even if it seems to be at variance from commonly known facts and then decide which inference can be drawn from the given statement.

The Net has become an indispensable tool for finding information, communicate with people around the world and manage your finance. However, it also poses many risks and challenges for young generation, such as radicalisation, race hate materials, excessive violence, and suicide. Some experts argue that parents should monitor and limit their children's internet use, while others claim that this would violate their privacy and autonomy. Christie Brinkley, a famous actress and mother of three, has revealed that she uses an app to track her kids' online activity and restrict their screen time.

Inferences:

- I. Christie Brinkley is a responsible parent who cares about her children's well-being and safety.
II. Parents have the right to interfere with their children's internet use as they see fit.
III. The internet is a dangerous place for children and they need constant supervision and guidance.
(a) Only I (b) Only II
(c) Only III (d) Only I and III
(e) Only II and III

34. In the question given below, there are two statements (I) and (II). These statements may be either independent causes or may be effects of independent causes or a common cause. One of these statements may be the effect of the other statement. Read both the statements and decide which of the following answer choice correctly depicts the relationship between these two statements.

Statement I: Recent law changes in India have made it possible for mother's name to be used as a legitimate identification identifier on a variety of papers, including passports and PAN cards.

Statement II: There are international human rights treaties and conventions that India is a signatory to, which uphold gender equality.

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

35. The university has decided to implement a new policy in the upcoming academic session that mandates all students to renew their biometric identity cards every six months which requires physical presence of the students. This was done due to limited use of resources by alumni. What effect will this policy have?

Possible Effects:

- I. The policy will have a positive effect on both academic performance and engagement, as it will motivate the students to attend classes regularly, interact with their peers and instructors and take the benefit of the available resources.
II. The policy will have a negative effect on both academic performance and engagement, as it will create an unnecessary burden and hassle for the students, especially those who live far away or have other commitments.
(a) Only I (b) Only II
(c) Either I or II (d) Neither I nor II
(e) Both I and II

36. In the question given below, there is a statement followed by four courses of action. On the basis of the situation given you have to decide which of the suggested course(s) of action logically follow(s) for pursuing. There is an increase in the number of waterborne diseases in Area W of Country H because the people of that area are using tap water without any filtration.

Course of action:

- I. The supply of water in area W should be reduced.
II. To save from waterborne diseases public awareness programme should be arranged so that people can be aware of using clean water.
(a) If only I follows
(b) If only II follows
(c) If either I or II follows
(d) If neither I nor II follows
(e) If both I & II follow

37. **Statement:** To manage the heavy workload, the workers of company X are demanding to increase the number of workers. The workers have also threatened the company to go on strike if the demand is not fulfilled by the company. Which of the following will strengthen or weaken the above statement?

- I. For the last few years, due to the heavy workload, the workers have been working extra hours and did not take any leave.
- II. In the last six months, the workers of company X have repeatedly taken rest in between the work, thus the work is not completed.
- (a) I is weak and II is strong
(b) Both are strong
(c) Both are weak
(d) I is strong and II is weak
(e) Either I or II is weak
38. Read the given information and answer the following questions:
Our global civilization is said to be enhanced by variety. Sadly, despite recent biological evidence that has categorically refuted such views, theories of racial prejudice continue to be spread and put into reality. Numerous people suffered unimaginable pain as a result of slavery, the slave trade, imperialism, and colonialism. Which of the given statements will weaken the argument?
- (a) Millions of people from the weaker segments of society now have voice and empowerment thanks to the institutions of our democratic polity and the growth of literacy.
(b) In comparison to the many advantages one person enjoys, people from various racial and ethnic origins may enjoy privileges.
(c) A National Committee should be established, and they should be encouraged by the general support of the legal protections against discrimination in the constitution and other laws.
(d) The internet and social media have made the globe a more interconnected place. However, some people are using this technical advancement to foment racial animosity.
(e) The government has established an institutional and administrative framework to address various types of discrimination within our democratic system
39. In each question below is given a statement followed by two assumptions numbered I and II. An assumption is something supposed or taken for granted. You have to consider the statement and the following assumptions and decide which of the assumptions is implicit in the statement.
Statement: A popular food blogger, known for her Instagram account 'Tasty Bites Explorer,' was recently harassed by a man in a busy marketplace in Mumbai. The entire incident was captured on her Instagram Live and quickly gained attention. In the video, the man tries to strike up a conversation with the blogger, asking if she would like to join him for coffee. However, his seemingly harmless approach turns uncomfortable as he makes inappropriate remarks about the blogger's appearance. Despite her attempts to ignore him, the man persists in following her and making lewd comments.
Assumption:
- I. The behaviour of the man not only violated the blogger's right to privacy and dignity but also highlighted the broader societal issue of gender-based harassment that needs to be urgently addressed.
- II. Incidents like these contribute to a negative perception of safety in public spaces for women, and such occurrences tarnish the reputation of the city.
- (a) Only I implicit
(b) Only II implicit
(c) Either I or II implicit
(d) Both I and II implicit
(e) Neither I nor II implicit
40. Read the statement below followed by two conclusions and decide which of the assumptions is implicit from the statement.
Statement: The college authorities have decided to give seven grace marks in the Mathematics paper to all the second-year students as the performance of these students in Mathematics was below their expectations.
Assumptions:
- I. Majority of the students in second-year may still fail in Mathematics even after giving them grace marks.
II. Majority of the students in second-year may now pass in Mathematics after giving grace marks.
- (a) Only assumption I is implicit
(b) Only assumption II is implicit
(c) Either assumption I or II is implicit
(d) Neither assumption I or II is implicit
(e) Both assumptions I and II are implicit
41. Six people from three generations of a family live in a house. How many males are in the family?
Statement I – K is the daughter of G, who is married to H. J is the father of a son and a daughter. F, the sister of H, is unmarried. H is the son-in-law of I.
Statement II – J is the father of H, who is married to G. I is the mother of G, who has a daughter. F is the aunt of K. J has two children, a son, and a daughter.
- (a) Only Statement I alone is sufficient to answer the question
(b) Only Statement II alone is sufficient to answer the question
(c) Both statements together are sufficient to answer the question
(d) Either statements are sufficient to answer the question
(e) Neither statements are sufficient to answer the question
42. The question below consists of two statements numbered I and II given below it. You have to decide whether the data provided in the statements are sufficient to answer the question. Read all the three statements and give answer: Six boxes namely – N, M, L, K, J and I are kept one above other, each box contains different Vegetables viz. Tomato, Potato, Carrot, Onion, Corn and Garlic. Box M is kept third from top at a gap of one box from one that contains Onion. Box K contains Corn, which is neither kept adjacent to box M nor adjacent to the one that contain Onion, is kept just above one that contains Potato. How many boxes are kept below one contains Garlic?
- I. Box which contains Carrot and Onion are kept together. Box I, which neither contains Carrot nor contains Onion, is kept at a gap of two from box N. Box which contains Carrot is kept at a gap of three from box J.

- II. I which contains Tomato is kept at a gap of two from box N, which neither contains Carrot nor kept adjacent to box K. Only two boxes are kept between box J and one which contains box Garlic.
- (a) If the data in statement I alone is sufficient to answer the question, while the data in statement II alone is not sufficient to answer the question.
- (b) If the data in statement II alone is sufficient to answer the question, while the data in statement I alone is not sufficient to answer the question.
- (c) If the data either in statement I alone or in statement II alone is sufficient to answer the question.
- (d) If the data in both statement I and II together are not sufficient to answer the question.
- (e) If the data in both statement I and II together are necessary to answer the question.

DIRECTIONS (Qs. 43-45): Study the following information carefully and answer the questions given below.

A arrangement machine, when given a particular input, rearranges it following a particular rule. The following is an illustration of the input and the steps of arrangement.

Input: LOVE, HOPE, FREE, GIFT, BEST, CAT, MAT, MAN, TOP

Step I: HOPE, FREE, GIFT, BEST, ELOV, ACT, MAT, MAN, TOP

Step II: FREE, GIFT, BEST, EHOP, ELOV, ACT, MAT, MAN, TOP

Step III: GIFT, BEST, EEFR, EHOP, ELOV, ACT, AMT, AMN, TOP

Step IV: BEST, FGIT, EEFR, EHOP, ELOV, ACT, AMT, AMN, OPT

Step V: BEST, FGIT, EEFR, EHOP, ELOV, ACT, AMT, AMN, OPT

Step V is the last step of the rearrangement. As per the rules followed in the above steps, find out the answer to each of the following questions for the Input given below.

Input: CALM, TRUE, COOL, SAFE, PLAY, CRY, LET, TOE, DOG

43. Which of the following is the third element from the left end in step V?
- (a) ERTU (b) AEFS
(c) ACLM (d) CLOO
(e) ALPY
44. What is the position of "PLAY" from "ERTU" in step III?
- (a) 3rd to the left (b) 2nd to the left
(c) Immediate left (d) 3rd to the right
(e) None of these
45. Which word comes exactly between "AEFS" and "ERTU" in step V of the given input?
- (a) DGO (b) CLOO
(c) ELT (d) ACLM
(e) ALPY
46. In which step are the elements 'PLAY CLOO ERTU' found in the same order?
- (a) Second (b) Fourth
(c) Third (d) Fifth
(e) None of the above

47. Which of the following combinations represents the first two and last two elements in step IV of the given input?
- (a) SAFE ,PLAY and EOT, DGO
(b) PLAY, AEFS and EOT, DGO
(c) PLAY, AEFS and TOE, DOG
(d) CLOO, SAFE and CRY, ELT
(e) ALPY, AEFS and EOT, DGO
48. Seven persons namely – Ravi, Sonu, Kavita, Sameen, Tanu, Manu and Shyam have different salaries, Salary of how many people are less than Sonu?
- I. Salary of Ravi is more than Kavita and Sonu but not as much as Shyam. The salary of Kavita is more than Tanu and Sameen but not as much as Ravi and Shyam. Salary of Tanu is only more than two Person and salary of Manu is lowest.
- II. Salary of Sonu is more than that Shyam and Tanu but not as much as Shyam and Kavita . The salary of Manu is more than Sameen and Manu but not as much as Ravi and Kavita . Salary of Shyam is the highest, and Salary of Sameen is not lowest.
- (a) If the data in Statement I alone is sufficient to answer the question, while the data in Statement II alone is not sufficient to answer the question. b) Ic) d) . e)
- (b) If the data in Statement II alone is sufficient to answer the question, while the data in Statement I alone is not sufficient to answer the question.
- (c) If the data either in Statement I alone or in Statement II alone is sufficient to answer the question.
- (d) If the data in both the Statements I and II together are not sufficient to answer the question
- (e) If the data in both the Statements I and II together are necessary to answer the question
49. Study the following information carefully and answer the given questions.
- Seven persons Z, Y, X, W, V, U, and T are living in an eight-storey building where the bottommost floor is numbered as 1 and the floor just above it as 2 and so on. One floor is vacant. Only one person lives on one floor. In which floor does U live?
- I. One of the odd numbered floors is vacant. X lives in an odd floor below W who lives in an even numbered floor but not on the top floor. W is not immediate above X. 3 people lives between W and T.
- II. Number of floors above V is one more than the number of floors below V. The number of persons live between Z and V is same as the number of persons live between V and T. Z lives on the top floor. Y lives immediate above T.
- (a) I is alone sufficient
(b) II is alone sufficient
(c) Both statements are not sufficient
(d) Either I or II alone sufficient
(e) Both statements are needed to answer the question.
50. In the following question, five different words are given in the options. Along with each word, positions of four letters in that word are given and the positions of the letters are counted from the left end of the word. Four lettered meaningful word can be formed from the letters

corresponding to the positions given in each option without jumbling the letters. Which of the following options will give a meaningful English word?

- (a) Claustrophobia – 2, 7, 12, 14
 (b) Photosynthesis – 2, 7, 8, 12
 (c) Incomprehensive – 3, 4, 10, 12
 (d) Notwithstanding – 4, 5, 11, 12
 (e) Parallelogram – 6, 7, 12, 13

Quantitative Aptitude

DIRECTIONS (Qs. 51-55): The given table shows the number of Tricycle sold in different shops P, Q, R and S and Cost price of each article, Markup percentage of each article and discount amount of each article in the same shops.

Shops	Sold Tricycles	Cost price of each Tricycle	Markup % of each Tricycle	Total Discount Amount
P	$(x + 5)$	$4x$	40	210
Q	y	$(y + 5)$	20	$3y$
R	x	$4x$	150	$117x$
S	$(y + 10)$	y	80	$27y$

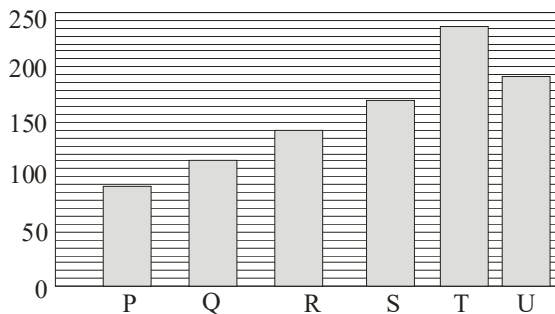
Note:

- (i) Selling price of Tricycle in shop P is equal to selling price of Tricycle in shop R.
 (ii) Selling price of Tricycle in shop Q is equal to selling price of Tricycle in shop S.
 (iii) The average cost price of Tricycle in each shops P, Q and R is 135.
51. If the cost price of Tricycles in shops S to T are in the ratio 4 : 5 and the number of Tricycles sold in shop T is $(y - 120)$, Markup percentage of Tricycles in shop T is $(x + 5)\%$. If the total discount amount of Tricycles in shop T is Rs. 4800. Find which of the following conditions are true?
- I. Selling price of the Tricycles in shop T is ₹ 265.
 II. Total revenue generated by the shop T by selling all the Tricycles in shop T is ₹12500
 III. Number of Tricycles sold in shop T is 70.
- (a) I only (b) II only
 (c) III only (d) I and II only
 (e) I and III only
52. Find the difference between the Sum of the marked price and sum of the selling price of each Tricycles sold in the shop P, Q, R and S.
- (a) ₹ 156.3 (b) ₹ 152.7
 (c) ₹ 141.3 (d) ₹ 147.3
 (e) ₹ 149.3
53. If the number of Tricycles sold in the shop Q 20% are defective and sold at Rs. 2 more than the usual discount. Find the total discount amount given by Shop Q by selling all the Tricycles
- (a) 580 (b) 550
 (c) 600 (d) 680
 (e) 590

54. If the marked price of each Tricycle in shop R is Rs. _____ and the average number of Tricycle sold in shops R and U is 23 and the total number of Tricycles sold in shop U is _____ then which of the following conditions satisfy the same order.
- (i) 250 and 21 (ii) 250 and 30
 (iii) 250 and 24
 (a) I only (b) III only
 (c) II only (d) I and II only
 (e) None of these
55. If the total number of Tricycles sold in shop P and R together is 55. Find which of the following contexts is true.
- I) The difference between the total revenue received by the shop P and R is Rs. 665.
 II) The marked price of each Tricycle in shop R is Rs. 250.
 III) The selling price of each Tricycle in shop P is Rs. 135.
- (a) I only (b) II only
 (c) I and II only (d) II and III only
 (e) I and III only
56. Given that the combined ages of two individuals, J and K is a^2 years, and the difference of their ages is $'72 - 12a'$ years (with K being younger), and also the ratio of J's age two years ago to J's age ten years from now is 4 : 7. can you determine the average between J's age three years from now and K's age seven years ago?
- (a) $a + 12$ (b) $a + 10$
 (c) $a + 15$ (d) $a + 8$
 (e) None of these
57. In a container of capacity 500 ml a mixture of juice and water is kept. Juice is 250 ml and water is 'a' ml, Now 70 ml of mixture is taken out without replacement and the process is repeated one more time, the container is now completely filled by adding water. If the ratio of milk and water in the final mixture is 3 : 7. What is the quantity of water added?
- (a) 250 ml (b) 300 ml
 (c) 290 ml (d) 260 ml
 (e) 80 ml
58. In the given question, 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.
- Umesh bought two articles A at Rs. x and article B at ₹ $x + 50$. He sold article A at 20% profit and article B at 10% loss, and earned Rs. 45 as profit on the whole deal.
- Quantity I :** Profit earned by Umesh on selling Article A (in Rs.)
Quantity II : Loss incurred (in ₹) when an article which costs Rs. 560 is sold at 25% loss.
- (a) If Quantity I \geq Quantity II
 (b) If Quantity I $>$ Quantity II
 (c) If Quantity I $<$ Quantity II
 (d) Quantity I = Quantity II or the relationship cannot be established from the information that is given
 (e) Quantity I \leq Quantity II

59. In this question, two equations are given. Answer the questions based on given equations:
 I. $2x^2 - Mx + 10 = 0$
 a and b are two roots of the given equation and their sum is $a + b = 4.5$ ($a > b$)
 II. $4y^2 - Ny + 19 = 0$
 c and d are two roots of the given equation such as one root is 40% of the largest root of first equation. ($c > d$)
 Which of the following statements is are correct?
 I. Values of $a + c = b + d$
 II. $c + d = 5.75$
 III. $a > b > c > d$
 (a) Only I (b) Only III
 (c) Only II (d) All of these
 (e) None of these
60. Rohan invested some money in the bank at the rate of 20% compounded annually and after 2 years received interest as Rs. 8800. If the man invested double of the principal in another scheme at the rate of 10% compounded annually for 2 years then find the compound interest earned by him in the second scheme
 (a) Rs. 8300
 (b) Rs. 8600
 (c) Rs. 8200
 (d) Rs. 8400
 (e) Rs. 8700
61. A box contains 10 yellow, 8 green and some white balls. Find the probability of getting three different coloured balls when 3 balls are drawn from box at random if total number of balls in the box is 32
 (a) $1 / 15$ (b) $3 / 31$
 (c) $7 / 31$ (d) $3 / 17$
 (e) None of these

DIRECTIONS (Qs. 62-66): The bare graph shows the total number of messages (Inbound and Outbound) from six different BPOs



Note :

- (a) Inbound Messages = International (IB) + Domestic (IB)
 (b) Outbound Messages = International (OB) + Domestic (OB)
 The given table shows the ratio between inbound messages and outbound messages

BPOs	Ratio between Inbound Messages to Outbound Messages
P	11:05
Q	4 : x
R	19:05
S	-
T	5:06
U	3:05

62. If the number of males to females bounded the inbound messages in K are in the ratio 10 : 9. And the total number of males bounded the all the messages in R is 70. Find the difference between the number of females bounded the inbound messages and outbound messages in the centre R.
 (a) 50 (b) 40
 (c) 30 (d) 35
 (e) 45
63. Inbound and Outbound messages of S are in the ratio 23 : 7. Then Inbound messages of S are $(a + 3)\%$ more than total messages made by Q. If the ratio of domestic inbound messages and International inbound messages of R is $(a + 4) : 3$. Find International Inbound messages of R.
 (a) 15 (b) 24
 (c) 18 (d) 20
 (e) None of these
64. The total international messages by P is 41 and the ratio of Inbound domestic messages and outbound domestic messages are in the ratio 4 : 5 : 2. Find the ratio of inbound domestic messages by P and outbound messages by T.
 (a) 23 : 95 (b) 17 : 86
 (c) 9 : 40 (d) 32 : 99
 (e) 24 : 89
65. Total International messages (Inbound and Outbound) by Q and total International messages (Inbound and Outbound) by S are in the ratio 26 : 45 and total Domestic messages (Inbound and Outbound) by Q are 20% Less than total Domestic messages (Inbound and Outbound) by S. Find the Difference between international messages (Inbound and Outbound) by Q and Total Inbound messages (International and Domestic) by U.
 (a) 7 (b) 8
 (c) 9 (d) 10
 (e) None of these
66. If total outbound messages by Q are 33.33% more than $(b + 3)$. Where b is the value of Inbound messages by U. The find the value of a, if a is the smaller root of equation; $m^2 - xm + 108 = 0$
 (a) 11 (b) 8
 (c) 9 (d) 4
 (e) None of the se
67. The monthly income of 'A' and 'B' are in the ratio of 1 : 3 respectively. 'A' spends 'x' of his monthly income and saves the remaining ₹12480. The sum of the monthly

- expenditure of 'A' and 'B' is ₹5920. If the monthly saving and expenditure of 'B' is the ration of 5:7 respectively then find the average monthly income of 'A' and 'B' together?
- (a) ₹ 52000 (b) ₹ 54000
(c) ₹ 56000 (d) ₹ 58000
(e) None of these
68. Yuvi and Ekansh started a business with the investment of ₹ 30000 and ₹ 36000 respectively, after 6 months Yuvi withdrawn 20% of his initial investment and Kartik started the business with the investment of ₹ X. At the end of the year, the total profit of the business is ₹ 132000 and profit share of Ekansh is ₹ 48000 and find the vale of X?
- (a) 72000 (b) 76000
(c) 80000 (d) 64000
(e) None of these
69. In this question, two equations are given, answer the questions based on given equations:
I. $x^2 - 12x + 32 = 0$
II. $x^2 - 26x + 169 = 0$
If one of the roots of given equation is taken from both equation, a new equation is formed which is:
(a) $x^2 + 10x + 36 = 0$ (b) $x^2 - 17x + 52 = 0$
(c) $x^2 - 17x - 52 = 0$ (d) $x^2 + 21x - 104 = 0$
(e) $x^2 - 16x + 63 = 0$
-
- DIRECTIONS (Qs. 70-71):** What approximate value should come in place of the question mark(?) in the following question?
70. $? \times 8.23 + 44.89\% \text{ of } 80.31 = 32.92 \times 4.14$
(a) 8 (b) 12
(c) 16 (d) 20
(e) 14
71. $25.12 \times 4.29 \div 5.19 + 16.16 + (7.91)^2 = ?^2$
(a) 10 (b) 8
(c) 9 (d) 5
(e) 12
-
- DIRECTIONS (Qs. 72-75):** Read the following information carefully and answer the questions given below.
- The marked price of an article K and M is 50% above its cost price and the selling price of article J is half of the marked price of article K. The ratio of the marked price of article M and the selling price of article J is 7 : 3. The sum of the marked price of the article L and M is Rs. 810. The profit of article K is Rs. 194 less than the cost price of M. The discount offered on article K is 15%.
72. If the Cost price of the article M is increase by 25% and the discount percentage of the article M is 20% then find which of the following is true in the given following statements?
I. New cost price of the article M is Rs. 325
II. Loss of Rs. 13 occurred
III. Selling price is Rs. 332
(a) I and II only (b) I only
(c) II only (d) III only
(e) I and III only
73. The profit obtained on article L is ₹ 36 and the discount offered on article L is 20%. Find the difference between the selling price of article J and the cost price of article L.
(a) ₹ 110 (b) ₹ 118
(c) ₹ 135 (d) ₹ 120
(e) None of these
74. Selling price of article J to the selling price of article N are in the ratio 3 : 5. The Marked price of article N is ₹50 more than its selling price. If the cost price of the article N is Rs. 10 less than the cost price of the article M. If J is sold at 20% profit. Find sum of the cost price of article N. Marked price of article N and Cost price of article J.
(a) Rs. 750 (b) Rs. 850
(c) Rs. 900 (d) Rs. 650
(e) None of these
75. If the profit obtained on article M is Rs. 25 less than the profit obtained on article K, then the discount offered on article M is
(a) 24.67% (b) 26.89%
(c) 22.82% (d) 21.25%
(e) None of these
76. The ratio of the cost price of two chairs is 5 : 9 one chair, in which cost price is less, is sold at profit of 24% and the other one is sold for Rs. 2196 more than that of the first one, if the overall profit earned after selling both the chairs at 6%. What is the difference of cost price of the two chairs?
(a) 3150 (b) 3600
(c) 1800 (d) 2700
(e) None of these
77. The ratio between the radius of the circle and the length of the rectangle is 7 : 22 and the breadth of the rectangle is equal to the base of the triangle. The area and height of the triangle is 2100 cm² and 60 cm. The perimeter of the rectangle is 360 cm, then, find the perimeter of the circle?
(a) 220 cm (b) 340 cm
(c) 450 cm (d) 550 cm
(e) None of these
-
- DIRECTIONS (Qs. 78-79):** What approximately value should come in the place of the question mark (?) in the following equation?
78. $18.17 \times 4.23 + (24.97 \div 5.31) - 33.24 = ?$
(a) 50 (b) 51
(c) 44 (d) 40
(e) 47
79. $70.39 - 20.19 \times 1.91 + 36.41 \times 1.17 = ?$
(a) 60 (b) 66
(c) 76 (d) 73
(e) 81
80. A boat travels is 1.85 km downstream is 18 hours, while a person can run S km in 24 hours. The speed of the boat in still water exceeds the running speed of the person by 4 km/h, and the speed of the current is 3 km/h. What is the speed of the boat in still water?
(a) 5 (b) 12
(c) 9 (d) 6
(e) 10

81. A train takes t seconds to pass a pole and $t + 12$ seconds to pass a platform. The combined length of the train and the platform is 540 meters and the train's length is L meters. If the train's length is reduced by 30 meters, it then takes 18 seconds to cross a pole. Determine the value of t .
- (a) 23.5 (b) 19.7
(c) 16.8 (d) 20.5
(e) None of these

DIRECTIONS (Qs. 82-83): The Series contains one wrong and one missing number.

0.5, 6, 84, 840, 6720, 40320, a

82. What is the value of a - 112809
(a) 41000 (b) 43245
(c) 48471 (d) 52231
(e) 45325
83. Find the wrong number of the given series.
(a) 84 (b) 6
(c) 6720 (d) 840
(e) 40320

DIRECTIONS (Qs. 84-86): In this question, two equations are given. Answer the questions based on given equations:

I. $a, b, c, 707, 563, 627, 611$

II. $x, x + 18, 433, 451, 469, y$

84. Which of the following are true?
- (i) $y = a + b$ (ii) $y = 446 + \left(\frac{1}{11}\right)C$
- (iii) $x + b = \frac{1}{2}(y)$
- (a) Only (ii) (b) Only (iii)
(c) Only (i) and (iii) (d) Only (ii) and (iii)
(e) All of these
85. If the sum of $z + y = 576$, then find the average of 'c' and 'z'.
(a) 300 (b) 270
(c) 220 (d) 200
(e) 250
86. Had 'a' been divided by the second largest single digit prime number, then resultant would be....
(a) 45 (b) 38
(c) 55 (d) 50
(e) 40
87. $3x^2 - 26x + n = 0$
Roots of the given equation are l and m , where, $l > m$ and $m = 8/3$.
Which of the following/s is/are true?
I. HCF of n and l is equal to 50% more than m
II. Value of n is a perfect cube
III. n is multiple of l .
(a) Only I and II (b) Only II
(c) Only II (d) Only I and III
(e) All of these

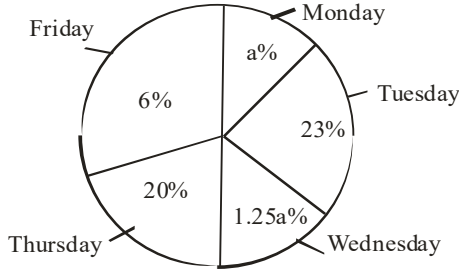
DIRECTIONS (Qs. 88-91): In the question, two quantities (I) and (II) are given. You have to solve both quantities to establish the correct relation between Quantity (I) and Quantity (II) and choose the correct option.

88. **Quantity I:** $50x + 3^2 \times \sqrt[3]{64}$ such that $2 \leq x \leq 4$

Quantity II: $\sqrt[3]{216y^3} - 2y^4 + 50y$ such that $8 \leq y \leq 10$

- (a) Quantity (I) > Quantity (II)
(b) Quantity (I) < Quantity (II)
(c) Quantity (I) \geq Quantity (II)
(d) Quantity (I) \leq Quantity (II)
(e) Quantity (I) = Quantity (II) or No relation can be established
89. **Quantity I:** Pipe P can fill a tank in 3 hours. Pipe Q can fill the same in 4 hours while Pipe R can fill the same tank in 5 hours. What is the time taken when all of them works together?
- Quantity II:** Two pipes P and Q can fill a tank in 8 hours. While Pipe Q and Pipe R can fill the same in 10 hours. Pipe R and Pipe S fill the tank in 15 hours. Pipe P and Pipe S can fill the same tank in 30 hours. Find the time taken by them to fill the tank together.
- (a) Quantity I > Quantity II
(b) Quantity I < Quantity II
(c) Quantity I = Quantity II or no relation can be established
(d) Quantity I \leq Quantity II
(e) Quantity I \geq Quantity II
90. **Quantity I:** Perimeter of triangle cut, of a square of side 22 cm, four isosceles triangles are cut from its four corners. Area of remaining part is 196 sq. cm. Take $\sqrt{2} = 1.4$
- Quantity II:** Percentage increase in area of rectangle. Increase in length and breadth are 20% and 15% respectively.
- (a) Quantity I \geq Quantity II
(b) Quantity I \leq Quantity II
(c) Quantity I = Quantity II or no relation can be established
(d) Quantity I > Quantity II
(e) Quantity I < Quantity II
91. Average of P and Q is 12, while the sum of Q and R is 12. $14 \geq (P, Q) \geq 8$ and $10 \geq Q$ and $R \geq 2$; Given P, Q, R are integers.
- Quantity I:** Value of $PQ - 54$
Quantity II: $(P + R) \times Q$
- (a) Quantity I \geq Quantity II
(b) Quantity I \leq Quantity II
(c) Quantity I = Quantity II or no relation can be established
(d) Quantity I > Quantity II
(e) Quantity I < Quantity II

DIRECTIONS (Qs. 92-93): The following pie chart shows the percentage distribution of the number of mobiles sold in a shop in five different days Monday, Tuesday, Wednesday, Thursday and Friday. Total number of mobiles sold = 400



Note: Difference between number of mobiles sold on Monday and Wednesday is 12.

92. Number of mobiles sold on Tuesday and Monday is what percentage of the number of mobiles sold on all the remaining days.
 (a) 56.87% (b) 50.78%
 (c) 42.89% (d) 53.84%
 (e) None of these
93. If the cost of each mobiles on Friday is ₹P and cost of each mobiles on Thursday is ₹ (P – 10) if the total cost earned by the shop by selling mobiles on the both the day is ₹ 9200. If the cost of each mobiles on Monday's ₹ (P – 20). Find the total amount earned by the shop on selling mobiles on Monday.
 (a) ₹ 1280 (b) ₹ 1360
 (c) ₹ 1440 (d) ₹ 1560
 (e) None of these
94. Number of mobiles sold on Wednesday is 66.667% of the number of mobiles present in the shop on Wednesday initially and the number of mobiles sold on Thursday is 33.33% of the number of mobiles present in the shop initially. Find the ratio between the number of unsold mobiles on Wednesday and the number of unsold mobiles in the shop on Thursday
 (a) 2 : 11 (b) 2 : 13
 (c) 3 : 16 (d) 3 : 17
 (e) None of these
95. Average number of mobiles sold on Monday and Sunday is 8 less than the number of mobiles sold on Monday and number of mobiles sold to unsold on Sunday are in the ratio 8 : 5. Find the total number of mobiles unsold on Sunday.
 (a) 28 (b) 25
 (c) 35 (d) 20
 (e) 44
96. Difference between the mobiles sold on Tuesday and Monday is twice the difference between the number of mobiles sold on Wednesday and Saturday. If the ratio of number of mobiles sold to unsold on Saturday is 19 : 15. Then find the number of mobiles unsold Saturday. (Note: Number of mobiles sold on Wednesday is more than the number of mobiles sold on Saturday).
 (a) 52 (b) 38
 (c) 30 (d) 44
 (e) None of these

97. Average weight of four friends 'J', 'K', 'L' and 'M' is a kg. When 'M' is replaced by 'N' then the average increases by 14.25 kg. When 'L' is replaced by 'N', average increases by 6.75 kg. If the average weight of 'L', 'M' and 'N' is 74 kg then the weight of 'N' is how much percent more than that of 'L'?
 (a) 30% (b) 36%
 (c) 42% (d) 45%
 (e) None for these

DIRECTIONS (Qs. 98): The following questions are accompanied by two or three statements . You have to determine which statement(s) is/are sufficient/necessary to answer the questions.

98. What is the present age of Father?
 I. The difference between the ages of Father and Son is 45 years.
 II. The present age of Son is 1/4th of the present age of the Father.
 III. The sum of the ages of Father and Son is 75 years.
 (a) Any two of them (b) Only I and III
 (c) Only I and II (d) All I, II and III
 (e) None of these
99. If a wire is cut into three pieces of unequal lengths, what is the length of the shortest of these pieces of wire?
Statement I. The combined length of the longer two pieces of wire is 35 meters.
Statement II. The combined length of the shorter two pieces of wire is 30 meters.
 (a) The data is statement I alone is sufficient to answer the question, while the data in statement II alone is not sufficient to answer the question.
 (b) The data is statement II alone is sufficient to answer the question, while the data in statement I alone is not sufficient to answer the question.
 (c) The data in statement I alone or in statement II alone is sufficient to answer the question.
 (d) The data in both statements I and II are not sufficient to answer the question.
 (e) The data in both statements I and II together are necessary to answer the question.
100. Two friends P and Q together can complete a piece of work in 20 days. In how many days can P alone complete the piece of work?
Statement I. Q alone completes half of the work in 25 days.
Statement II. The efficiency of P is 50% more than that of Q.
 (a) The data is statement I alone is sufficient to answer the question, while the data in statement II alone is not sufficient to answer the question.
 (b) The data is statement II alone is sufficient to answer the question, while the data in statement I alone is not sufficient to answer the question.
 (c) The data in statement I alone or in statement II alone is sufficient to answer the question.
 (d) The data in both statements I and II and not sufficient to answer the question.
 (e) The data in both statements I and II together are necessary to answer the question.

English Language

DIRECTIONS (Qs. 101-105): Read the passage carefully and answer the questions given below it. There are some blanks given in the passage based on which some questions are framed, and some words are highlighted as well to help you answer the other questions.

The revised protocol for the extended period of lockdown that is now scheduled to end on May 3 indicates it's(A) rollback starting from April 20. (B) A partial **containing(1)** of the economy is being proposed, but a lot will **depend(2)** on the extent of success in **reopening(3)** the **spread(4)** of the COVID-19 pandemic in particular areas. (C) State and local administrations could continue with a tighter level of control on economic and social activities if required, according to the Centre's guidelines announced on Wednesday. It is now clear that the battle against the pandemic will be drawn out, and(D) in life will have to wait until a vaccine or a treatment line is found. It is impossible to keep the economy shut and people at home indefinitely. The proposed relaxations are, hence, a step forward. Industries outside city limits, certain types of construction both in rural and urban areas, segments of the service sector, and manufacturing partially will reopen after April 20. (E) Small service **providers(a)**, such as electricians, **plumbers(b)**, IT repair, motor mechanics and carpenters, will be allowed to **oparate(c)**, which will help them and those who need to **hire(d)** them. It will be a good idea to add tailors to that list, an essential service now that masks are mandatory in public and workplaces.

101. Which of the following words given in the options should come at the place marked as (A) in the above passage to make it grammatically correct and meaningful? Also, the word should fill in the two sentences given below to make them contextually correct and meaningful?
- (I) Sheon trembling legs.
 (II) Sheat the sensation, taking in the crumbled world around her.
- (a) staggered (b) conjure
 (c) evoke (d) quell
 (e) None of these
102. The sentence in (B) has four words given in bold. Amongst the given bold words, which of the following must replace each other to make the sentence contextually correct and meaningful?
- (a) Both 2-1 and 3-4 (b) Both 1-3 and 2-4
 (c) Both 2-3 and 1-4 (d) 1-3
 (e) 2-4
103. Find the synonym for the word, 'engage'.
- (a) Depend (b) Spread
 (c) Hire (d) Provide
 (e) None of these
104. In the above passage, sentence (C) may or may not have an error in one part of the sentence. Select the part having an error.
- (a) State and local administrations could continue with
 (b) a tighter level of control

- (c) on economic and social activities if required,
 (d) according to the Centre's guidelines announced on Wednesday
 (e) No error
105. Which of the following should fill the blank given in (D) to make it contextually correct and meaningful?
- (a) Stingy (b) Niggardly
 (c) Penurious (d) Normalcy
 (e) None of these
106. From the passage, find the antonym for the word, 'voluntary'.
- (a) Mandatory (b) Tight
 (c) Tailor (d) Partial
 (e) None of these
107. Four sentences each with one bold word type are given marked as (E). These are numbered (a), (b), (c) and (d). One of these words might either be wrongly spelt or inappropriate in the context of the sentence. Find out the word that is inappropriate or wrongly spelt, if any.
- (a) Only a (b) Only a & b
 (c) Only a & d (d) Only c
 (e) All correct

DIRECTIONS (Qs. 108-115): Read the passage carefully and answer the questions given below:

Motivational literature aimed at youth has become a staple in bookstores worldwide. With their aesthetically pleasing covers and powerful testimonials, these books claim to invigorate young readers and pave their way towards success. Despite these promising attributes, the effectiveness of such books raises quite a debate. The **sheer** number of these motivational compilations is, in itself, an overwhelming sight. They purport aversion of reality wherein success and growth are distilled into actionable tips and methodologies easily consumed by an impressionable audience. However, there is a belief that such convenience brings complexities of its own. Motivation, inherently a personal and subjective experience, is often simplified in these books. They offer a sequence of simplified steps, a 'one-size-fits-all' path towards success. Though such guidance might temporarily inspire, it rarely contributes to long-lasting motivation, rendering them ineffective in the long run. A central issue lies in the external nature of motivation these books attempt to foster. It's widely accepted that motivation should be an **intrinsic** quality, a self-ignited passion driving one forward, even in the face of adversity. This motivation, which develops from introspection, life experiences, and personal values, cannot be derived from predetermined methods or uniform strategies. Additionally, there is an inherent difficulty to **retain** the fleeting inspiration these books might induce. The motivational surge often experienced during or shortly after reading is seldom **sustainable**. Over time, as the realities of daily life resume, the inspiration diminishes, leaving readers at their starting point, sometimes even more demotivated than before. Are these observations an indictment of youth motivation books? Not entirely. These books undoubtedly play their part. They provide practical tips, inspiration from shared stories, and can even stimulate one's journey of self-growth and discovery. They expose readers to new ways of thinking and provide alternate

life perspectives. However, a cautious approach towards accepting these books as the definitive path to success is recommended. They are not magic solutions or silver bullets, as they often portray themselves to be. They should be seen as only one element of a broader journey towards self-growth and development. The youth, while inspired by these motivational reads, should understand that lasting motivation can only be derived from within themselves. It is fuelled by their impassioned desires, intrinsic values, and dreams. So, while motivational literature has its place, the youth are encouraged to primarily cultivate their own intrinsic motivation that can withstand the test of time.

108. What is the synonym for 'sheer' as used in the passage?

- (a) Obscurity (b) Infinity
(c) Throw (d) Utter
(e) Blur

109. According to the passage, what is the complexity associated with the convenience of motivational books aimed at youths?

- (a) They offer too many success stories.
(b) They disrupt the reading habits of the youth.
(c) They oversimplify the subjective nature of motivation.
(d) They are too expensive for young people.
(e) They are often outdated.

110. Which of the following is a synonym for the phrase 'retain' as given in the passage?

- (a) Maintain (b) Disperse
(c) Relinquish (d) Neglect
(e) Dismiss

111. Which of the following is mentioned in the passage as a challenge in the effectiveness of youth motivational books?

- (a) The lack of personal testimonies
(b) The broad scope of the contents
(c) Difficulty in sustaining the inspired motivation
(d) The language used is too complex for the youth
(e) The books are not accessible enough

112. What is an antonym for 'essential' as mentioned in the passage?

- (a) Invigorate (b) Sheer
(c) Seldom (d) Intrinsic
(e) Indictment

113. Based on the passage, which of the following statements is correct?

- (i) Motivational books potentially serve as a start towards self-growth and development.
(ii) Motivational literature for youth counsels a one-size-fits-all method to success.
(iii) The motivational surge from these books is often short-lived.
(a) Only i (b) i and ii
(c) ii and iii (d) i and iii
(e) i, ii and iii

114. Which of the following would be an appropriate title for the passage?

- (a) The Unseen Dangers of Motivational Literature
(b) Dissecting Motivational Literature for Youth
(c) The Ineffectiveness of Self-help Books

(d) The Mediocre Influence of Motivational Books

(e) Youth Motivation: The Role and Limitations of Motivational Books

115. How does an individual ultimately feel motivated to do something?

- (a) Understanding that 'one-size-fits-all' path towards success.
(b) Through introspection, life experiences and personal values.
(c) Reading motivational books, but these are only a temporary source.
(d) When an individual does not receive the much needed guidance.
(e) When motivational books drive the self-ignited passion among individuals.

116. According to the passage, why should young readers take a cautious approach to motivational literature?

- (a) The books cannot replace practical life experience.
(b) The books lack credibility and authenticity.
(c) The books might discourage readers from pursuing their own goals.
(d) The books cannot be the definitive path to success.
(e) The books often lack quality and depth.

DIRECTIONS (Qs. 117-123): Fill in the blanks with the most appropriate words to complete the passage.

In today's fast-paced world, time management is (117) _____ for success. Whether you are a student or a professional, (118) _____ the most out of your day can be a challenge. The first step is to (119) _____ a daily schedule. Start by listing your (120) _____ tasks and prioritize them. Allocate specific time slots for each task and stick to your schedule. Avoid (121) _____ distractions and stay (122) _____ on your goals. Remember that (123) _____ planning and discipline can help you make the most of your time.

117. (a) crucial (b) irrelevant
(c) ineffective (d) optional
(e) necessary

118. (a) maximizing (b) minimizing
(c) optimizing (d) ignoring
(e) sulking

119. (a) ignore (b) create
(c) eliminate (d) cherish
(e) build

120. (a) favourite (b) essential
(c) random (d) unnecessary
(e) boring

121. (a) enticing (b) eliminating
(c) embracing (d) ignoring
(e) unnecessary

122. (a) focused (b) distracted
(c) relaxed (d) anxious
(e) aimed

123. (a) haphazard (b) strategic
(c) random (d) spontaneous
(e) good

DIRECTIONS (Qs. 124-127): In the following questions, there are some errors in every sentence. Find the part of the sentence which has an error. That particular part is your answer. If there is no error, your answer is (d), i.e., No error.

124. She is a qualified doctor (a)/ but none of her daughters (b)/ pursue the medical field. (c)/ No error (d)
 (a) She is a qualified doctor
 (b) but none of her daughters
 (c) pursue the medical field
 (d) No error
125. After knowing the truth, (a)/ he moved ahead (b)/ and made the right choice. (c)
 (a) After knowing the truth
 (b) he moved ahead
 (c) and made the right choice
 (d) No error
126. Reading and writing (a)/ provides (b)/ nutrition to the brain. (c)
 (a) Reading and writing (b) provides
 (c) nutrition to the brain (d) No error
127. His brother (a)/ was wet in the rain (b)/ while returning from his office. (c)
 (a) His brother
 (b) was wet in the rain
 (c) while returning from his office
 (d) No error

DIRECTIONS (Qs. 128-130): In the below given questions, a part of the sentence is bold. There are five alternatives provided as (A), (B), (C) and (D) which may improve the sentence. Choose the correct alternative. In case no replacement is required, choose (E) as your answer.

128. The organization may be hiring for vacancies, but **cannot scold freely**.
 (a) cannot scold at will
 (b) cannot give umbrage
 (c) cannot just scold anyway
 (d) cannot scold wilfully
 (e) No improvement
129. Many of the conservationists proclaim **to save the environment** against degradation.
 (a) to save the environment well
 (b) that they save the environment
 (c) to prevent the environment
 (d) to save the environment
 (e) No improvement
130. **Except for you and I**, everyone went for the dinner to their house.
 (a) With the exception of you and I
 (b) Except for I and you
 (c) Except for you and me
 (d) Everyone except for me and you
 (e) No improvement

DIRECTIONS (Qs. 131-135): In each of the following sentences, there are three blank spaces. There are five options and each option consists of three words which will be filled in the blanks to make the sentence grammatically correct.

131. Activists in the country have been _____ since ages about its _____ society that prohibits women from travelling, marrying or attending college without _____ from a male member of their family, also known as the guardian according to the law.
 (a) denying, rigid, permit
 (b) fighting, strong, restrictions
 (c) proposing, lenient, allowance
 (d) curious, patriarchal, permitting
 (e) protesting, patriarchal, permission
132. The new world driven by _____ changes is seeing a _____ of startups who are questioning the status quo and _____ industries.
 (a) automatically, upsurge, disorganized
 (b) robotic, decline, Indian
 (c) technological, proliferation, disrupting
 (d) mechanical, enlargement, organized
 (e) patriotism, storehouse, astounding
133. The _____ of time does not remain the same. The new lamp had _____ for reading. Therefore, he opened his books for a _____ understanding of concepts.
 (a) lapse, more, better (b) span, less, clear
 (c) cycle, much, detailed (d) cycle, enough, thorough
 (e) span, enough, better
134. There cannot be _____ among Indian children because there are two _____ of children. They get two _____ kinds of education in the country.
 (a) peace, kinds, varied
 (b) equality, classes, different
 (c) happiness, types, indirect
 (d) peace, dimensions, major
 (e) rights, kinds, limited
135. The government has failed to provide necessary _____ for the _____ of children. Most of them go to a _____ without blackboards.
 (a) facilities, education, school
 (b) amenities, upliftment, school
 (c) schools, education, place
 (d) requirements, well-being, school
 (e) reports, betterment, educational institute

DIRECTIONS (Qs. 136-138): In the question given below, a set of sentences is given, which when properly sequenced, form a coherent paragraph. Arrange the sentences in the correct sequence, and answer the questions.

- P. Among the biggest implications of the coming drop in population is the end of plentiful labour.
 Q. China's population is shrinking faster than expected.
 R. According to the Chinese Academy of Social Sciences, the long-anticipated population decline will start in 2027.
 S. Over the past 40 years, companies benefited from the seemingly endless scale of the Chinese workforce.
 T. Now, that era is drawing to a close, and companies need to prepare for a shrinking talent pool.
136. Which of the following would be the SECOND statement after rearrangement?
 (a) P (b) R
 (c) Q (d) S
 (e) T

137. Which of the following would be the FIFTH statement after rearrangement?
 (a) P (b) R (c) Q (d) S
 (e) T
138. Which of the following would be the THIRD statement after rearrangement?
 (a) P (b) R (c) Q (d) S
 (e) T

DIRECTIONS (Qs. 139-140): In the given questions, a word in the sentence is printed in bold. Below the sentence, alternatives are provided for the bold part which may help improve the sentence. Choose the correct alternative out of the five given options.

139. North Korean leader Kim Jong-un met with Chinese President Xi Jinping and **reaffirmed** his commitment to the peninsula's denuclearization.
 (a) Emphasized (b) Redundant
 (c) Forced (d) Imposed
 (e) Slapped
140. This special magnetic appeal or charm is **reinforce** to his power and presence in front of an audience.
 (a) Ornate (b) Opine
 (c) Paramount (d) Peculiar
 (e) None of these

General/Finance Awareness

141. DLabs at the Indian School of Business (ISB) launched "Build for Billions", a startup accelerator program, in collaboration with the Reserve Bank Innovation Hub (RBIH) and which bank?
 (a) State Bank of India
 (b) Punjab National Bank
 (c) Axis Bank
 (d) Union Bank of India
 (e) Bank of Baroda
142. What is the architectural style of the Ayodhya Ram Mandir?
 (a) Gothic (b) Neoclassical
 (c) Nagara (d) Modernist
 (e) None of the above
143. Name the DRDO Multi-Barrel Rocket Launcher (MBRL) systems
 (a) bazooka (b) Pinaka
 (c) Panzerfaust 3 (d) M-160 Rocket Launcher
 (e) None of the above
144. Which states are in startup ranking 2022?
 (a) Gujarat. Karnataka. Kerala. Tamil Nadu.
 (b) Maharashtra. Odisha. Punjab. Rajasthan. Telangana
 (c) Andhra Pradesh. Assam. Madhya Pradesh. Uttar Pradesh. Uttarakhand
 (d) Bihar. Haryana
 (e) All of the above
145. Name the Argentina's state-owned enterprise that has signed an agreement with Khanij Bidesh India Limited (KABIL) to explore and develop 5 lithium brine blocks
 (a) CEMYIN (b) CAMYEN
 (c) CEMYAN (d) CIMYEN
 (e) None of the above
146. Hanle as India's first dark sky reserve, is located in which state/UT?
 (a) Ladakh (b) Himachal Pradesh
 (c) Punjab (d) Jammu and Kashmir
 (e) None of the above
147. In which state/UT, Pench Tiger Reserve (PTR) is located?
 (a) Gujarat (b) Rajasthan
 (c) Uttar Pradesh (d) Madhya Pradesh
 (e) None of the above
148. Under the PM-JANMAN, India has a Scheduled Tribe (ST) population with _____ communities across _____ states.
 (a) 75 & 15 (b) 75 & 18
 (c) 53 & 68 (d) 63 & 98
 (e) 43 & 48
149. In August 2020, COVID-19 stress committee headed by
 (a) Shri Diwakar Gupta (b) Shri T N Manoharan
 (c) Shri Ashvin Parekh (d) K.V. Kamath
 (e) None of the above
150. Regional Rural Banks (RRBs) located in which of the following Union Territory (UTs)
 (a) Punjab, Jammu & Kashmir and Ladakh.
 (b) Delhi, Jammu & Kashmir and Ladakh.
 (c) Puducherry, Jammu & Kashmir and Ladakh.
 (d) Madhya Pradesh, Jammu & Kashmir and Ladakh.
 (e) Jammu & Kashmir and Ladakh.
151. How much % of Indian population come under 15-64 working age, as per the United Nations Population Fund (UNFPA)
 (a) 65% (b) 68% (c) 70% (d) 80%
 (e) 90%
152. The manipulation of facial appearance through deep generative methods called
 (a) Line art (b) Deepfake
 (c) Fake (d) Duplicate
 (e) None of the above
153. What is the inspiration for G20 2023 logo?
 (a) India's national flag (b) Russia's national flag
 (c) France's national flag (d) China's national flag
 (e) None of the above
154. Who is the first unicorn in 2024?
 (a) Krutrim (b) BYJU's
 (c) Swiggy (d) OYO Rooms
 (e) Dream11
155. Eway Bill should be generated when the value exceeds
 (a) ₹ 50,00 (b) ₹ 50,000
 (c) ₹ 50,0000 (d) ₹ 70,000
 (e) ₹ 60,000
156. The RBI has given permit to resident individuals to make remittances to IFSCs that was established in India under which scheme?
 (a) Liberalized remittance scheme (LRS)
 (b) Money Transfer Service Scheme (MTSS)
 (c) Rupee Drawing agreement (RDA)
 (d) Restructuring scheme by RBI
 (e) One Time Settlement Scheme (OTSS)
157. Which company signed MoU with NPCI to expand UPI globally?
 (a) Amazon (b) Flipkart
 (c) Google Pay India (d) Bharat pay
 (e) None of the above
158. Windfall tax levied in the form of
 (a) Special Additional Extra Duty
 (b) Special Additional Excise Duty

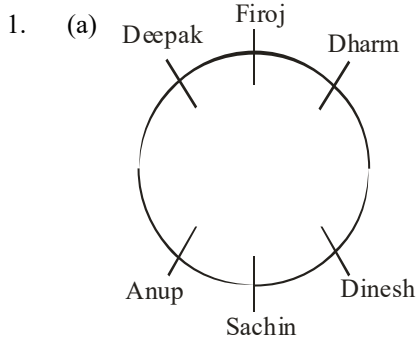
- (c) Super Additional Excise Duty
(d) Special Advantage Excise Duty
(e) None of the above
159. Tata Consultancy Services (TCS) is India's most valuable brand with a brand value of
(a) \$50 billion (b) \$43 billion
(c) \$60 billion (d) \$70 billion
(e) \$80 billion
160. What is the meaning of ISO IEC 27001?
(a) International Organization for Steel
(b) International Organization for Standardization
(c) Internal Organization for Standardization
(d) International Outlook for Standardization
(e) None of the above
161. An account becomes inoperative after how many years?
(a) 3 years (b) 4 years
(c) 2 years (d) 5 years
(e) 1 year
162. Which company ranked first among arrangers for Indian offshore loans in 2023?
(a) HDFC (b) HSBC Holdings plc
(c) SBI (d) AXIS
(e) None of the above
163. Which of the following is NOT a classical language of India?
(a) Odia (b) Pali
(c) Kannada (d) Telugu
(e) None of the above
164. REC Limited issues inaugural Yen Denominated Green Bonds aggregating to JPY 61.1 Billion for how many years?
(a) 4-year (b) 2-year
(c) 1-year (d) 5-year
(e) 3-year
165. Non-Banking Financial Companies (NBFCs) are the Financial Intermediaries engaged primarily in the business of
i. Accepting Deposits
ii. Lending loans and advances
iii. Leasing
iv. Hire purchasing
(a) i and ii (b) iii and iv
(c) i and iii (d) i, ii, iii and iv
(e) None of the above
166. Based on the recommendations of which Committee was the creation of a separate category for NBFCs operating in the microfinance sector (NBFC-MFI) done?
(a) Narasimhan Committee
(b) Malegam Committee
(c) Deepak Parekh Committee
(d) PK Mohanty Committee
(e) None of the above
167. Who is the regulatory authority for Merchant Banking in India?
(a) Securities and Exchange Board of India
(b) Reserve Bank of India
(c) Union Ministry of Corporate Affairs
(d) Union Ministry of Finance
(e) None of the above
168. Which of the following statements is incorrect with respect to TReDS?
(a) It stands for Trade Related Discounting System.
(b) It is an initiative of the Reserve Bank of India.
(c) Its aim is to help cash-starved micro, small and medium enterprises (MSMEs) promptly encash receivables.
(d) It is an online bill discounting platform that enables discounting of invoices/bills of exchanges of MSME sellers against large corporate, including Government departments and PSEs through an auction mechanism at competitive market rates.
(e) None of the above
169. The National Quantum Mission (NQM) was launched for how many years?
(a) 4 years (b) 8 years
(c) 5 years (d) 6 years
(e) 9 years
170. State Bank of India (SBI) had raised Rs. _____ through its second Basel III compliant Additional Tier 1 bond issuance for the current financial year.
(a) ₹4,000 crore (b) ₹ 5,000 crore
(c) ₹6,000 crore (d) ₹7,000 crore
(e) ₹8,000 crore
171. The transaction limit for UPI payments for Retail Direct Scheme and IPO subscriptions is upto Rs
(a) 1 lakh (b) 2 lakh
(c) 5 lakh (d) 4 lakh
(e) 6 lakh
172. The Central Board of Directors of the RBI (Reserve Bank of India) is appointed/nominated for a period of _____ years.
(a) five (b) six (c) three (d) four
(e) None of the above
173. How much fine issued for coaching centre after the 1 breach of Guidelines for Regulation of Coaching Center 2024?
(a) Rs 35,000 (b) Rs 45,000
(c) Rs 25,000 (d) Rs 55,000
(e) Rs 65,000
174. The UDGM portal to simplify the process for the public to locate their _____ in various banks through a single platform.
(a) Fixed Deposits (b) Unclaimed Deposits
(c) Current Deposits (d) Claim Deposits
(e) None of the above
175. Aihika Mukherjee is associated with which sports?
(a) Football (b) Table Tennis
(c) Cricket (d) Hockey
(e) None of the above
176. Which of the following are the Domestic Systemically Important Insurers (D-SIIs)?
(a) Life Insurance Corporation of India (LIC), General Insurance Corporation of India Limited (GIC Re)
(b) Life Insurance Corporation of India (LIC), General Insurance Corporation of India Limited (GIC Re), and New India Assurance
(c) Life Insurance Corporation of India (LIC)
(d) Life Insurance Corporation of India (LIC), General Insurance Corporation of India Limited (GIC Re), and HDFC
(e) None of the above

177. Under the Member of Parliament Local Area Development (MPLAD) scheme, Rs _____ will be available to each Member of Parliament (MP) at the start of the financial year.
 (a) 1 crore (b) 2 crore
 (c) 5 crore (d) 4 crore
 (e) 6 crore
178. Which Bank has applied to the Monetary Authority of Singapore for a banking licence?
 (a) SBI Bank (b) Axis Bank
 (c) ICICI Bank (d) HDFC Bank
 (e) Union Bank
179. How many banks were nationalized in India on 15th April 1980?
 (a) 4 (b) 5 (c) 6 (d) 8
 (e) 9
180. Which team Netherlands defeated in World Cup 2023?
 (a) India (b) Pakistan
 (c) Bangladesh (d) South Africa
 (e) None of the above
181. Which of the following is not a regulatory body?
 (a) CCI (b) RBI (c) SIDBI (d) SEBI
 (e) None of the above
182. What is the compensation amount per day of delay in releasing documents as per RBI's recent directions?
 (a) ₹ 2,000 (b) ₹ 5,000 (c) ₹ 3,000 (d) ₹ 4,000
 (e) ₹ 6,000
183. Presence of Indian banks increased in overseas through _____
 (a) subsidy (b) Subsidiaries route
 (c) annexation (d) appropriation
 (e) None of the above
184. Which bank has signed an MoU with the Indian Renewable Energy Development Agency (IREDA) to co-lending and loan syndication of Renewable Energy (RE) projects across the India?
 (a) ICICI (b) Punjab National Bank
 (c) SBI (d) HDFC
 (e) None of the above
185. When was the Pension Fund Regulatory and Development Authority of India (PFRDA) established?
 (a) 2000 (b) 2005 (c) 2003 (d) 2001
 (e) None of the above
186. How many times has NASA Apollo reached the moon till now?
 (a) Two missions (b) Six missions
 (c) Five missions (d) Four missions
 (e) Ten missions
187. The Constitution (Scheduled Castes) Order (Amendment) Bill, 2023 was passed to include two synonyms for a community in which state?
 (a) Madhya Pradesh (b) Sikkim
 (c) Chhattisgarh (d) West Bengal
 (e) Bihar
188. Which Union Ministry has set up a working group to decriminalise laws to further promote ease of doing business?
 (a) Ministry of Finance
 (b) Ministry of MSME
 (c) Ministry of Commerce and Industry
 (d) Ministry of Corporate Affairs
 (e) None of the above
189. India and which bloc reached an agreement to review their free trade pact for goods by 2025?
 (a) SAARC (b) BIMSTEC
 (c) ASEAN (d) G-20
 (e) None of the above
190. India signed a MoU with which country to boost cooperation in civil aviation?
 (a) New Zealand (b) France
 (c) Germany (d) Spain
 (e) France

ANSWER KEY

1	(a)	21	(d)	41	(b)	61	(c)	81	(b)	101	(a)	121	(a)	141	(d)	161	(c)	181	(c)
2	(b)	22	(a)	42	(b)	62	(b)	82	(c)	102	(d)	122	(a)	142	(c)	162	(b)	182	(b)
3	(b)	23	(b)	43	(d)	63	(a)	83	(b)	103	(c)	123	(b)	143	(b)	163	(b)	183	(b)
4	(c)	24	(d)	44	(b)	64	(c)	84	(a)	104	(e)	124	(c)	144	(e)	164	(d)	184	(b)
5	(a)	25	(d)	45	(b)	65	(b)	85	(b)	105	(d)	125	(b)	145	(b)	165	(d)	185	(c)
6	(b)	26	(a)	46	(c)	66	(c)	86	(c)	106	(a)	126	(b)	146	(a)	166	(b)	186	(b)
7	(c)	27	(c)	47	(b)	67	(a)	87	(b)	107	(d)	127	(b)	147	(d)	167	(b)	187	(c)
8	(c)	28	(c)	48	(e)	68	(a)	88	(a)	108	(d)	128	(a)	148	(b)	168	(a)	188	(c)
9	(a)	29	(e)	49	(e)	69	(b)	89	(b)	109	(c)	129	(b)	149	(d)	169	(b)	189	(c)
10	(e)	30	(a)	50	(d)	70	(b)	90	(d)	110	(a)	130	(c)	150	(c)	170	(b)	190	(a)
11	(e)	31	(c)	51	(a)	71	(a)	91	(e)	111	(c)	131	(c)	151	(b)	171	(c)		
12	(d)	32	(e)	52	(b)	72	(a)	92	(d)	112	(d)	132	(c)	152	(b)	172	(d)		
13	(c)	33	(a)	53	(d)	73	(d)	93	(c)	113	(e)	133	(d)	153	(a)	173	(c)		
14	(d)	34	(b)	54	(a)	74	(a)	94	(c)	114	(e)	134	(b)	154	(a)	174	(b)		
15	(d)	35	(e)	55	(c)	75	(c)	95	(d)	115	(b)	135	(a)	155	(b)	175	(b)		
16	(b)	36	(b)	56	(b)	76	(b)	96	(c)	116	(d)	136	(b)	156	(a)	176	(b)		
17	(b)	37	(d)	57	(c)	77	(a)	97	(b)	117	(a)	137	(e)	157	(c)	177	(c)		
18	(b)	38	(b)	58	(c)	78	(c)	98	(a)	118	(c)	138	(a)	158	(b)	178	(d)		
19	(b)	39	(d)	59	(c)	79	(b)	99	(d)	119	(b)	139	(a)	159	(b)	179	(c)		
20	(c)	40	(a)	60	(d)	80	(c)	100	(c)	120	(a)	140	(c)	160	(b)	180	(c)		

ANSWERS & EXPLANATIONS



2. (b) Clearly, Dinesh is sitting opposite of Deepak
 After Combining
 $N \geq K \leq T \leq J \leq I \leq G = M > L \leq H \leq F = Z$

Conclusions:

- I. $G > L \rightarrow$ True ($G = M > L$)
 - II. $F > L \rightarrow$ False ($L \leq H \leq F \rightarrow L \leq F$)
 - III. $F = L \rightarrow$ False ($L \leq H \leq F \rightarrow L \leq F$)
- So, conclusion II and conclusion III form complementary pairs.
 Hence, only I and Either II or III are True.

3. (b) $H \geq U < K \leq L \leq T < N = J > I \leq G \leq M = A$
Conclusions:

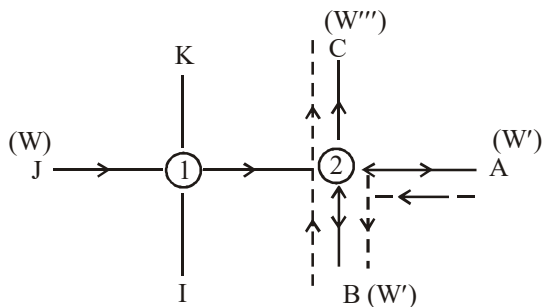
- I. $M > I \rightarrow$ false ($I \leq G \leq M \rightarrow I \leq M$)
 - II. $L < H \rightarrow$ false ($H \geq U < K \leq L$)
 - III. $I = M \rightarrow$ false ($I \leq G \leq M \rightarrow I \leq M$)
- So, conclusion I and conclusion III forms complementary pair.
 Hence, Either I or III is true.

4. (c) $K \leq N < R = T \geq F = U \geq I = H < B = X$

Conclusions:

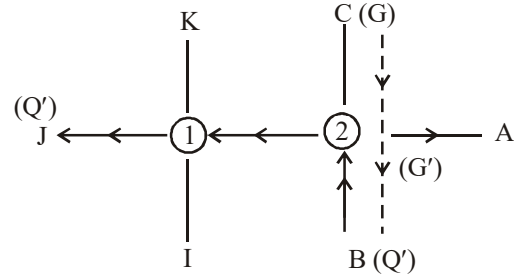
- (I) $T > H \rightarrow$ False ($T \geq F = U \geq I = H \rightarrow T \geq H$)
 - (II) $R \neq U \rightarrow$ True ($R = T \geq F = U$)
 - (III) $H = T \rightarrow$ False ($T \geq F = U \geq I = H \rightarrow T \geq H$)
- So, conclusion I and III forms complementary pair.
 Hence, only II and either I or III are true.

Sol. (5- 8):



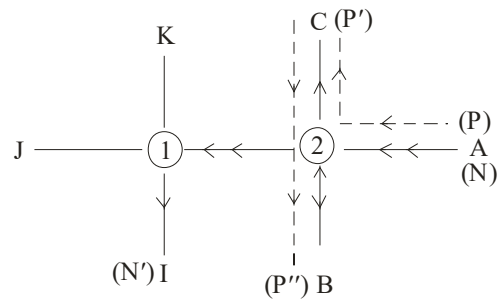
5. (a) So, the answer is North-East.

6. (b)



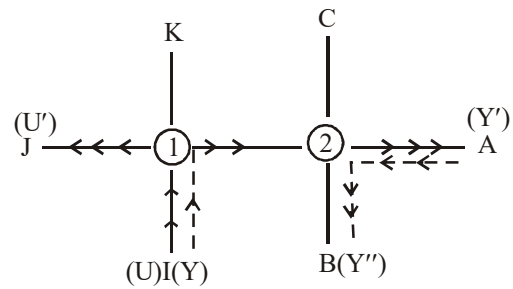
So, it is clear that the initial position of Q is in the south to the initial position of G.

7. (c)



So, we know that the final position of Bus 'N' from initial position of Bus 'P' is in South-West.

8. (c)



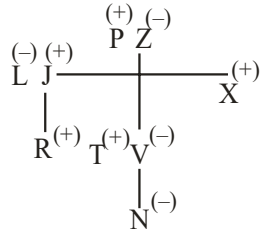
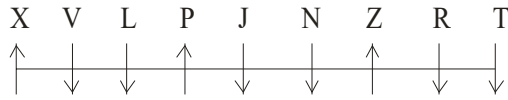
The distance between each point is unknown so we can not exactly tell the initial position of Bus U from final Position of Bus Y. It can not be determined.

9. (a)

Digits	7	7	8	4	4	6	7	4	8	2	8	4
Subtract-1	+1	-1	+1	-1	+1	-1	+1	-1	+1	-1	+1	-1
Add 1												
Resultant Digit	8	6	9	3	5	5	8	3	9	1	9	3
Final Number	6	8	3	9	5	5	3	8	1	9	3	9

The sum of all the digits of the final number is $\underline{\hspace{2cm}}$
 $= 6 + 8 + 3 + 9 + 5 + 5 + 3 + 8 + 1 + 9 + 3 + 9 = 69$
 The largest two digit number is = 99
 Therefore, the difference between 99 and 69 is = 30

Sol. (10-14)

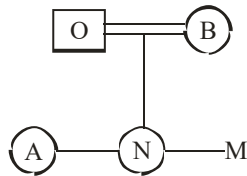


- 10. (e) N is the grand daughter of Z
Hence, Z is the grandmother of N.
- 11. (e) V is seated third to the right of J
Hence, V sits third to the right of J.
- 12. (d) The grandchildren of P are R and N. N is seated second to the right and R is seated fourth to the right of P. Hence, the grandchildren sit second and fourth to the right of P.
- 13. (c) The two persons sitting at the two ends of the row are X and T. They are brothers-in-law.
Hence, X and T are brothers-in-law.
- 14. (d) **Statement I:** No married couple is seated side by side. This is true. There are three married couples in the family and none are seated side by side.
Statement II: R and N are cousins. This is true.
Statement III: Z is mother-in-law of L. This is true. L is J's wife who is the son of Z.
Hence, none of the statements are false.

Sol. (15-18):

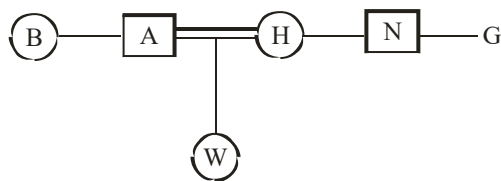
Symbol in diagrams	Meaning
○ Female	□ Male
══ Married	— Single

15. (d)



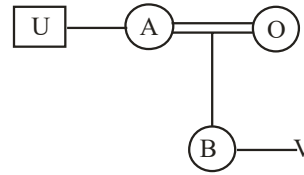
M is being the daughter of B when the symbol of '#' between M and B can be palced here.
Hence, the option (d) is Correct.

16. (b)



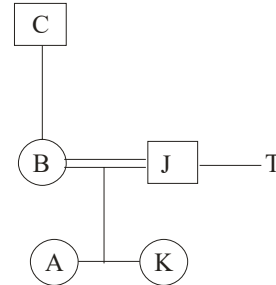
Therefore, only statement (b) is true.
Hence, A is the brother-in-law of g.

17. (b)



U is the uncle of V
Hence, the answer is U%A\$B#O+V

18. (b)



Hence, J is the father of A.

19. (b)

- I. "White Whale" only sells new books → The passage does not provide any information about whether the bookstore only sells new books or not. Therefore, we cannot conclude that statement I is correct.
 - II. The bookstore's success is due to its book collection and cozy atmosphere → The passage mentions that the bookstore has gained popularity due to its "extensive collection of books" and "cozy reading books and tea shop". Therefore, statement II is correct.
 - III. Aakash's expertise is in management rather than literature → The passage states that Aakash, the store owner, "has studied literature at a prestigious university". The passage does not provide any information about Aakash's management skills or education. Therefore, we cannot conclude that the statement III is correct.
- Hence, the correct answer is Only II.

20. (c)

Statement 1: It suggests that the integration of AI-driven financial advisors may contribute to reinforcing biased financial practices, aligning the warning in the study.
Statement II: It assumes that financial institutions are actively working to eliminate biases in AI system used for decision-making in the financial sector, which is not explicitly mentioned in the given information. However, it is a common expectation that institutions would work towards reducing biases. Therefore, the correct answer is C, as both assumptions are implicit and align with the concerns raised in the study about AI - driven financial advisors.
The correct answer is option (c). Both I and II implicit.

21. (d)

The codes for the 21 consonants and 5 vowels of the English alphabetical series. They are as follows-
1. The consonants are coded as the numbers of the even number series except N, M and I, which are coded with special characters. Therefore, the codes for the consonants are-

CONSONANT	CODE	CONSONANT	CODE
B	2	N	&
C	4	P	20
D	6	Q	22
F	8	R	%
G	10	S	24
H	12	T	26
J	14	V	28
K	16	W	30
L	18	X	32
M	@	Y	34
		Z	36

2. The vowels are coded as the position of letter we get by reversing the English alphabetical series. The codes for vowels are-

VOWEL	MIRROR LETTER	CODE
A	Z	26
E	V	22
I	R	18
O	L	12
U	F	6

The given word is 'BUSINESS'. It is a eight letter word. So the code for it should begin with 'c'. Also the fourth letter is a vowel. So it should be replaced by '#' in the code.

Therefore, in accordance with the given set of rules, the code for the given word is C2624#&222424

Hence, the code for the word 'BUSINESS', is 'C2624#&222424'.

22. (a) In accordance with the given set of rules, the code for the word 'INTERMEDIATE' is C18&26#%'22618262622'.
Hence, the second part of the code for the word INTERMEDIATE is 226182622.
23. (b) 'DOCTOR' is coded as 'C61242612%'.
The sum of the individual digits in the code is ____.
 $6 + 1 + 2 + 4 + 2 + 6 + 1 + 2 = 24$
'ENGINEER' is coded as 'C22&10#&2222%'.
The sum of the individual digits in the code is ____
 $2 + 2 + 1 + 0 + 2 + 2 + 2 + 2 = 13$
The positive difference between these two quantities is $24 - 13 = 11$
24. (d) The vowels are shifted by two forward places and the consonants are shifted by four backward places according to the English alphabetical series 8 ____.

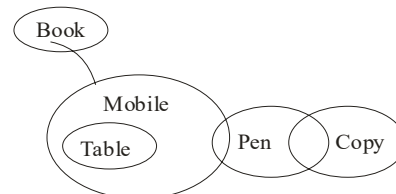
LETTERS	D	E	P	O	S	I	T
CONSONANTS (C)/VOWELS(V)	C	V	C	V	C	V	C
+2 if(V) -4if (C)	-4	+2	-4	+2	-4	+2	-4
RESULTANT LETTER	Z	G	L	Q	O	K	P
REARRANGEMENT	G	K	L	O	P	Q	Z

The second letter from right end is 'Q'. The fourth letter from the left end is 'O'. Difference between them is $17 - 15 = 2$

Sol. (25-29):

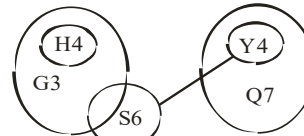
Floor	Person
13	VACANT
12	S
11	Z
10	X
9	VACANT
8	W
7	Q
6	T
5	VACANT
4	U
3	Y
2	V
1	VACANT

25. (d) 'Y' lines two floor below vacant floor.
26. (a) Number of person between Z and T is three.
27. (c) There are four floor in between W and Y.
28. (c) So, floors S and I are vacant, Hence, option(c) is the correct answer.
29. (e) All except 'z' lines in even number floor.
30. (a)



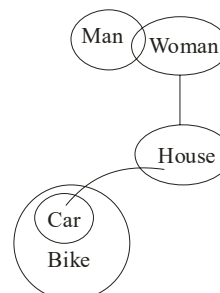
Hence, Only I follows.

31. (c)



Hence, the correct answer is all follows.

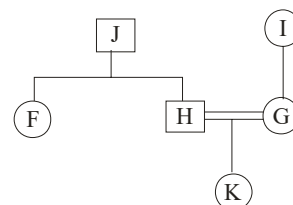
32. (e)



Hence, the correct answer is Only II follows.

33. (a) **Inference 1:-**
Christie Brinkley is decision to use an app to track her kids' Online activity and restrict their screen time suggests that she is a responsible parent who cares about her children's well-being and safety. Therefore, the inference I is valid.
34. (b) According to statement I, India has made a progressive and landmark change in law that recognizes gender equality in India by making it possible to use mother's name in official documents, which is the effect of the fact that India is bound by international law to respect and protect such rights as per statement II.
Thus statement I is the effect and II is the cause. Hence, the correct answer is **Statement II is the cause and statement I is the effect.**
35. (e) Let's analyze the possible effects of the new policy mandating students to renew their biometric identity cards every six months with physical presence:
Effect I: The policy will have a positive effect on both academic performance and engagement, as it will motivate the students to attend classes regularly, interact with their peers and instructors, and take advantage of the available resources. '!
Effect II: The policy will have a negative effect on both academic performance and engagement, as it will create an unnecessary burden and hassle for the students, especially for those who live far away or have other commitments. '!
Hence, the correct answer is **Both I and II.**
36. (b) To determine which of the suggested courses of action logically follow for addressing the situation of an increase in waterborne diseases in Area W of Country H, let's analyze each course of action:
Course of Action II: To save from waterborne diseases, a public awareness program should be arranged so that people can be aware of using clean water. '!
This **course of action logically follows** for addressing the situation. Waterborne diseases are likely occurring because people in Area W are using tap water without filtration. Conducting a public awareness program would help educate the residents about the risks associated with using untreated water and promote the importance of using clean water to prevent waterborne diseases. Hence, the correct answer is **If only II follows.**
37. (d)
38. (b) The passage talks about effects of racial discrimination faced by the weaker section of people so that still the weaker section faces racial discrimination, which was believed to be a thing of the past. Thus, the racism faced should be put to an end.
- I. Because of the institutions of our democratic politics and the increase of literacy, millions of individuals from the weaker parts of society now have a voice and empowerment which is positive note and it does not weaker the statement.

- II. People of different racial and ethnic origins may have privileges in comparison to the numerous advantages one individual receives. Thus, this statement weakens the argument.
- III. The establishment of a National Committee and the widespread endorsement of the constitutional and other legal provisions that prohibit discrimination should be supported. This statement does not weaken the argument.
- IV. The world is now more linked thanks to the internet and social media. However, some people are stoking racial tension with this technological breakthrough which does not weakens the argument.
- V. Our democratic system's institutional and administrative structures have been set up by the government to counter different forms of prejudice. this will strengthen the argument. Thus, **option II is the answer.**
39. (d)
- I. The incident showcases a clear violation of the food blogger's privacy and dignity, highlighting an instance of gender-based harassment. Such behavior not only infringes on individual rights but also points to a larger societal issue that demands attention.
- II. The statement implies that incidents like these contribute to a negative perception of safety for women in public spaces, and such occurrences tarnish the reputation of the city. This indicates a broader impact on the safety perception and reputation of the city due to incidents like the one described. Therefore, assumption II is implicit. Hence, both assumptions I and II are implicit in the given context.
40. (a) The given statement is-
The college authorities have decided to give seven grace marks in the Mathematics paper to all the second-year students as the performance of these students in Mathematics was below their expectations. This mainly implies that a majority of the students in second year have not passed their Mathematics paper and giving them grace marks might help them clear their paper.
Considering this, we can infer that:
Assumption I: Majority of the students in second-year may still fail in Mathematics even after giving them grace marks. This statement is implicit as those seven grace marks may still not be enough for many students of second year to pass their examination as they might have performed very poorly. They might need more than seven marks to pass the examination. Hence, **only assumption I is implicit.**
41. (b)



Hence, statement alone is sufficient to answer the question.

42. (b)

No.	Box	Vegetables
6	N	Onion
5		
4	M	Garlic
3	I	Tomato
2	K	Corn
1	J	Potato

This statement is sufficient to answer. How many boxes are kept below one contains Garlic.

Hence, the data in statement II alone is sufficient to answer the question, while the data in statement I alone is not sufficient to answer the question.

Sol. (43-47):

For the four letter words:- The first word from the four letter words shifted to the end (arranged from right to left) and the letters are arranged in alphabetical order.

For the three letter words:- The letters in words are arranged in alphabetical order from the beginning.

Input : CALM TRUE COOL SAFE PLA Y CRY LET TOE DOG

Step I: TRUE COOL SAFE PLAY ACLM CRY LET TOE DOG

Step II: COOL SAFE PLAY ERTU ACLM CRY ELT TOE DOG

Step III: SAFE PLAY CLOO ERTU ACLM CRY ELT EOT DOG

Step IV: PLAY AEFS CLOO ERTU ACLM CRY ELT EOT DGO

Step V: ALPY AEFS CLOO ERTU ACLM CRY ELT EOT DGO

43. (d) From above we know that the third element is step V is 'CLOO'.

44. (b) As we can see that 'PLAY' is 2nd to the left of 'ERTU' in setp III.

45. (b) In step V 'CLOO' comes exactly between "AEFS" and "ERTU".

46. (c) In Step III "PLAY CLOO ERTU" are in same order.

47. (b) From the above steps it is clear that PLAY, AEFS and EOT, DGO represents the first two and last two elements in Step IV.

48. (e) From Statements I and II :

Salary (Decreasing Order)	Shyam	Ravi	Kavita	Sonu	Tanu	Sameen	Monu

Thus, the salary of only three persons are less than 'Sonu' Hence. Statement I and II together are sufficient.

49. (e)

Floor	Person
8	Z
7	U
6	W
5	
4	V
3	X
2	Y
1	T

Hence, both statements are needed to answer the question.

50. (d)

Given words	Selected Letters	New Word
Claustrophobia	l, r, b, a	-
Photosynthesis	h, y, n, s	-
Incomprehensive	c, o, e, s	-
Not with Standing	w, l, n, d	Wind
Parallelogram	l, e, a, m	-

Sol. (51-55):

Shops	Sold Tricycles	Cost price per Tricycle	Markup Price Per Tricycle	Selling Price per Tricycle	Total Discount	Discount per Tricycle
P	30	₹100	₹140	₹133	₹210	₹7
Q	y = 200	₹205	₹246	₹243	₹600	₹3
R	x = 25	₹100	₹250	₹133	₹2925	₹117
S	210	₹200	₹360	₹334.29	₹5400	₹25.71
Total	465	₹605	₹996	₹843.29	₹9135	₹152.71

51. (a) Cost price each Tricycle in shop T = $\frac{200}{4} \times 5 = ₹250$

Number of tricycles is shop T = 200 - 120 = 80

So, condition III is not true.

Markup % of Tricycles is shop T = 25 + 5 = 30%

∴ Markup price of each Tricycles in shop T

$$= 250 \times \frac{130}{100} = ₹325$$

$$\text{Discount of each Tricycles in shop T} = \frac{4800}{80} = ₹60$$

∴ Selling price of each Tricycle in shop T

- $= 325 - 60 = ₹265$
 So, condition I is true.
 Total revenue in shop T = $80 \times 265 = ₹21200$
 So, condition II is not true
 Hence, only condition I is true
52. (b) Required difference = $₹996 - ₹843.29 = ₹152.71$
53. (d) Total tricycles sold in shop Q = 200
 Defective tricycles = $200 \times \frac{20}{100} = 40$
 Non - defective tricycles = $200 - 40 = 160$
 Discount per tricycles for non - defective tricycles = ₹3
 \therefore Discount per tricycle for defective tricycles = $3 + 2 = ₹5$
 Hence, total discount given by shop Q = $160 \times 3 + 40 \times 5 = 480 + 200 = ₹680$
54. (a) Marked price of each tricycle in shop R = ₹250
 Number of tricycles, sold by shop U = $46 - 25 = 21$
 Hence, condition I is satisfy.
55. (c) (I) Difference between total revenue received by the shop P and R = $30 \times 133 - 25 \times 133 = 5 \times 133 = ₹665$ (True)
 (II) Marked price of each tricycle in shop R = ₹250 (True)
 (III) Selling price of each tricycle in shop P = ₹133 (Not true)
 Hence, only I and II are true.
56. (b) Let J's present age is x years.
 According to question,
 $\frac{x-2}{x+10} = \frac{4}{7}$
 $\Rightarrow 7x - 14 = 4x + 40$
 $\Rightarrow 3x = 54$
 $\Rightarrow x = 18$ years
 Let K's present age is y years.
 $18 - y = 72 - 12a$
 $\Rightarrow y = 12a - 54$ — (i)
 And $18 + y = a^2$
 $\Rightarrow y = a^2 - 18$ — (ii)
 From equation (i) and (ii) —
 $12a - 54 = a^2 - 18$
 $\Rightarrow a^2 - 12a + 36 = 0$
 $\Rightarrow a = 6$
 \therefore K's present age = $12 \times 6 - 54 = 18$ years.
 So average age = $\frac{(18+3)+(18-7)}{2} = \frac{21+11}{2} = 16$
 Hence, we can write $16 = 6 + 10 = (a + 10)$
57. (c) Juice in final mixture = $500 \times \frac{3}{10} = 150\text{ml}$
 Water in final mixture = $500 \times \frac{7}{10} = 350\text{ml}$
 \therefore Total juice taken out in two process = $250 - 150 = 100$ ml

- \therefore Juice removed in one process = $\frac{100}{2} = 50$ ml
 So, $70 \times \frac{250}{(250+a)} = 50$
 $\Rightarrow 250 + a = 350$
 $\Rightarrow a = 100$ ml (Initial quantity of water)
 \therefore Replaced water in each process = $70 - 50 = 20$ ml
 So, quantity of water after two process = $100 - 20 - 20 = 60$ ml
 Hence quantity of water added = $350 - 60 = 290$ ml
58. (c) **Quantity I :**
 $x \times \frac{20}{100} - (x+50) \times \frac{10}{100} = 45$
 $\Rightarrow \frac{2x}{10} - \frac{x}{10} - 5 = 45$
 $\Rightarrow \frac{x}{10} = 50$
 $\Rightarrow x = ₹500$ (Cost price of Article A)
 \therefore Profit on article A = $500 \times \frac{20}{100} = ₹100$
- Quantity II :**
 Loss = $560 \times \frac{25}{100} = ₹140$
 Hence, Quantity I < Quantity II
59. (c) Sum of roots = $\frac{(-b)}{a} = \frac{b}{a}$
 (coefficient of x)
 (coefficient of x^2)
 $\Rightarrow \frac{b}{a} = 4.5 = \frac{9}{2}$
 So, coefficient of x (M) = 9
 \therefore Equation is $-2x^2 - 9x + 10 = 0$
 $\Rightarrow 2x^2 - 4x - 5x + 10 = 0$
 $\Rightarrow (x-2)(2x-5) = 0$
 $\Rightarrow x = 2, \frac{5}{2} = 2.5$
 $\therefore a = 2.5$ and $b = 2$
 $4y^2 - Ny + 19 = 0$
 One root of this equation = $2.5 \times \frac{40}{100} = 1$
 Product of roots = $c \times d = \frac{19}{4} = 4.75$
 as $c > d$
 $\therefore d = 1$
 And, $c = 4.75$
 I. $a + c = b + d$
 $\Rightarrow 2.5 + 4.75 = 2 + 1$
 $\Rightarrow 7.25 \neq 3$ (Not correct)
 II. $c + d = 4.75 + 1 = 5.75$ (Correct)
 III. As, $a = 2.5, b = 2, c = 4.75, d = 1$
 So, $a > b > c > d$ is not correct

60. (d) 1st scheme –

$$8800 = P \left(1 + \frac{20}{100} \right)^2 - P$$

$$\Rightarrow 8800 = P \left[\frac{36}{25} - 1 \right]$$

$$\Rightarrow P = 8800 \times \frac{25}{11} = ₹20000 \text{ (Principal amount)}$$

In IInd scheme –

$$\text{Principal} = 2 \times 20000 = ₹40000$$

$$\text{Compound Interest} = 40000 \left[\left(1 + \frac{10}{100} \right)^2 - 1 \right]$$

$$= 40000 \left(\frac{121}{100} - 1 \right) = 40000 \times \frac{21}{100} = ₹8400$$

61. (c) Yellow balls = 10

Green balls = 8

White balls = 32 – (10 + 8) = 14

$$\text{Hence, required probability} = \frac{{}^{10}C_1 \times {}^8C_1 \times {}^{14}C_1}{{}^{32}C_3}$$

$$= \frac{10 \times 8 \times 14}{32 \times 31 \times 30} = \frac{10 \times 8 \times 14}{16 \times 31 \times 10} = \frac{7}{31}$$

Sol. (62 – 66):

BPOs	Inbound Messages	Outbound Messages	Total
P	55	25	80
Q			100
R	95	25	120
S	115	35	150
T	100	120	220
U	60	100	160

62. (b) Males bounded the inbound message in R

$$= \frac{95}{19} \times 10 = 50$$

Females bounded the inbound message in R

$$= 98 - 50 = 48$$

Males bounded the outbound messages in R

$$= 70 - 50 = 20$$

∴ Females bounded the outbound messages in R

$$= 25 - 20 = 5$$

Hence, required difference = 48 – 5 = 43.

63. (a) Inbound messages by S = $150 \times \frac{23}{30} = 115$

$$\text{Outbound messages by S} = 150 \times \frac{7}{30} = 35$$

Total messages made by Q = 100

$$\therefore \frac{(115-100)}{100} \times 100 = (a+3)$$

$$\Rightarrow 15 = a + 3$$

$$\Rightarrow a = 12$$

So, $a + 4 = 12 + 4 = 16$

Hence, International Inbound messages of R

$$= 95 \times \frac{3}{(16+3)} = 5 \times 3 = 15$$

64. (c) Total domestic messages by P = 80 – 41 = 39

$$\therefore \text{Inbound domestic messages by P} = 39 \times \frac{4.5}{6.5} = 27$$

Outbound messages by T = 120

Hence, required ratio = 27 : 120 = 9 : 40

65. (b) Let International messages by Q and S are 26a and 45a respectively.

And Domestic messages by Q and S are 4b and 5b respectively.

According to question,

$$26a + 4b = 100 \text{ – (i)}$$

$$45a + 5b = 150 \text{ – (ii)}$$

By solving equation (i) and (ii)

$$a = 2 \text{ and } b = 12$$

$$\therefore \text{International message by Q} = 26 \times 2 = 52$$

Total Inbound message by U = 60

Hence, difference = 60 – 52 = 8

66. (c) Inbound messages by U = 60

$$\text{So, } b + 3 = 60 + 3 = 63$$

$$\text{And } 33.33\% = \frac{1}{3}$$

$$\text{So, Outbound messages by Q} = 63 \times \frac{4}{3} = 84$$

Inbound message by Q = 100 – 84 = 16

$$\therefore 4 : x = 16 : 84 = 4 : 21$$

So, $x = 21$

$$\therefore m^2 - 21m + 108 = 0$$

$$\Rightarrow m^2 - 12m - 9m + 108 = 0$$

$$\Rightarrow (m - 12)(m - 9) = 0$$

$$\Rightarrow m = 9, 12$$

Hence, smaller root (a) = 9

67. (a) Let monthly income of A and B are 100a and 300a respectively.

$$\text{A's expenditure} = 100a \times \frac{x}{100} = ax$$

$$\text{B's expenditure} = 300a \times \frac{7}{12} = 175a$$

According to question,

$$12480 + ax = 100a$$

$$\Rightarrow (100 - x)a = 12480 \text{ – (i)}$$

$$\text{And, } ax + 175a = 59020$$

$$\Rightarrow (175 + x)a = 59020 \text{ – (ii)}$$

By dividing equation (ii) by (i) –

$$\frac{175 + x}{100 - x} = \frac{59020}{12480} = \frac{227}{48}$$

$$\Rightarrow 48x + 8400 = 22700 - 227x$$

$\Rightarrow 275x = 14300$

$\Rightarrow x = 52$

By equation (i) –

$(100 - 52)a = 12480$

$\Rightarrow a = \frac{12480}{48} = 260$

Hence, average monthly income of A and B

$= \frac{100a + 300a}{2} = 200a = 200 \times 260 = ₹52000$

68. (a) Ratio of investment of Yuvi, Ekansh and kartik
 = $(30000 \times 6 + 24000 \times 6) : 36000 \times 12 : 6x$
 = $54000 : 72000 : x$
 According to question,

$132000 \times \frac{72000}{(126000 + x)} = 48000$

$\Rightarrow \frac{66 \times 3000}{(126000 + x)} = 1$

$\Rightarrow 126000 + x = 198000$

$\Rightarrow x = 198000 - 126000 = 72000$

Hence, value of $x = ₹72000$

69. (b) I. $x^2 - 4x - 8x + 32 = 0$

$\Rightarrow (x - 4)(x - 8) = 0$

$\Rightarrow x = 4, 8$

II. $x^2 - 26x + 169 = 0$

$\Rightarrow x^2 - 13x - 13x + 169 = 0$

$\Rightarrow (x - 13)(x - 13) = 0$

$\Rightarrow x = 13, 13$

So, two equations can make –

(i) $x^2 - (13 + 4)x + 13 \times 4 = 0$

$\Rightarrow x^2 - 17x + 52 = 0$

(ii) $x^2 - (13 + 8)x + 13 \times 8 = 0$

$\Rightarrow x^2 - 21x + 104 = 0$

Hence, equation in option (b) is formed.

70. (b) $? \times 8 + \frac{45}{100} \times 80 = 33 \times 4$

$\Rightarrow ? \times 8 = 132 - 36$

$\Rightarrow ? = \frac{96}{8} = 12$

71. (a) $\frac{25 \times 4}{5} + 16 + (8)^2 = ?^2$

$\Rightarrow ?^2 \times 20 + 16 + 64$

$\Rightarrow ? = \sqrt{100} = 10$

Sol. (72 – 75):

Articles	Cost - price	Selling Price	Marked Price	Discount	Profit
J	–	₹180	–	–	–
K	₹240	₹306	₹360	₹54	₹66
L	–	–	₹420	–	–
M	₹260	–	₹390	–	–

72. (a) New Cost price of article M = $260 \times \frac{125}{100} = ₹325$

Discount on article M = $390 \times \frac{20}{100} = ₹78$

\therefore Selling price of article M = $390 - 78 = ₹312$

\therefore Loss occurred = $325 - 312 = ₹13$

Hence, statement I and II only are true.

73. (d) Selling price of article L = $420 \times \frac{80}{100}$

\Rightarrow Cost price of article L + 36 = 336

\Rightarrow Cost price of article L = $336 - 36 = ₹300$

Selling price of article J = ₹180

Hence, required difference = $300 - 180 = ₹120$

74. (a) Selling price of N = $\frac{180}{3} \times 5 = ₹300$

\therefore Marked price of N = $300 + 50 = ₹350$

Cost price of N = $260 - 10 = ₹250$

\therefore Cost price of J = $180 \times \frac{100}{120} = ₹150$

Hence, required sum = $250 + 350 + 150 = ₹750$

75. (c) Profit on M = $66 - 25 = ₹41$

\therefore Selling price of M = $260 + 41 = ₹301$

Hence, discount % on M

$= \frac{(390 - 301)}{390} \times 100 = 22.82\%$

76. (b) Let cost price of two chairs are $50x$ and $90x$.
 Selling price of chair in which CP is less

$= 50x \times \frac{124}{100} = 62x$

According to question,

$62x + 62x + 2196 = 140x \times \frac{106}{100}$

$\Rightarrow 124x + 2196 - 148.4x$

$\Rightarrow 24.4x = 2196$

$\Rightarrow x = 90$

Hence, required difference = $90x - 50x = 40x$

$40 \times 90 = ₹3600$

77. (a) $\frac{1}{2} \times \text{base} \times 60 = 2100$

$\Rightarrow \text{Base} = \frac{2100}{30} = 70$

\therefore Breadth of rectangle = 70cm

$\therefore 2(70 + l) = 360$

$\Rightarrow 70 + l = 180 \Rightarrow l = 110$

\therefore Radius of circle = $\frac{110}{22} \times 7 = 35\text{cm}$

Hence, perimeter of the circle = $2\pi r$

$= 2 \times \frac{22}{7} \times 35 = 220\text{ cm}$