RRB PO Mains 2025 Reasoning Section Memory-Based Paper (28 Dec 2025)

Directions (1-3): In the question below, some statements are given followed by two conclusions numbered I and II. You have to take the given statements to be true even if they seem to be at variance with commonly known facts. Read all the conclusions and then decide which of the given conclusions logically follows from the given statements, disregarding commonly known facts. Give answer-

Q1. Statements:
Only a few books are copies
All copies are markers
Some markers are pens
No pens are paper
Conclusions:
I. All copies being books is a possibility
II. Some markers are not paper
III. No books being markers is a possibility
(a) Only I follow
(b) Only III follow
(c) Both I and II follow
(d) Both II and III follow
(e) All I, II and III follow

Q2. Statements:
All boxes are tools.
Only a few tools are sharp.
Some boxes are not heavy.
No sharp is plastic.
Conclusions:
I. All heavy being tools is a possibility
II. Some boxes are plastic
III. No boxes are plastic
(a) Only II follow
(b) Only I follow
(c) Both I and II follow
(d) Only I follow and Either II and III follow
(e) Both II and III follow

Q3. Statements:
Only cups are mugs
Some cups are table
Some kettle is chair
All table is kettle
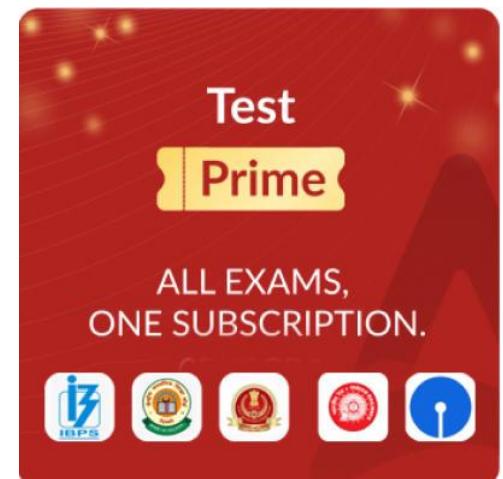
Conclusions:
I. No mugs being chair is a possibility
II. All cups are kettle
III. Some table being chair is a possibility.
(a) Only I follow
(b) Only III follow
(c) Both I and II follow
(d) Both II and III follow
(e) All I, II and III follow

Directions (4-8): Read the given information carefully and answer the questions that follow:
Eight boxes A, B, C, D, E, F, G, and H are kept one above the other in a vertical stack, but not necessarily in the same order. Each box has a different stationery item among: Pen, Pencil, Eraser, Pins, Marker, Plates, Cups, Stapler
Three boxes are kept between box A and the box which has pencil. Box A is kept above the box which has pencil. Two boxes are kept between box C and the box which has pencil. Box A is not kept immediately above box C. The box which has eraser is kept five boxes above box C. More than two boxes are kept between box G and the box which has eraser. Same number of boxes are kept below box G and above the box which has cups. The box which has pen is kept immediately below the box which has marker. The box which has pen and stapler is not kept at bottom-most position. One box is kept between box E and the box which has marker. The box which has pins is kept two boxes above the box D. Two boxes are kept between box D and box F. Box F is neither kept adjacent to box H nor has eraser.

Q4. Which of the following statement is NOT true?
(a) No box is kept between box E and the box which has pencil.
(b) Box G is kept below the box which has cups.
(c) The number of boxes kept above box E is one more than the number of boxes kept below the box which has stapler.
(d) Box B has pencil
(e) Two boxes are kept between boxes which has Cups and Pencil

Q5. Box C has which item?
(a) Marker
(b) Pencil
(c) Pen
(d) Plates
(e) Stapler

Q6. How many boxes are kept above the box which has the Marker?
(a) Two
(b) Three
(c) Four
(d) Five
(e) One

Q7. Four of the following five are alike in a certain way and thus form a group.
Which one does not belong to the group?
(a) Box E and the box which has cups
(b) Box B and the box which has eraser
(c) Box F and the box which has stapler
(d) Box C and the box which has marker
(e) Box G and the box which has pins

Q8. Which of the following box has Stapler?
(a) Box B
(b) Box D
(c) Box E
(d) Box A
(e) Box H

Directions (9-11): The question below is followed by two statements numbered I and II. You have to decide whether the data provided in the statements are sufficient to answer the question. Read both statements carefully and give the answer:

Q9. Six persons A, B, C, D, E and F sit around a circular table and face towards the centre. Who sits immediately to the right of E?
Statements:
I. A sits immediate right of D. C is not an immediate neighbour of D and A. One person sits between C and E. E and A are not immediate neighbours.
II. Two persons sit between F and G. B sits second to the right of G. D sits immediate left of A.
(a) Only statement I is sufficient
(b) Both statements I and II together are sufficient
(c) Either statement I or statement II is sufficient
(d) Only statement II is sufficient
(e) Both statements I and II, even together are not sufficient

Q10. Six persons P, Q, R, S, T and U go for trip on six different days of the week from Monday to Saturday. On which day does S goes for trip?
Statements:
I. U goes for trip after Tuesday. Two persons go for trip between U and Q. T goes for trip before S.
II. Q goes for the trip three persons before S. T goes for trip immediately before S. T goes for trip before Thursday.
(a) Only statement II is sufficient
(b) Both statements I and II together are sufficient
(c) Either statement I or statement II is sufficient
(d) Only statement I is sufficient
(e) Both statements I and II, even together are not sufficient

Q11. In a certain code language, how is the word "Against" coded?
Statements:
I. In that language, "Rise against odds" is coded as "hb tr tp" and "Rise Strong Always" is coded as "tp ef gv".
II. In that language, "Speak against lies" is coded as "wn hb ur" and "Speak against time" is coded as "ur hv hb".
(a) Only statement II is sufficient
(b) Both statements I and II together are sufficient
(c) Either statement I or statement II is sufficient
(d) Only statement I is sufficient
(e) Both statements I and II, even together are not sufficient

Directions (12-16): Study the following information carefully and answer the questions given below.
Seven persons – A, B, C, D, E, F, and G –are designated at seven different designations in a company, namely Peon, Trainee, Assistant Manager (AM), Manager (MG), Assistant General Manager (AGM), General Manager (GM) and CEO and each of them bought a different book – Macbeth, Inferno, Rebecca, Othello, Persuasion, Ivanhoe, and Matilda (not necessarily in the same order). All the posts are in increasing order of seniority, where Peon is the junior-most and CEO is the senior-most.
D is designated four persons junior to the one who bought Rebecca. No person was designated between the ones who bought Rebecca and Inferno. The one who bought Inferno is designated senior to the one who bought Rebecca. Two persons are designated between G and the ones who bought Inferno. The number of persons designated junior to G is one more than the number of persons designated senior to E. Four persons are designated between E and the one who bought Ivanhoe. A is designated junior to MG and two persons junior to the one who bought Macbeth. Three persons are designated between the ones who bought Othello and Matilda. The one who bought Othello is designated immediately junior to F. B doesn't bought Matilda.

Q12. How many persons are designated senior to the one who bought Matilda?
(a) Six
(b) Two
(c) Three
(d) Four
(e) None

Q13. What is the designation of F?
(a) GM
(b) CEO
(c) AGM
(d) MG
(e) AM

Q14. Who is designated three designations senior to the one who bought Ivanhoe?
(a) The one who bought Persuasion
(b) The one who bought Macbeth
(c) D
(d) The one who is AGM
(e) G

Q15. Which of the following statements is correct?
I. C is designated senior to the one who bought Persuasion.
II. Only four persons are designated senior to F.
III. More than two persons are designated between E and D.
(a) Both I and II
(b) Only II
(c) Only III
(d) Both I and III
(e) All I, II and III

Q16. Which of the following combinations is correct?
(a) G – Othello – Trainee
(b) E – Inferno – AGM
(c) A – Persuasion – Trainee
(d) B – Ivanhoe – Peon
(e) D – Matilda – Manager

Directions (17-21): Study the following information carefully and answer the questions given below.
Ten persons sit in two rows parallel to each other, Row-1 and Row-2. Each row consists of five persons. A, B, C, D and E sit in Row-1 face south and M, N, O, P, Q sit in Row-2 face north. All persons of both rows face each other. Each person is studying a different type of bird namely Eagle, Sparrow, Parrot, Pigeon, Peacock, Owl, Duck, Swan, Falcon and Kite, but not necessarily in the same order.
The one who studies about sparrow sits third to the right of M. The one who sits opposite to M, sits immediate right of the one who studies about eagle. Only one person sits between the one who studies about eagle and pigeon. E sits immediate right of the one who studies about pigeon. Immediate neighbour of the one who sits opposite to E, studies about duck. More than one person sits between Q and the one who studies about duck. A sits second to the left of the one who studied about swan. A sits opposite to the one who sits third to the right of P. One of the immediate neighbour of P, studies about owl. M doesn't study about falcon and owl. The one who studies about falcon faces north and sits opposite to the one who studies about Parrot. B sits opposite to the one who studies about kite. N neither sits opposite to D nor studies about owl.

Q17. The person who sits opposite to D, sits in which position with respect to the one who studies about falcon?
(a) Immediate left

(b) Second to the left
(c) Second to the right
(d) Third to the right
(e) Third to the left

Q18. Which of the following statements is/are true?
I. Q studies about duck.
II. The person who studies about parrot sits diagonally opposite to the one who studies about kite.
III. The number of persons who sit to the right of O is one less than the number of persons who sit to the right of C.
(a) Only I
(b) Both II and III
(c) Only III
(d) Both I and II
(e) Both I and III

Q19. How many persons sit between O and the person who faces the one who studies about peacock?
(a) None
(b) One
(c) Two
(d) Three
(e) Can't be determined

Q20. Who among the following sits second to the right of C?
(a) A
(b) B
(c) The person who faces O
(d) The person who studies about eagle
(e) The one who sits opposite to Q

Q21. Four of the following five pairs are alike in a certain way and thus form a group. Which one pair does not belong to that group?
(a) The one who studies about sparrow – C
(b) B – the one who studies about kite
(c) The ones who studies about parrot and falcon
(d) D-M
(e) E- the one who studies about owl.

Directions (22–26): A word–number arrangement machine, when given an input line of words and two-digit numbers, rearranges them following a particular rule in each step. The example of input and its rearrangement is given below.
Input: 22 goat 45 egg 15 sun 68 hair 54 pens

Step I: 20 22 goat 45 sun 68 hair 54 pens gee

Step II: 27 20 45 sun 68 hair 54 pens gee eqcr

Step III: 50 27 20 sun 68 54 pens gee eqcr fckp

Step IV: 59 50 27 20 sun 68 gee eqcr fckp nglq

Step V: 73 59 50 27 20 gee eqcr fckp nglq qwl

Step V is the last step of the given example. Illustrate the above input arrangement and obtain the steps for the asked input given below:

Input: 64 lamp 58 toy 33 fan 26 cook 49 net

Q22. Which of the following word is third from the right end of Step III?
(a) toy
(b) aqqi
(c) aqzi
(d) jckn
(e) qqz

Q23. What is the sum of the first numbers from the left end in Step IV and Step V respectively?
(a) 119
(b) 142
(c) 132
(d) 122
(e) 127

Q24. Which of the following is second to the left of the word 'rqw' in Step V?
(a) dcl
(b) 54
(c) lgr
(d) 31
(e) jckn

Q25. What is the difference between the highest and the lowest number in Step II?
(a) 35
(b) 48
(c) 34
(d) 33
(e) 63

Q26. Which of the following combination of words and numbers is present in Step IV correctly in the same sequence?
(a) 31 64 toy aqqi dcl jckn
(b) 38 31 65 toy dcl
(c) 31 64 toy aqqi jbkn dbl
(d) 31 64 toy aqqi jckn dcl

(e) 38 31 64 toy acqi

Directions (27-30): Study the following information carefully and answer the given questions:
Seven persons – A, B, C, D, E, F and G – purchased different numbers of books, but not necessarily in the same order.
C purchased more books than D but less books than A. The person who purchased the third highest number of books purchased 12 books. The person who purchased the lowest number of books purchased a prime number of books. Only one person purchased books between B and G. G purchased less books than B. F purchased more books than B but less books than C. A purchased 14 books but did not purchase the highest number of books.

Q27. What is the highest possible number of books purchased by G, if B purchased 10 books?
(a) 11
(b) 9
(c) 8
(d) 7
(e) 5

Q28. If the sum of books purchased by A and B is 24 and the sum of books purchased by C and G is 17, then what is the sum of the number of books purchased by B and G?
(a) 16
(b) 17
(c) 18
(d) 15
(e) Can't be determined

Q29. How many persons purchased less books than E?
(a) Two
(b) None
(c) Four
(d) Five
(e) Six

Q30. Which of the following persons purchased the third highest number of books?
(a) The one who purchased immediately more books than A
(b) C
(c) A
(d) D
(e) F
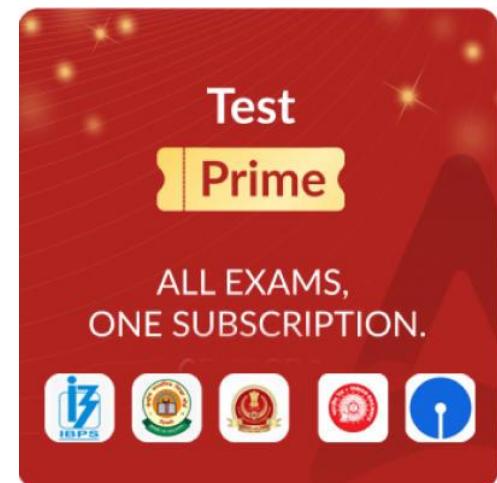
Directions (31-33): Study the following information carefully and answer the questions given below.

F is the sister-in-law of B. S is married to G. F is the only daughter of M. A is the brother-in-law of G. N is the son-in-law of K. D is the mother of B. B and G doesn't have any siblings. S is the grandson of M. T is the mother of H. H is the uncle of S. D is the married member of the family. H is not married to B. N doesn't have any child. There is one single parent in the family.

Q31. How is N related to M?
(a) Nephew
(b) Son
(c) Cousin
(d) Grandson
(e) Brother

Q32. How many female members are there in the family?
(a) Four
(b) Can't be determined
(c) Six
(d) Seven
(e) Five

Q33. Which of the following statement is *not* true?
(a) T is the grandmother of S
(b) D's son-in-law is the brother of H.
(c) There are three persons in first generation in the family.
(d) There are four married couples in the family.
(e) K is married to D

Q34. In the number **'7853468359'**, if the digits at even place from left end is subtracted by 2 and rest of the digits are added by 1 then remove all the digits which are repeated more than twice. After that arrange the resultant digits in descending order from left. Now, find the sum of first digit and last digit in the new number formed after rearrangement?
(a) 11
(b) 7
(c) 10
(d) 9
(e) 4

Q35. From the options given below, the numbers represent the positions of letters in the word from the left end. If using those letters which are denoted by the numbers, a four-letter meaningful word is formed, then which of the following options will NOT form a four-letter meaningful word?
(a) TRAINING : 1, 2, 4, 6

(b) HOSPITAL : 1, 2, 3, 6
(c) GARDENER : 2, 3, 5, 8
(d) FRIENDLY : 1, 2, 3, 4
(e) All of these

Q36. Statement: A manufacturing company has observed a steady increase in workplace accidents over the last six months. Most accidents are reported during night shifts. The management is concerned about employee safety and production loss.
Which of the following is the most appropriate course of action?
(a) The company should shut down night shifts permanently.
(b) The company should ignore the issue as accidents are unavoidable.
(c) The company should review safety measures and provide additional training for night-shift workers.
(d) The company should dismiss workers involved in accidents.
(e) The company should reduce production targets.

Q37. Statement: A private fitness club allows all its registered members to use the gym facilities without any restriction during working hours. In addition to this, the club management occasionally permits a few non-member visitors to use the gym for a limited time after completing a formal permission process. These visitors are not part of the registered membership list.
Which of the following is a valid inference?
(a) All visitors are registered members.
(b) Some gym users are not registered members.
(c) Registered members need special permission to use the gym.
(d) Visitors use the gym more frequently than members.
(e) Only visitors are allowed to use the gym.

Q38. Statement: A city park authority observed that during festive seasons, the demand for decorative flowers increases sharply. To meet this demand, vendors often store large quantities of flowers in open areas for several days. After such periods, complaints about foul smell and increased insect activity around the park rise noticeably. Officials suspect that improper handling and storage of flowers may be causing these issues.
Which of the following hypotheses is most likely true?
(a) Decorative flowers should not be used during festivals.
(b) Festivals are responsible for environmental pollution.
(c) Proper storage and timely disposal of decorative flowers can reduce insect problems.
(d) Insects increase only due to seasonal weather changes.
(e) Flower vendors intentionally create unhygienic conditions.

Q39. Statement: Ayan, a resident of a semi-urban area, observed that children around his house rarely interacted with each other and spent most of their evenings indoors using smartphones and tablets. Concerned that this lifestyle might reduce physical fitness and limit real-world social interaction, Ayan planned to arrange regular outdoor games and sports activities for children on weekends.
Which of the following is an implicit assumption in the above statement?

(a) Children will immediately stop using smartphones if outdoor games are arranged.
(b) Outdoor games can help improve physical health and social bonding among children.
(c) Schools have failed to encourage physical activities among children.
(d) Parents are forcing children to use smartphones.
(e) All children dislike indoor activities.

Q40. Statements: A shopkeeper purchased a batch of goods at a certain price and sold all of them at a discount. Even after offering the discount, the shopkeeper earned an overall profit because the goods were purchased at a comparatively lower cost.
Conclusions:
I. The shopkeeper must have sold each item at a price higher than its cost price.
II. Purchasing goods at a lower cost can help earn profit even after offering discounts.
III. Offering discounts always leads to loss for the seller.
Which of the following conclusion supports the above statement?
(a) Only I follows
(b) Only III follows
(c) Only I and II follow
(d) Only II and III follow
(e) Only II follows

Solutions

S1. Ans.(c)
Sol. I. Follow: The relation of 'all copy being books' will follow in possibility because the relation of all copies towards books in undefined in definite case.
II. Follow: The part of markers which is pens will not be paper.
III. Not follow: As per the statement, it is already given that some parts of books are markers. So, their negative relation will not follow even in possibility.
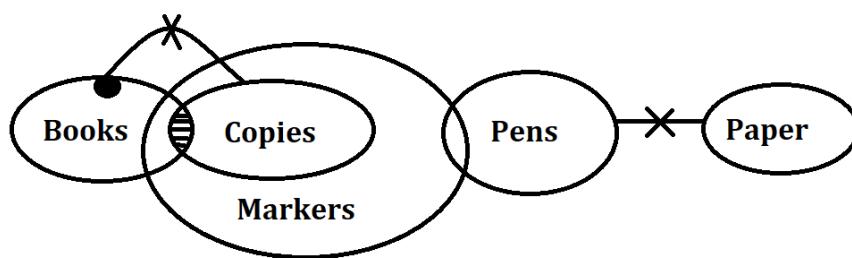

S2. Ans.(d)
Sol. I. Follow: Heavy and tools are not directly related to each other. Hence, possible relation will follow between them.
Conclusion II and III do not follow individually in definite case because boxes and plastic are not directly related to each other.
**But conclusion II and III are satisfying the condition of 'either-or'**
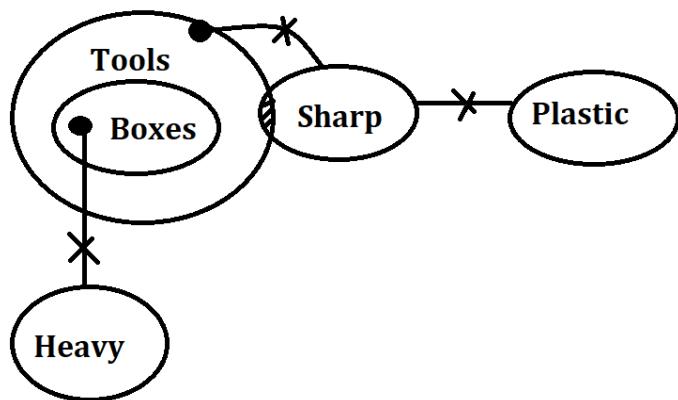
S3. Ans.(b)

Sol. I. **Not follow:** Because of 'only' relation, mugs is related to cups only and its relation is restricted with other elements even in possibility.

II. **Not follow:** As per the statement 'some part of cups are kettle' but the definite relation of all cups being kettle will not follow.

III. **Follow:** Table and chair are not directly related to each other, hence the possible relation between them will follow.
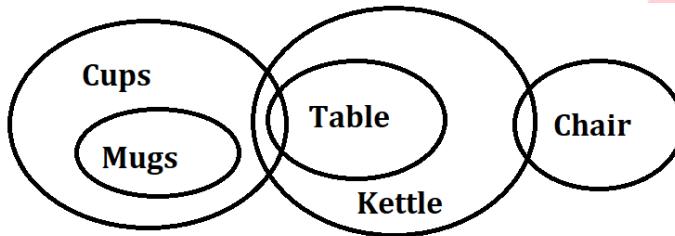
Solutions (4-8):

Boxes	Colours
A	Pins
H	Cups
D	Eraser
E	Stapler
B	Pencil
F	Marker
G	Pen
C	Plates

S4. Ans.(c)

Sol. Statement in option (c) is not true

S5. Ans.(d)

Sol. Box C has plates

S6. Ans.(d)

Sol. Five boxes are kept above the box which has marker

S7. Ans.(e)

Sol. Except option (e) i.e., G and pins, the logic followed in rest pair is: First box is placed two boxes below that box containing given item.

S8. Ans.(c)

Sol. Box E has stapler

S9. Ans.(c)

**Sol.** Either statement I or statement II is sufficient

From Statement I: D sits immediately to the right of E.
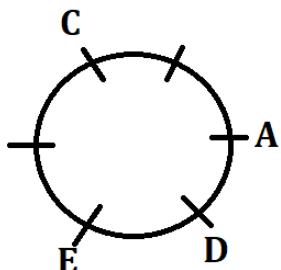
From Statement II: B sits immediately to the right of E.
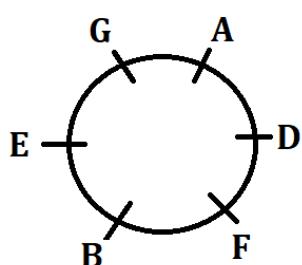
S10. Ans.(a)

Sol. From Statement II: S goes for trip on Thursday.

Days	Persons
Monday	Q
Tuesday	
Wednesday	T
Thursday	S
Friday	
Saturday	
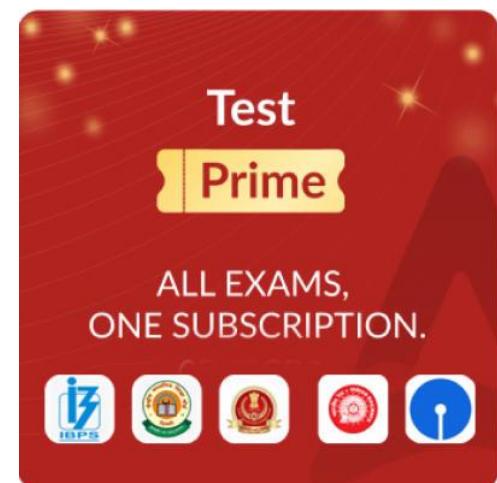
S11. Ans.(b)
Sol. From Statement I:

Words	Codes
Rise	tp
Against/Odds	hb/tr
Strong/ Always	ef/gv

From Statement II:

Words	Codes
Lies	wn
Against/Speak	hb/ur
Time	hv

After combining both the statements, the code of the word "Against" is "hb".

Words	Codes
Rise	tp
Lies	wn
Time	hv
Against	hb
Odds	tr
Speak	ur
Strong/ Always	ef/gv

Solutions (12-16):

Designations	Persons	Books
CEO	C	Matilda
GM	E	Inferno
AGM	B	Rebecca
MG	F	Macbeth
AM	G	Othello
Trainee	A	Persuasion
Peon	D	Ivanhoe

S12. Ans.(e)
Sol. No one is designated senior to the one who bought Matilda.

S13. Ans.(d)
Sol. F is designated as MG (Manager).

S14. Ans.(b)
Sol. The one who bought Macbeth is three designations senior to the one who bought Ivanhoe.

S15. Ans.(d)
Sol. Statement I and III is correct.

S16. Ans.(c)
Sol. The combination given in option (c) is correct.

Solutions (17-21):
Final Arrangement:
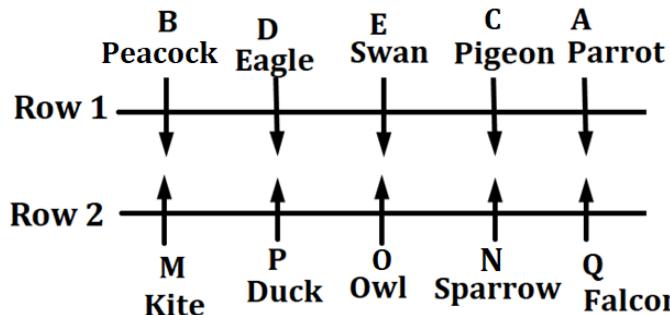
Clues: The one who studies about sparrow sits third to the right of M. The one who sits opposite to M, sits immediate right of the one who studies about eagle. Only one person sits between the one who studies about eagle and pigeon. E sits immediate right of the one who studies about pigeon.

Inference: Here we get two possible cases:
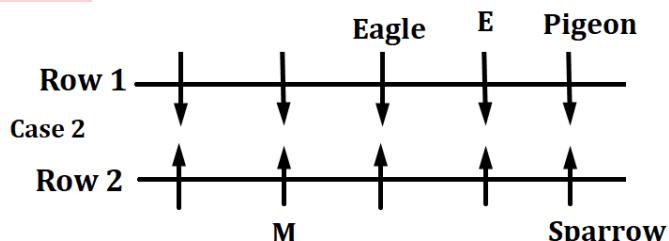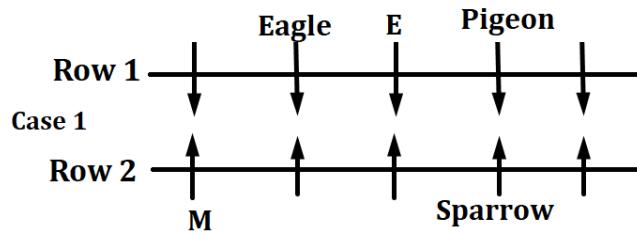
Clues: Immediate neighbour of the one who sits opposite to E, studies about duck. More than one person sits between Q and the one who studies about duck

Inference: Case 2 gets cancelled here because there is no place for Q:
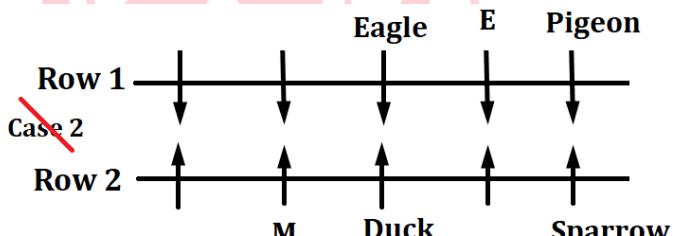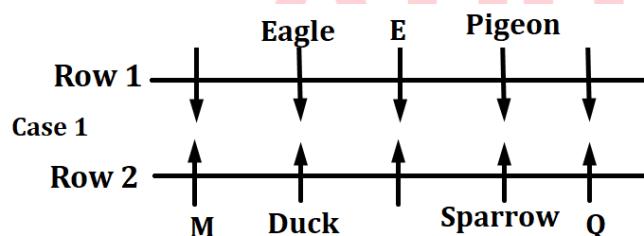
Clues: A sits second to the left of the one who studied about swan. A sits opposite to the one who sits third to the right of P. One of the immediate neighbours of P, studies about owl. M doesn't study about falcon and owl. The one who studies about falcon faces north and sits opposite to the one who studies about Parrot.

Inference: Above clues are arranged and we get the following output.
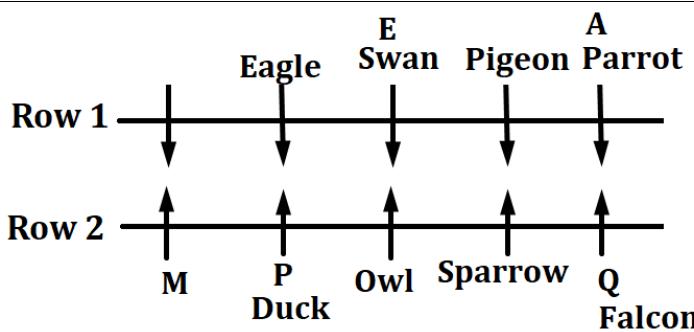
Clues: B sits opposite to the one who studies about kite. N neither sits opposite to D nor studies about owl.

Inference: Only place for C, O and Peacock is left. Now, the final arrangement is here:
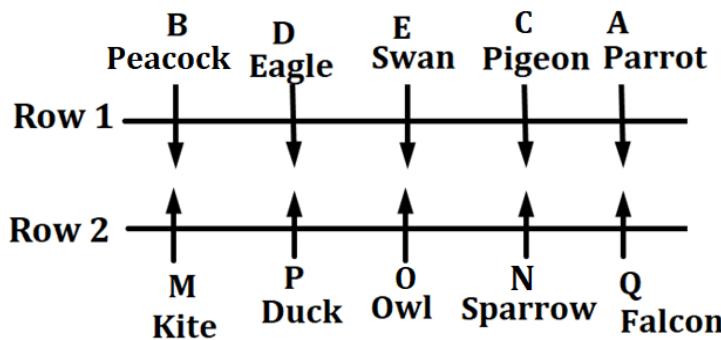
S17. Ans.(e)
Sol. P sits opposite to D and P sits third to the left of the one who studies about falcon.

S18. Ans.(b)
Sol. Statements II and III, both are true.

S19. Ans.(b)
Sol One person sits between O and the person who faces the one who studies about peacock.

S20. Ans.(d)
Sol. The person who studies about eagle i.e. D sits second to the right of C.

S21. Ans.(d)
Sol. Except D-M, all the persons sit opposite to each other.

Solutions (22–26):
Sol. Logic of the given arrangement:
For numbers: The numbers are picked in ascending order and arranged after adding 5, at extreme left end in each step.
For words: The words are picked in dictionary order and in the given word vowels are changed to second succeeding letter and consonants are changed to second preceding letter and then they are arranged at extreme right end in each step.

Input: 64 lamp 58 toy 33 fan 26 cook 49 net
Step I: 31 64 lamp 58 toy 33 fan 49 net aqqi
Step II: 38 31 64 lamp 58 toy 49 net aqqi dcl
Step III: 54 38 31 64 58 toy net aqqi dcl jckn
Step IV: 63 54 38 31 64 toy aqqi dcl jckn lgr
Step V: 69 63 54 38 31 aqqi dcl jckn lgr rqw

S22. Ans.(b)
Sol. 'aqqi' is third word from the right end of Step III.

S23. Ans.(c)
Sol. The sum of the first two numbers from the left end of Step IV and Step V: 63+69=132.

S24. Ans.(e)
Sol 'jckn' is second to the left of the word 'rqw' in Step V.

S25. Ans.(d)
Sol. The difference between the highest and the lowest number in Step II: 64-31= 33.

S26. Ans.(a)

Solutions (27-30):
Final Arrangement:

$$\underline{\text{E}} > \underline{\underset{14}{\text{A}}} > \underline{\underset{12}{\text{C}}} > \underline{\text{F}} > \underline{\text{B}} > \underline{\text{D}} > \underline{\underset{\substack{\text{(Prime} \\ \text{number of} \\ \text{books)}}}{\text{G}}}$$

Clues: C purchased more books than D but less books than A. The person who purchased the third highest number of books purchased 12 books. The person who purchased the lowest number of books purchased a prime number of books.
Inference:

$$A > C > D$$
$$\underline{\quad} > \underline{\quad} > \underline{\underset{12}{\quad}} > \underline{\quad} > \underline{\quad} > \underline{\quad} > \underline{\underset{\substack{\text{(Prime} \\ \text{number of} \\ \text{books)}}}{\quad}}$$

Clues: A purchased 14 books but did not purchase the highest number of books.
Only one person purchased books between B and G. G purchased less books than B. F purchased more books than B but less books than C.
Inference: Only E was left to be arranged. Now the final arrangement is:

$$\underline{\text{E}} > \underline{\underset{14}{\text{A}}} > \underline{\underset{12}{\text{C}}} > \underline{\text{F}} > \underline{\text{B}} > \underline{\text{D}} > \underline{\underset{\substack{\text{(Prime} \\ \text{number of} \\ \text{books)}}}{\text{G}}}$$

S27. Ans.(d)
Sol. The highest possible number of books purchased by G is 7, if B purchased 10 books (because G has prime number of books).

S28. Ans.(d)
Sol. A+B =24; 14+B=24; B = 24-14 = 10
C+G = 17; 12+G=17; G=17-12 =5
B+G= 10+5 = 15.

S29. Ans.(e)
Sol. Six persons purchased less books than E.

S30. Ans.(b)
Sol. C purchased the third highest number of books.

Solutions (31-33):

```
T (-)══M (+)          D (-)══K (+)
        |                     |
H (+)— F (-) ——— N (+)══B (-)
        |
A (+)— S (+)══ G (-)
```

S31. Ans.(b)
Sol. N is the son of M.

S32. Ans.(e)
Sol. Five female members are there in the family.

S33. Ans.(c)
Sol. Statement (c) is not true.

S34. Ans.(c)
Sol. Given number = 7853468359
Operation 1 = 8661549167 (even place digit from left – 2, rest digit + 1)
Operation 2 = 8154917 (remove digits repeating more than twice i.e., 6)
Operation 3 = 9875411 (rearrange the digit in descending order from left)
Sum of first and last digit= 9 + 1 = 10

S35. Ans.(a)
Sol. TRAINING → positions 1,2,4,6 → T, R, I, I
No meaningful 4-letter word can be formed.
HOSPITAL → positions 1,2,3,6 → H, O, S, T

Rearranged as HOST (meaningful).

GARDENER → positions 2,3,5,8 → A, R, E, R

Rearranged as RARE & REAR (meaningful).

FRIENDLY → positions 1,2,3,4 → F, R, I, E

Rearranged as FIRE (meaningful).

S36. Ans.(c)

Sol. Explanation: The action directly addresses the cause (safety during night shifts) and is practical and preventive.

S37. Ans.(b)

Sol. Explanation:

The statement clearly mentions that some visitors (who are not registered members) are also allowed to use the gym. Hence, it logically follows that some gym users are not registered members.

S38. Ans.(c)

Sol. Explanation:

The statement links improper storage of flowers with increased insect activity and foul smell. Hence, the most logical hypothesis is that better storage and disposal practices can reduce the problem.

S39. Ans.(b)

Sol. Explanation:

Ayan's plan to organize outdoor games is based on the belief that outdoor activities positively impact children's physical health and social interaction. This assumption is necessary for his action to be meaningful.

S40. Ans.(e)

Sol. Explanation:

Conclusion I does not necessarily follow because overall profit does not guarantee profit on each individual item.

Conclusion II directly follows from the statement and is clearly supported.

Conclusion III is false, as the statement itself shows profit despite discount.

Hence, only Conclusion II follows.
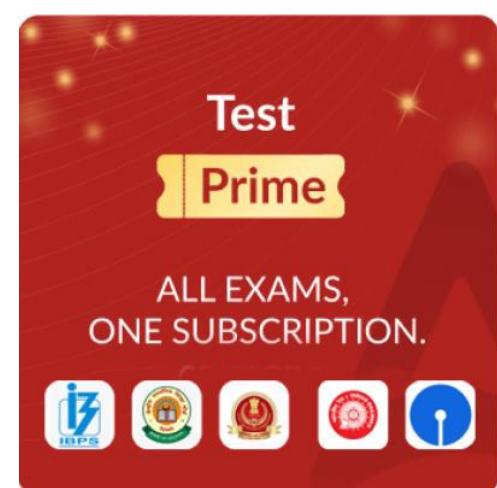
RRB PO Mains 2025 Quantitative Aptitude Section Memory-Based Paper (28 Dec 2025)

Directions (1-6): Find the missing number in the following number series.

Q1. 7, ?, 34, 70,142, 286
(a) 16
(b) 10
(c) 21
(d) 7
(e) 14

Q2. 13, ?, 52, 130, 442, 2002
(a) 51
(b) 13
(c) 26
(d) 39
(e) 35

Q3. 78, 121, 168, 221, ?, 341
(a) 210
(b) 280
(c) 205
(d) 235
(e) 225

Q4. 87, ?, 144, 204, 285, 387
(a) 110
(b) 100
(c) 105
(d) 135
(e) 125

Q5. 12, 133, 214, 263, ?, 297
(a) 288
(b) 270
(c) 289
(d) 290
(e) 295

Q6. 96, 48, 72, 180, ?, 2835
(a) 610
(b) 680
(c) 605
(d) 635
(e) 630
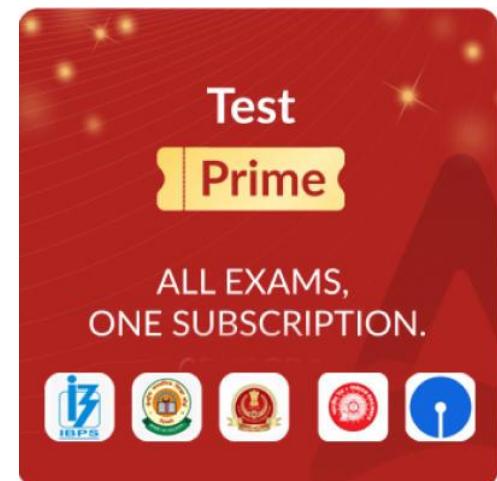
Directions (7-12): The pie chart given below shows the percentage distribution of fictional books and non-fictional books sold by four sellers and another pie chart shows the percentage distribution of fictional books sold by these sellers.
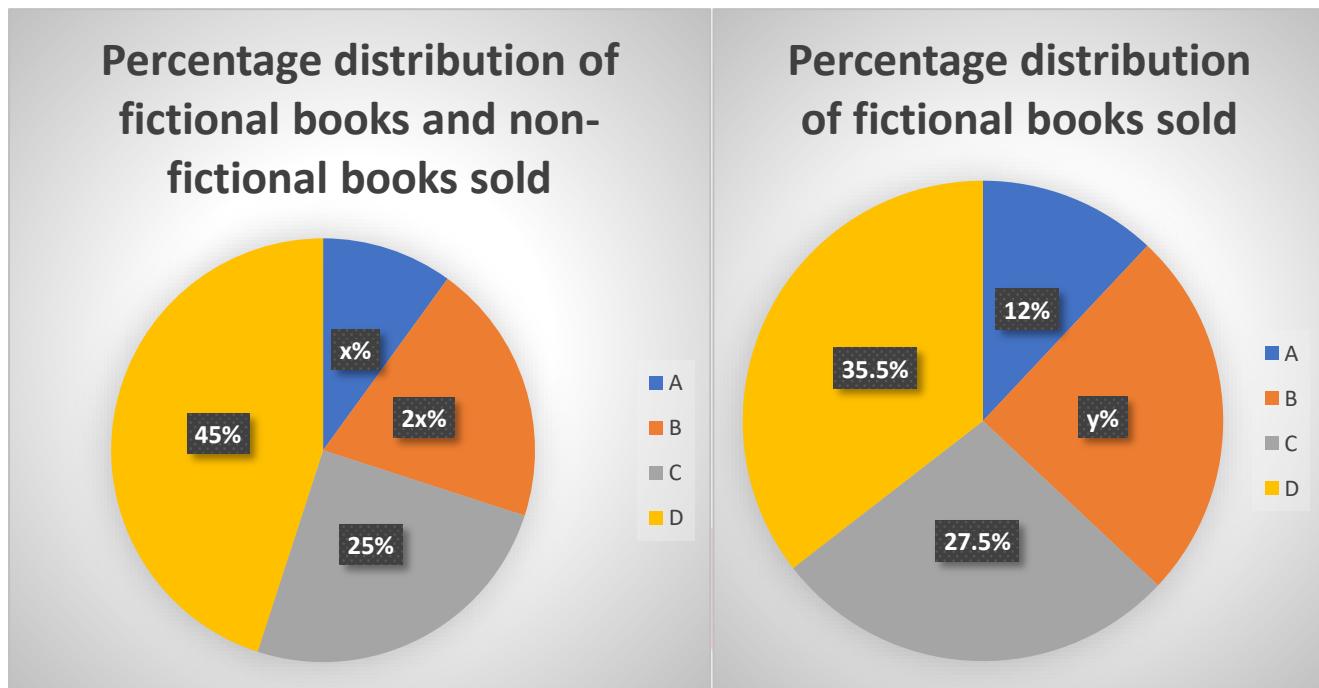
Note – (I) Total fictional books and non-fictional books sold = 1500

(II) Total fictional books sold = 1000

Q7. Find the ratio of fictional books sold by A and B together to non – fictional books sold by C.

(a) 37:10

(b) 10:37

(c) 11:13

(d) 13:12

(e) 15:17

Q8. There are two type of fictional books Hindi and English. If the number of English fictional book sold by D is 25% of total non-fictional books sold by sold by C, then find the Hindi fictional books sold by D is what percentage of difference between total books sold by C and D.

(a) 100%

(b) 110%

(c) 90%

(d) 30%

(e) 130%

Q9. Find the difference between average number of fictional books sold by A and B together to non-fictional books sold by A, B and C.
(a) 120
(b) 100
(c) 110
(d) 115
(e) 125

Q10. If the cost of fiction books is 14.28% more than that of non-fictional book for all the sellers and total revenue generated by C after selling all the books is Rs. 5800. Find the sum of revenue generated after selling fictional books by A and D.
(a) 7600
(b) 7100
(c) 8100
(d) 7500
(e) 7250

Q11. **The ratio of total books sold by E and C is 2:1 and out of the total books sold by E, $1/5^{th}$ are the non-fictional books. If the ratio of fictional books sold by E to F is 2:5, then find the fictional books sold by F.**
(a) 1500
(b) 1000
(c) 1100
(d) 1150
(e) 1250

Q12. Find the difference between total fictional books sold by C and D together and total non-fictional books sold by all the given seller.
(a) 130
(b) 100
(c) 110
(d) 115
(e) 125

Directions (13-18): The bar graph shows the total number of orders (veg + non-veg) delivered by different restaurants (A, B, C and D) in the month of March. The table shows the distribution of non-veg orders for each restaurant out of the total non-veg orders delivered by all four restaurants.

Restaurants	Percentage distribution of non-veg orders for each restaurant out of the total non-veg orders delivered
A	10%
B	40%
C	15%
D	35%
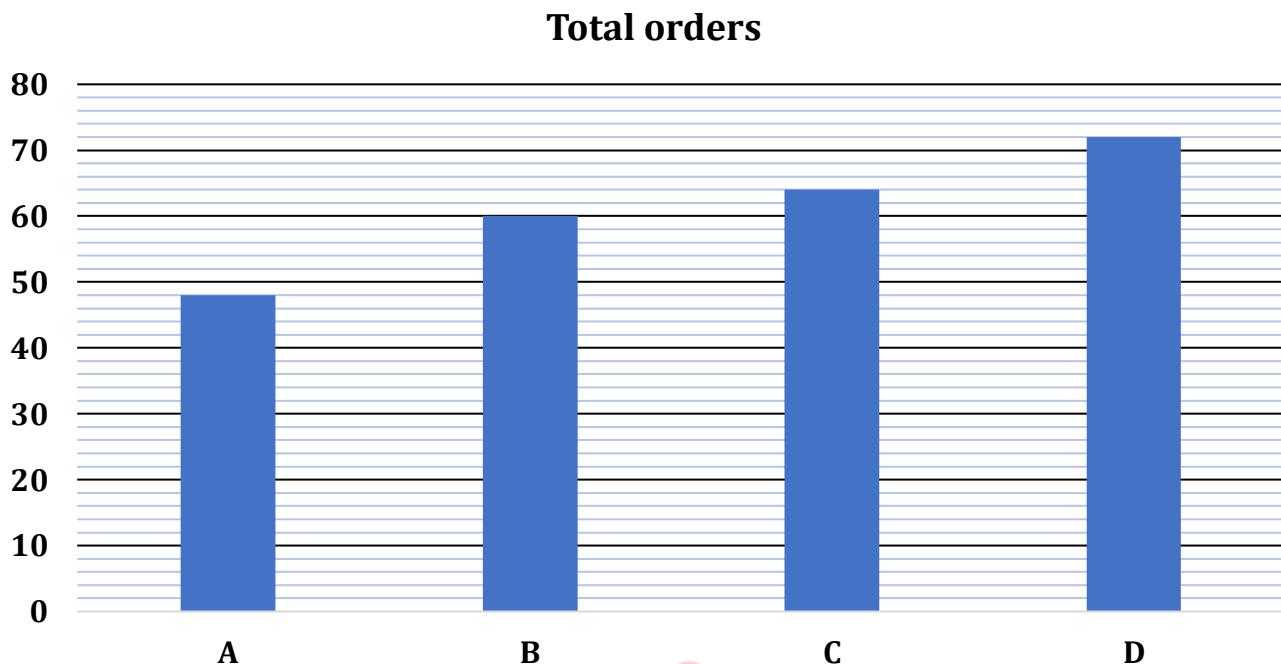
Total orders

Note – Difference between number of veg and non-veg orders delivered is 36.

Q13. In D, the ratio of chicken fry to fish curry orders is 3:4, and the total number of dine-in chicken fry orders is 5 and rest are take away. Find the take away chicken fry orders is what percentage of veg orders placed in C. (non-veg= chicken fry to fish curry)
(a) 28
(b) 18
(c) 38
(d) 48
(e) 58

Q14. The selling price of non- veg orders is 50% more than the veg orders for all the restaurants and the revenue generate by selling all the veg orders by B is Rs.M. Find the ratio revenue of 25% veg orders sold by A to 50% non-veg orders sold by D.
(a) 2:7
(b) 7:2
(c) 1:3
(d) CND
(e) None of these

Q15. Find the veg orders delivered by C is what percentage of non-veg orders delivered by A and C.
(a) 133.33
(b) 153.33
(c) 113.33
(d) 83.33
(e) 125.33
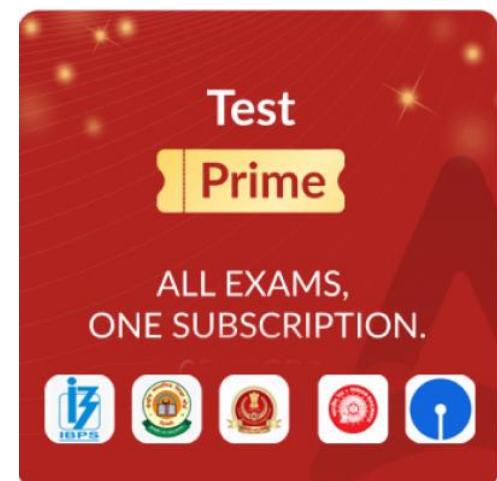
Q16. Restaurant E, sold 75% more veg orders then veg orders sold by A and the ratio of total orders sold by E to D is 2:1, then find the non-veg orders sold by E.
(a) 120
(b) 100
(c) 81
(d) 90
(e) 125

Q17. The ratio of 5 rating to 3 rating given by the customers on veg orders delivered by D is 1:4 and percentage of rating 3 with comment is 40% more than rating 3 with no comment. Find the rating 3 with no comment is what percentage more/less than total orders placed by B.
(a) 133.33
(b) 106.33
(c) 113.33
(d) 83.33
(e) 125.33

Q18. Find the difference between total veg orders delivered to non-veg orders delivered by all the restaurants.
(a) 0
(b) 1
(c) 2
(d) 3
(e) 4

Q19. P can complete 1/10 of a work in 14 days. P and Q together can complete the same work in 42 days. If R can complete 85% of the work in 25½ days, then in how many days will Q and R together complete 2/3 of the work?
(a) 16.67
(b) 12.5
(c) 13 1/3
(d) 14.28
(e) 19

Q20. The ratio of the curved surface area of a cylinder to the area of its base is 3 : 2. If the volume of the cylinder is 6468 cubic cm, find the height of the cylinder (in cm).
(a) 14.5
(b) 12.5
(c) 11
(d) 10.5
(e) 17.5

Q21. A person invests Rs 2399.69 in Scheme A, which offers a compound interest rate of 19.99% for 2 years and 4 days. Another sum of Rs 3999.70 is invested in Scheme B for T years and 3 days

(a) 8
(b) 6
(c) 3
(d) 5
(e) 4

Q22. A and B enter into a partnership by investing Rs 4400 and Rs 3000 respectively. After x months, B withdrew Rs 1200. If the ratio of the annual profit of A to that of B is 11 : 17, find the value of x.
(a) 10
(b) 5
(c) 9
(d) 7
(e) None of these

Q23. The marked price of item A is twice that of item B. Item A is sold at a discount of 40%, while item B is sold with a flat discount of Rs 800. The combined cost price (CP) of both items is Rs 4000. If the overall transaction results in a loss of 10%, calculate the marked price of item A.
(a) 4400
(b) 3800
(c) 4000
(d) 5000
(e) 6500

Q24. A person spends 40% of their monthly income on rent and 15% on other items. From the remaining income, 30% is spent on groceries, and the rest is saved. If the difference between the amount spent on groceries and the amount saved is Rs 8999.99, find the difference between the amount (in Rs) spent on rent and the amount spent on groceries.
(a) 13250
(b) 14550
(c) 19200
(d) 18500
(e) 15150

Q25. Train P, running at 108 km/hr, crosses Train Q in 36 seconds when traveling in the same direction. The two trains cross each other in 30 seconds when traveling in the opposite direction. Find the ratio of the length of Train P to the length of Train Q.
(a) 7:5
(b) 5:1
(c) 3:5
(d) 1:2
(e) Can't be determined

Q26. The average weight of 30 students in a class is 48.6 kg. The ratio of the average weight of boys to that of girls is 6 : 5. If the average weight of the girls is 9 kg less than the average weight of the boys, find the total number of girls in the class.
(a) 12
(b) 18
(c) 15
(d) 24
(e) 8

Q27. Two boats, A and B, are operating in the same stream. The downstream speed of Boat A is equal to the upstream speed of Boat B. The ratio of the upstream speed of Boat A to the downstream speed of Boat B is 1 : 3.
Quantity I: 500% of the speed of the stream.
Quantity II: The speed of Boat B in still water.
(a) **Quantity I > Quantity II**
(b) **Quantity I < Quantity II**
(c) **Quantity I ≥ Quantity II**
(d) **Quantity I ≤ Quantity II**
(e) **Quantity I = Quantity II or no relation**

Q28. The Highest Common Factor (HCF) of a number x and 630 is 70. The Least Common Multiple (LCM) of the same number x and 60 is 420.
It is given that $x = 35y^2$, where y is a prime number.
Quantity I: $2x - 3y$
Quantity II: $198y - x$
(a) **Quantity I > Quantity II**
(b) **Quantity I < Quantity II**
(c) **Quantity I ≥ Quantity II**
(d) **Quantity I ≤ Quantity II**
(e) **Quantity I = Quantity II or no relation**

Q29. P invested Rs. X in Scheme A which offers R% simple interest for eight years after eight years the interest becomes 2.8 times of the amount he invested. If he invested Rs. (X+280) in scheme B which offers simple interest for three years at the same rate of interest, the interest received is Rs.1995, then find the value of X/2?
(a) 740
(b) 680
(c) 920
(d) 810
(e) 1020

Q30. 'A' purchased two beds at same price. He further sold one bed to 'B' at 60% profit and other bed to 'C' at 20% profit. 'C' further sold the bed to 'D' at 20% less than the average of cost price of bed for 'B' & 'C'. If D incurred 25% loss by selling the bed to 'E' at Rs.2100, then find the difference between the cost price of a bed for 'A' and 'D'

(a) 180
(b) 560
(c) 440
(d) 240
(e) 300

Q31. In a 124-litre mixture, the ratio of milk to water is 3 : 1. If x liters of milk and 1.5x liters of water are added to the mixture, the difference between the quantity of milk and water in the resultant mixture becomes (2x + 2). Find the value of x.
(a) 30
(b) 24
(c) 32
(d) 15
(e) 18

Q32. The ratio of the present ages of Amit and his father is 1 : 4. The sum of the present ages of Amit, his father, and his mother is 140 years. Furthermore, 3 years ago, Amit's mother's age was 28 years less than 5 times Amit's age at that time. Find the present age (in years) of Amit.
(a) 18
(b) 23
(c) 25
(d) 14
(e) 31

Directions (33-37): **Read the information carefully and answer the following questions.** The number of males travelling on Tuesday is 30 less than the number of males travelling on Sunday. The number of females travelling on Tuesday is 2 less than the number of females travelling on Monday.
On Sunday: The total number of males travelling is 60% of the total males and females travelling.
On Monday: The total number of males travelling is 75% of the total males and females travelling.
On Tuesday: The total number of males and females travelling is 40 less than the average of the total males and females who travelled on Sunday and Monday.
Note - 260 males and females travel in three days (i.e. Sunday, Monday, and Tuesday).

Q33. Find the ratio of males travelling on Sunday to females travelling on Tuesday.
(a) 1:7
(b) 4:1
(c) 4:3
(d) CND
(e) None of these

Q34. Find the difference between males and females in all the given days.
(a) 108
(b) 105
(c) 88
(d) 84

(e) 90

Q35. Find the males travelling on Sunday and Monday together is what percentage of total people travelling on Sunday and Monday.
(a) 66
(b) 72
(c) 25
(d) 16
(e) 32

Q36. Total Males and females travelling on Wednesday is 50% more than total females working in all the given days. Find the difference between total males and females working on Wednesday and females working on Monday.
(a) 108
(b) 103
(c) 105
(d) 104
(e) 109

Q37. Find the sum of 25% less males in Monday and 60% more females in Tuesday.
(a) 333
(b) 233
(c) 325
(d) 314
(e) 331

Q38. Set A consists of 5 distinct prime number. Set B consists of 5 consecutive odd numbers. How many numbers in set A are greater than or less than the second smallest number in set B.
Statement I- The product of the largest number in set B and smallest number in Set A is 55.
Statement II- The sum of the smallest number in set A and one of the numbers in set B is 10 and their product is greater than 21.
(a) Statement I alone is sufficient.
(b) Statement II alone is sufficient.
(c) Both statements together are sufficient.
(d) either Statements I or II together are sufficient.
(e) neither Statements I nor II together are not sufficient.

Q39. What is the perimeter of a circle?
Statement I. The side of a square is equal to the diameter of the circle.
Statement II. Length of a square equals half of the length of a rectangle whose
 (a) Statement I alone is sufficient.
(b) Statement II alone is sufficient.
(c) Both statements together are sufficient.
(d) either Statements I or II together are sufficient.
(e) neither Statements I nor II together are not sufficient.

Q40. The radius of circles X is 25% less than that of circle Y and the sum of circumference of circle X and diameter of circle Y is 188 cm. If the ratio of height of a right angle triangle to the radius of circle Y is 5 : 4 and area of triangle is 350 cm square, then find based of the triangle?
(a) 20 cm
(b) 16 cm
(c) 18 cm
(d) 24 cm
(e) 30 cm

Solution

S1. Ans.(a)
Sol. Pattern of the series –

```
7      ?=16      34      70      142      286

  +9        +18     +36      + 72      +144

     x2      x2      x2        x2
```

S2. Ans.(c)
Sol. Pattern of the series –

```
13      26       52        130        442        2002

  + 13       +26       + 78        + 312        +1560

     x2         x3          x4            x5
```

S3. Ans.(b)
Sol. Pattern of the series –

```
78      121       168        221        280=?        341

  + 43        + 47        + 53        + 59        + 61
```

S4. Ans.(c)
Sol.
Pattern of the series –

```
87        105=?      144      204        285        387

  +18          + 39        + 60        + 81        + 102

     + 21          + 21        + 21        + 21
```

S5. Ans.(a)
Sol. Pattern of the series –
(square of consecutive odd numbers)
12 +121 = 133
122 +81 = 214
214+49 = 263
263+25 **= 288**
288 + 9 = 297
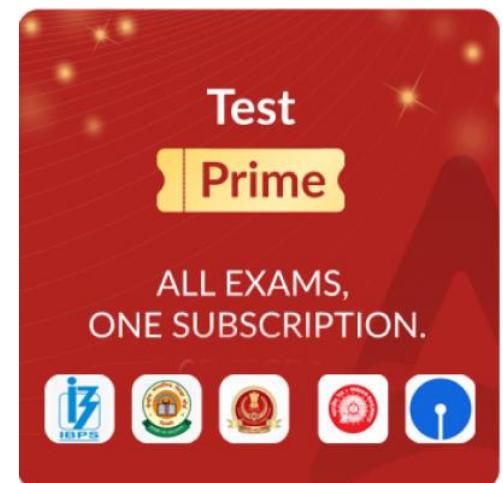
S6. Ans.(e)

Sol. Pattern of the series –

96   48   72   180   630=?   2835

    x0.5   x1.5   x2.5   x3.5   x4.5

Solutions (7-12):

From pie chart 1-

(45 +25 +2x + x)% = 100 %

3x = 30

10 = x

From pie chart 2,

(27.5+12+35.5+y)% = 100%

25 = y

Sellers	Total books	Fictional books	Non – fictional books
A	10% of 1500 = 150	12% of 1000 = 120	30
B	20% of 1500 = 300	25% of 1000 = 250	50
C	25% of 1500 = 375	27.5% of 1000 =275	100
D	45% of 1500 = 675	35.5% of 1000 =355	320
Total	1500	1000	500

S7. Ans.(a)

Sol. 120 +250: 100 = 370:100 = 37:10

S8. Ans.(b)

Sol. Number of English fictional book sold by D = 25% of 100 = 25

Number of Hindi fictional book sold by D = 355 – 25 = 330

Required answer = 330/(675-375)x100 = 110%

S9. Ans.(e)

Sol. Required difference = $\frac{120+250}{2} - \frac{30+50+100}{3}$ =185 – 60 = 125

S10. Ans.(a)

Sol. Let cost of non-fictional book be = 7x

Let cost of fictional book be = 8x

275×8x+100×7x= 5800

2 = x

Required answer = $(120 + 355) \times 8 \times 2 = 7600$

S11. Ans.(a)

Sol. Total books sold by E = 2 x375 = 750

Non-fictional books sold by E = 1/5th of 750 = 150

Fictional books sold by E =750 – 150 = 600

Fictional books sold by F =$\frac{5}{2} \times 600 = 1500$

S12. Ans.(a)
Sol. Required answer = 275 +355 – (500)= 130
Sol (13-17)
Let the veg and non-veg orders in B are x and y.
60 = x + y
Case 1.
36 = x – y
Then,
48 = x and y = 12
Case2.
36 = y – x
Then
48 = y and 12 =x
Using case 1.
48 = x and y = 12
40% = 12
1% = 12/40
So,
10% = 3, 15% = 4.5 (decimal value is obtained)
Using case2.
48 = y and 12 =x
40% = 48
1% = 1.2
10%= 12, 15% = 18, 35% = 42
Case 2 is correct.

Restaurants	Total orders	Veg orders	Non-veg orders
A	48	36	12
B	60	12	48
C	64	46	18
D	72	30	42

S13. Ans.(a)
Sol. Chicken fry orders in D = $\frac{3}{(3+4)} \times 42 = 18$

Fish curry orders in D = 42 – 18 = 24
The total number of dine-in chicken fry orders = 5
The total number of take away chicken fry orders =18 – 5 = 13
Required answer =$\frac{13}{46} \times 100 = 28.26\% = 28$

S14. Ans.(a)
Sol. Let the cost of veg orders be 100x
So, the cost of non-veg orders be 150x

$12\times 100x = M$

Required ratio = (25% of 36)×100x:(50% of 42)×150x

900x:3150x = 90:315 = 10:35 = 2:7

S15. Ans.(b)
Sol. Required answer = 46/12+18 × 100 = 153.33%

S16. Ans.(c)
Sol. Veg orders sold by E = 175% of 36 = 63

Total orders sold by E = 2× 72 = 144

Required answer = 144 – 63 = 81

S17. Ans.(d)
Sol. Customer giving 5 rating = $\frac{1}{5}\times 30 = 6$

Customer giving 3 rating = 30 – 6 = 24

Rating 3 with comment/ rating 3 with no comment =140/100 = 7x:5x

12x = 24

2 =x

Required answer = $\frac{60- 5\times 2}{60}\times 100 = 83.33\%$

S18. Ans.(e)
Sol. Required difference = 36+12+46+30 – (12+48+18+42) = 124 – 120 = 4

S19. Ans.(c)
Sol. Information Given in the Question:

P does 1/10 work in 14 days → Total work = 140 days for full work

P + Q together do full work in 42 days

R does 85% work in 25.5 days

Required: Time taken by Q and R to complete 2/3 of the work

Concept/Formula Used in the Question:

LCM Method: Assume total work = LCM of all work units (use 840 units)

Work = Time × Rate

85% = 85/100 = 17/20

Use: Time = Work / (Q + R)'s combined rate

Detailed Explanation:

Assume Total Work = 840 units (LCM of 140, 42, etc.)

→ P does full work in 140 days → P's 1-day work = 840 / 140 = **6 units/day**

→ P + Q together complete work in 42 days → (P + Q)'s 1-day work = 840 / 42 = **20 units/day**

→ Q's 1-day work = (P + Q) - P = 20 - 6 = **14 units/day**

R's Work

R does 85% of the work in 25.5 days

→ 85% of 840 = (85/100) × 840 = **714 units**

→ R's 1-day work = 714 / 25.5 = 28 units/day

Q + R Together

Q = 14 units/day, R = 28 units/day

→ Q + R = 14 + 28 = **42 units/day**

We need time to complete 2/3 of the work:

→ 2/3 of 840 = 560 units

Time = Work / Rate = 560 / 42 = **13⅓ days**

S20. Ans.(d)

Sol. Information Given in the Question:

Ratio of curved surface area (CSA) to base area = 3 : 2

Volume of the cylinder = 6468 cm^3

Concept/Formula Used in the Question:

CSA of cylinder = $2\pi rh$

Base Area of cylinder = πr^2

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

Given: $\frac{2\pi rh}{\pi r^2} = \frac{3}{2} \Rightarrow \frac{2h}{r} = \frac{3}{2}$

Detailed Explanation:

Use the ratio of CSA to base area:

$$\frac{2\pi rh}{\pi r^2} = \frac{3}{2} \Rightarrow \frac{2h}{r} = \frac{3}{2}$$

$$4h = 3r \Rightarrow r = \frac{4h}{3}$$

$$\pi r^2 h = 6468$$

$r = \frac{4h}{3}$:

$$\pi \left(\frac{4h}{3}\right)^2 h = 6468$$

$$\Rightarrow \pi \frac{16h^3}{9} = 6468$$

$$\Rightarrow \frac{16\pi h^3}{9} = 6468$$

$$h^3 = \frac{6468 \times 9}{16\pi}$$

$$\Rightarrow h^3 = \frac{58212}{50.24}$$

$$h^3 = 1157.625$$

$$\Rightarrow h = \sqrt[3]{1157.625}$$

$$h = 10.5 \, cm$$

S21. Ans.(e)

Sol. Information Given in the Question:

We take approx. values

Scheme A: Principal = Rs 2400, Rate = 20%, Time = 2 years

Scheme B: Principal = Rs 4000, Rate = 9%, Time = T years

Total Interest = Rs 2496

Concept/Formula Used in the Question:

Compound Interest (CI):

$$CI = P\left[(1 + \frac{R}{100})^T - 1\right]$$

Simple Interest (SI):

$$SI = \frac{P \times R \times T}{100}$$

Detailed Explanation:

Scheme A (Compound Interest):

$$CI = 2400\left[(1 + \frac{20}{100})^2 - 1\right]$$
$$= 2400[(1.2)^2 - 1]$$
$$= 2400(1.44 - 1)$$
$$= 2400 \times 0.44 = Rs\ 1056$$

Total Interest from both = 2496

Interest from Scheme B = 2496 − 1056 = Rs 1440

Use Simple Interest formula:

$$SI = \frac{4000 \times 9 \times T}{100} = 1440$$
$$\Rightarrow 360T = 1440$$
$$\Rightarrow T = \frac{1440}{360} = 4\ years$$

S22. Ans.(e)

Sol. Information Given in the Question:

A invests Rs 4400 for 12 months

B invests Rs 3000 for x months, then reduces to Rs 1800 for (12 - x) months

Final profit ratio (A : B) = 11 : 17

Concept/Formula Used in the Question:

Profit is distributed in the ratio of investment × time.

Detailed Explanation:

Let's

A's investment × time = 4400 × 12 = 52800

B's investment × time = 3000x + 1800(12 - x)

= 3000x + 21600 - 1800x

= (3000 - 1800)x + 21600 = 1200x + 21600

Now, as per question:

A : B = 11 : 17

So,

$$\frac{52800}{1200x + 21600} = \frac{11}{17}$$

$$52800 \times 17 = 11 \times (1200x + 21600)$$

$$897600 = 13200x + 237600$$

$13200x = 897600 - 237600 = 660000$

$x = \frac{660000}{13200} = 50$

S23. Ans.(c)
Sol. Information Given in the Question:
MP of A = 2 × MP of B
Discount on A = 40%
Discount on B = Rs 800
Combined Cost Price (CP of A + CP of B) = Rs 4000
Overall transaction results in 10% loss
Concept/Formula Used in the Question:
Selling Price (SP) = MP - Discount
Loss % = [(CP - SP) / CP] × 100
Overall SP = 90% of total CP = 0.9 × 4000 = Rs 3600
Detailed Explanation:
Let the marked price of item B = Rs x
Then, marked price of item A = Rs 2x
Selling Price of A = 60% of 2x = 0.6 × 2x = Rs 1.2x
Selling Price of B = x – 800
Total SP = 1.2x + (x - 800) = 2.2x - 800
Total CP = Rs 4000
We are told the total SP = 90% of total CP = Rs 3600
So,
2.2x - 800 = 3600
→ 2.2x = 4400
→ x = 2000
So, **MP of A = 2x = Rs 4000**

S24. Ans.(a)
Sol. We take approx. values
Information Given in the Question:
Rent = 40% of monthly income
Other items = 15% of monthly income
From remaining 45%, groceries = 30%, savings = 70%
Difference between groceries and savings = Rs 9000
Concept/Formula Used in the Question:
Total remaining income = 100% - 40% - 15% = 45%
Grocery amount = 30% of 45% = 0.30 × 0.45 × income = 0.135 × income
Savings = 70% of 45% = 0.70 × 0.45 × income = 0.315 × income
Difference = Savings - Grocery = 0.315x - 0.135x = 0.18x = 9000
→ Solve for x (monthly income)
Detailed Explanation:

Let monthly income = Rs x
Then:
Grocery amount = 13.5% of x = 0.135x
Savings = 31.5% of x = 0.315x
Difference = 0.315x - 0.135x = 0.18x = 9000
→ 0.18x = 9000
→ x = 9000 / 0.18 = 50,000
Now,
Rent = 40% of 50000 = Rs 20,000
Grocery = 13.5% of 50000 = Rs 6,750
Required difference = 20000 - 6750 = Rs 13,250

S25. Ans.(e)
Sol. Information Given in the Question:
Speed of Train P = 108 km/hr = 30 m/s
Time to cross Train Q when moving in the same direction = 36 seconds
Time to cross each other when moving in opposite directions = 30 seconds
Concept/Formula Used in the Question:
Relative Speed (same direction) = Speed of P – Speed of Q
Relative Speed (opposite direction) = Speed of P + Speed of Q
Distance = Speed × Time
Total length covered = Sum of lengths of both trains
Detailed Explanation:
Convert speed of Train P:
108 × 5/18 = 30 m/s
Let:
Speed of Q = v m/s
Length of P = LP
Length of Q = LQ
Same direction:
LP + LQ = (30 – v) × 36 …(1)
Opposite direction:
LP + LQ = (30 + v) × 30 …(2)
Equate (1) and (2):
(30 – v) × 36 = (30 + v) × 30
1080 – 36v = 900 + 30v
180 = 66v
v = 180 / 66 = 30 / 11 m/s
Now total length:
LP + LQ = (30 + 30/11) × 30
= (360/11) × 30
= 10800 / 11 m

There is no extra information to separately get LP and LQ, so their ratio LP : LQ cannot be found uniquely by any "normal" (algebraic) method.
So, Can't be determined

S26. Ans.(b)
Sol. Information Given in the Question:
Total students = 30
Overall average weight = 48.6 kg
Ratio of average weight (boys : girls) = 6 : 5
Average weight of girls is 9 kg less than boys
Required: Number of girls in the class
Concept/Formula Used in the Question:
Let number of boys = B, number of girls = G
So, B + G = 30
Let average weight of boys = 6x, average of girls = 5x
Given: 6x − 5x = 9 ⇒ x = 9
ATQ,
$\frac{B(6x)+G(5x)}{30} = 48.6$
Detailed Explanation:
From the given:
Average of boys = 6x, average of girls = 5x
Difference = 9 ⇒ x = 9
So, boys' average = 54 kg, girls' average = 45 kg
Let number of girls = G
Then number of boys = 30 − G
Total weight = 48.6 × 30 = 1458 kg
Now:
Weight of boys = (30 − G) × 54
Weight of girls = G × 45
So,
$(30 - G) \times 54 + G \times 45 = 1458$
$1620 - 54G + 45G = 1458$
$\Rightarrow 1620 - 9G = 1458$
$\Rightarrow 9G = 162$
$\Rightarrow G = 18$

S27. Ans.(e)
Sol. Given:
Let the speed of stream = s
Let the speed of Boat A in still water = a
Let the speed of Boat B in still water = b
Downstream speed of Boat A = Upstream speed of Boat B

$a + s = b - s \dots (1)$

Ratio of the upstream speed of Boat A to the downstream speed of Boat B is 1 : 3

$\frac{a-s}{b+s} = \frac{1}{3} \dots (2)$

From (1):

$a + s = b - s \Rightarrow b = a + 2s$

Substitute in (2):

$\frac{a-s}{(a+2s)+s} = \frac{1}{3}$

$\frac{a-s}{a+3s} = \frac{1}{3}$

$3(a - s) = a + 3s$

$3a - 3s = a + 3s$

$2a = 6s$

$a = 3s$

From $b = a + 2s = 3s + 2s = 5s$

Quantity I: 500% of the speed of stream = $5s$

Quantity II: Speed of Boat B in still water = $b = 5s$

So, Quantity I = Quantity II

S28. Ans.(a)

Sol. Given:

$HCF(x, 630) = 70$

$LCM(x, 60) = 420$

And

$x = 35y^2$, where y is a prime.

Prime factorization of given numbers

$630 = 2 \times 3^2 \times 5 \times 7$

$60 = 2^2 \times 3 \times 5$

$70 = 2 \times 5 \times 7$

$420 = 2^2 \times 3 \times 5 \times 7$

Use HCF condition

$HCF(x, 630) = 70$

means x shares exactly the prime factors 2,5,7 with the same or higher powers as in 70, but not introducing higher common powers with 630.

$x = 35y^2 = 5 \times 7 \times y^2$

Let's find what y can be.

For the HCF to be **70 = 2 × 5 × 7**, x must contain 5 and 7, and 630 must contain at least one factor of 2 in common with x.

But $x = 35y^2 = 5 \times 7 \times y^2$.

This has **no factor 2** unless $y = 2$.

So $y = 2$ must be the prime.

Check:

Then $x = 35 \times 2^2 = 140$.

Check HCF(140, 630)

$140 = 2^2 \times 5 \times 7$

$630 = 2 \times 3^2 \times 5 \times 7$

HCF = $2^1 \times 5 \times 7 = 70$ correct.

Check LCM(140, 60)

$140 = 2^2 \times 5 \times 7$

$60 = 2^2 \times 3 \times 5$

LCM = $2^2 \times 3 \times 5 \times 7 = 420$ correct.

So $x = 140$ and $y = 2$ satisfy both.

Compute the quantities

Quantity I = $2x - 3y = 2(140) - 3(2) = 280 - 6 = 274$

Quantity II = $198y - x = 198(2) - 140 = 396 - 140 = 256$

So, Quantity I > Quantity II

S29. Ans.(d)

Sol. Information Given in the Question:

Principal for Scheme A = Rs. X

Time for Scheme A = 8 years

Simple Interest from Scheme A = 2.8 × X

Principal for Scheme B = Rs. (X + 280)

Time for Scheme B = 3 years

Interest from Scheme B = Rs. 1995

Same rate R% is used in both schemes

Concept/Formula Used in the Question:

Simple Interest (SI) = (P × R × T) / 100

Detailed Explanation:

From Scheme A:

$SI = \frac{X \times R \times 8}{100} = 2.8X$

Divide both sides by X:

$\frac{R \times 8}{100} = 2.8$

$R = \frac{2.8 \times 100}{8} = 35\%$

Use this rate R = 35% in Scheme B:

$SI = \frac{(X + 280) \times 35 \times 3}{100} = 1995$

Calculate:

$\frac{(X+280) \times 105}{100} = 1995$

$(X + 280) \times 1.05 = 1995$

$X + 280 = \frac{1995}{1.05} = 1900$

$X = 1900 - 280 = 1620$

Required value = X / 2 = 1620 / 2 = **810**
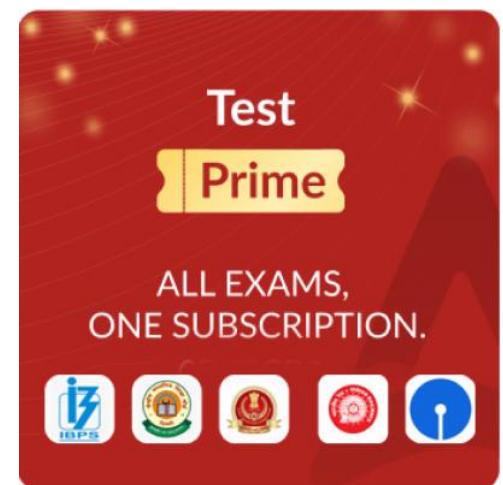
S30. Ans.(e)
Sol. Information Given:
A buys 2 beds at same CP = x each.
Bed 1 → sold to B at 60% profit.
Bed 2 → sold to C at 20% profit.
C sells to D at 20% less than the average of CP for B and C.
D sells to E at Rs 2100 with 25% loss.
Asked: Difference between CP of a bed for A and CP for D.
Formula Used:
Profit SP = CP × (1 + profit%).
Loss SP = CP × (1 − loss%).
Average of two numbers = (a + b)/2.
Explanation:
Let the cost price of each bed for A = Rs x.
He bought two beds at the same price.
Selling prices for B and C
To B: sold at 60% profit
⇒ Selling price to B = $x + 0.6x = 1.6x$
To C: sold at 20% profit
⇒ Selling price to C = $x + 0.2x = 1.2x$
C sells to D
D bought the bed from C at 20% less than the *average* of cost prices of the bed for B and C.
Average of cost prices of the bed for B and C = $\frac{1.6x + 1.2x}{2} = 1.4x$
20% less than this average = $1.4x - 0.2(1.4x) = 1.4x \times 0.8 = 1.12x$
So, **Cost Price for D = 1.12x**
D sells to E at 25% loss for ₹2100
Selling price for D = ₹2100
Loss = 25%
So, Cost Price for D = $\frac{2100}{0.75} = 2800$
Hence,
$1.12x = 2800$
Solve for x
$x = \frac{2800}{1.12} = 2500$
Cost price for A = Rs 2500
Cost price for D = Rs 2800
Required Difference = 2800 − 2500 = **Rs 300**

S31. Ans.(b)
Sol. Information Given in the Question:
Total mixture = 124 litres
Ratio of milk to water = 3 : 1

Milk added = x litres
Water added = 1.5x litres
Difference between milk and water in final mixture = (2x + 2)
Detailed Explanation:
Initial Milk and Water
Total mixture = 124 litres
Ratio of Milk : Water = 3 : 1
So,
Milk = (3/4) × 124 = 93 litres
Water = (1/4) × 124 = 31 litres
Additions
Milk added = x litres
Water added = 1.5x litres
Final Milk = 93 + x
Final Water = 31 + 1.5x
Final Difference
ATQ, (93 + x) - (31 + 1.5x) = 2x + 2
93 - 31 + x - 1.5x = 2x + 2
62 - 0.5x = 2x + 2
62 - 0.5x - 2x - 2 = 0
60 - 2.5x = 0
2.5x = 60
x = 60 / 2.5 = 24

S32. Ans.(a)
Sol. Information Given in the Question:
Present age ratio (Amit : Father) = 1 : 4
Sum of present ages of Amit, father, and mother = 140 years
3 years ago: Mother's age = 5 × (Amit's age at that time) – 28
Detailed Explanation:
Let Amit's present age be **x**
Father's present age = 4x
Total present ages = x + 4x + Mother's age = 140
→ 5x + Mother's age = 140
→ Mother's age = 140 - 5x ...(1)
Now, use the condition from 3 years ago:
Mother's age 3 years ago = (140 - 5x) - 3 = 137 - 5x
Amit's age 3 years ago = x - 3
Given:
137 - 5x = 5(x - 3) - 28
→ 137 - 5x = 5x - 15 - 28
→ 137 - 5x = 5x - 43
→ 137 + 43 = 10x

$\rightarrow$ 180 = 10x

$\rightarrow$ x = 18

Sol (33-37)

Let the males travelling on Sunday be 3x

So, the females travelling on Sunday = 2x

Let the males travelling on Monday be 3y

So, the females travelling on Monday = y

Total females and males travelling on Tuesday = $\frac{5x+4y}{2} - 40$

5x + 4y + $\frac{5x+4y}{2} - 40 = 260$

7.5x + 6y = 300

5x + 4y = 200 (1)

Also,

Males travelling on Tuesday = 3x – 30

Females travelling on Tuesday = y – 2

3x – 30 + y -2 = $\frac{5x+4y}{2} - 40$

3x +y – 32 = 2.5x +2y – 40

0.5x – y = - 8

y - 0.5x = 8

10y – 5x = 80

2y – x = 16 (2)

24 = x and y = 20

Days	Total	Males	Females
Sunday	120	72	48
Monday	80	60	20
Tuesday	60	42	18
Total	260	174	86

S33. Ans.(b)

Sol. Required answer = 72:18 = 4:1

S34. Ans.(c)

Sol. Required answer = 174 - 86 = 88

S35. Ans.(a)

Sol. Required percentage = $\frac{72+60}{120+80} \times 100 = 66\%$

S36. Ans.(e)

Sol. Total Males and females travelling on Wednesday = 150% of 86 = 129

Required answer = 129 – 20 =109

S37. Ans.(a)

Sol. Required answer = $\frac{75}{100} \times 60 + \frac{160}{100} \times 18 = 45 + 288 = 333$

S38. Ans.(b)
Sol. Let the prime number be a,b,c,d,e
Let the odd number be x, x+2, x+4, x+6, x+8
Statement I-
product of the largest number in set B and smallest number in Set A = 55
55 x 1 = 55 (wrong)
11 x 5 = 55
Case 1.
(x+8)× a = 55
11× 5 = 55
a = 5, x = 11-8 = 3
A – 5, 7,11,13,17
B – 3,5,7,9,11
4 numbers are greater.
Case 2.
(x+8)× a = 55
5×11 = 55
a = 11, x = 8 – 11 = -3
A – 11,13,17,19,23
B – -3,-1,1,3,5
5 numbers are greater.
Answer is Contradicting. So, Statement I alone is not sufficient
Statement II-
Sum = 10
(1,9), (3,7), (4,5), (5,5)
Only (3,7), (5,5) is possible.
Product of 3 and 7 is 21 (which is not greater than 21)
5,5 is the possible value.
Statement II alone is sufficient.

S39. Ans.(a)
Sol.
Let the side of a square =a
Radius of a circle = r
Diameter of a circle = 2r
From I. side of a square = diameter of a circle
                a = 2r
From II. perimeter of a rectangle = 80=2× (l + b)
Let l = 3x and b= 2x
80= 2 × (5x)
X= 8 unit
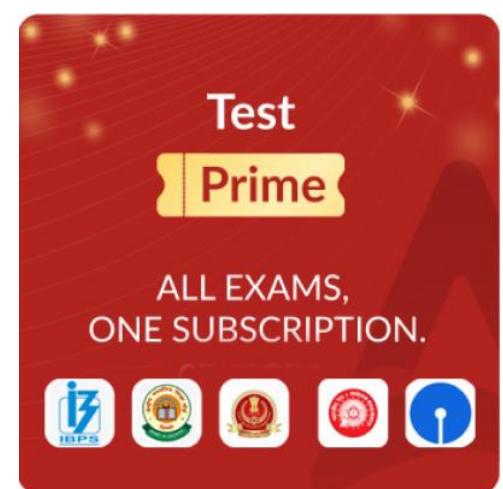
From I and II. Length of a rectangle= 24 unit

Breadth of a rectangle= 16 unit

Side of a square (a) $= \frac{l}{2} = \frac{24}{2} = 12$ unit

Perimeter of a circle= $2\pi r$

$$2 \times \frac{22}{7} \times 6 = 37.71 \; unit$$

Hence, both the statements are taken together to answer the question.

S40. Ans.(a)

Sol. Information Given:

Radius of circle X is 25% less than circle Y

Sum of circumference of X and diameter of Y=188 cm

Height to radius ratio of triangle =5: 4

Area of triangle =350

Formula Used:

Circumference of a circle =$2\pi r$

Area of a triangle =$1/2\times$ base × height

Ratio and circumference relationships

Explanation:

Let radius of circle X & Y be 3r and 4r respectively

$2 \times \frac{22}{7} \times 3r + 2 \times 4r = 188$ cm

r = 7 cm

Height of triangle = 5/4 ×(4×7)=35 cm

ATQ,

350 = 1/2 × base ×35

Base = 20 cm
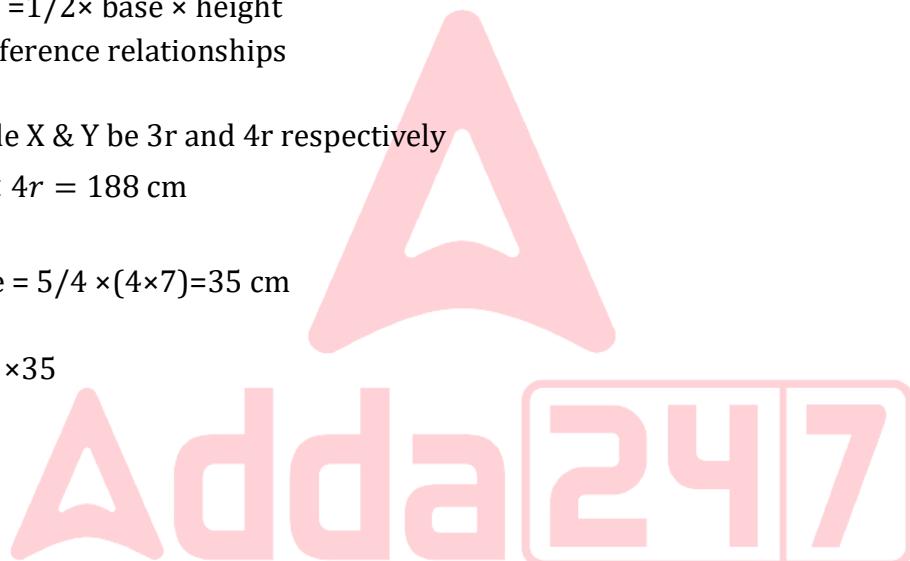
RRB PO Mains 2025 English Section Memory-Based Paper (28 Dec 2025)

Q1. In the given sentence, four words are highlighted which may not be grammatically and contextually correct. Choose the option from the given options that can be the best replacement for the highlighted words.

The central bank has **eulogised** a framework to **exacerbate** monetary stability by **diluting** regulatory vigilance, while **impeding** financial resilience.
(a) instituted, reinforce, tightening, bolstering
(b) absconded, enhance, moderating, supporting
(c) collapsed, confine, easing, advancing
(d) endorsed, rectify, relaxing, encouraging
(e) No replacement required

Q2. In the given sentence, four words are highlighted which may not be grammatically and contextually correct. Choose the option from the given options that can be the best replacement for the highlighted words.

The **issued** money **advisory** led to the **disruption** of assets and ultimately caused the **restriction** of the shell company.
(a) planned, cursory, acquisition, survival
(b) launched, delusory, adaptation, assumption
(c) attempted, laundering, confiscation, defunction
(d) intended, incite, looting, concession
(e) No replacement required

Q3. In the given sentence, four words are highlighted which may not be grammatically and contextually correct. Choose the option from the given options that can be the best replacement for the highlighted words.

Attempts to **fetter** progress through **dissipative** policies that aim to **communalize** resources were met with widespread **incredulity**.
(a) expedite, disillusionment, scrutinize, credibility
(b) trammel, disburdened, revolutionize, habituality
(c) dispatch, dissolutive, categorize, originality
(d) whisk, dissuasions, recognize, scalability
(e) No replacement required

Q4. In the given sentence, four words are highlighted which may not be grammatically and contextually correct. Choose the option from the given options that can be the best replacement for the highlighted words.

The **barrage** that profits would rise unchecked **threats** investors to be cautious in **grappling** their finances despite attractive **earnings**.
(a) barge, insulting, exploring, remuneration
(b) bias, complaints, dealing, associate
(c) flooding, accusations, struggled, profits
(d) delusion, warned, handling, dividends
(e) No replacement required

Q5. In the question below, a sentence is divided into several parts. Select the most appropriate sequence to rearrange the parts into a grammatically correct and contextually coherent sentence.
(A) sufficient to ensure success warned
(B) professionals against complacency, emphasizing
(C) an increasingly competitive and evolving environment
(D) the perception that experiences alone is
(E) the need to continuously update their skills in
(a) BADEC
(b) DCBAE
(c) DABEC
(d) BACED
(e) No rearrangement required

Q6. In the question below, a sentence is divided into several parts. Select the most appropriate sequence to rearrange the parts into a grammatically correct and contextually coherent sentence.
$ques$
(A) allocating capital and
(B) scaling operations prematurely
(C) the belief that rapid expansion
(D) guarantees stability advised
(E) entrepreneurs to stay cautious when
(a) CDEAB
(b) BAECD
(c) CABDE
(d) BECAD
(e) No rearrangement required

Q7. In the question below, a sentence is divided into several parts. Select the most appropriate sequence to rearrange the parts into a grammatically correct and contextually coherent sentence.
(A) the expectation of immediate
(B) policies that could have
(C) public approval urged administrators
(D) to act prudently while drafting
(E) long-term social consequences
(a) CDEAB
(b) CEBAD
(c) ACEDB
(d) ACDBE
(e) No rearrangement required

Q8. In the question below, a sentence is divided into several parts. Select the most appropriate sequence to rearrange the parts into a grammatically correct and contextually coherent sentence.
(A) managing workforce transitions
(B) the assumption that automation would
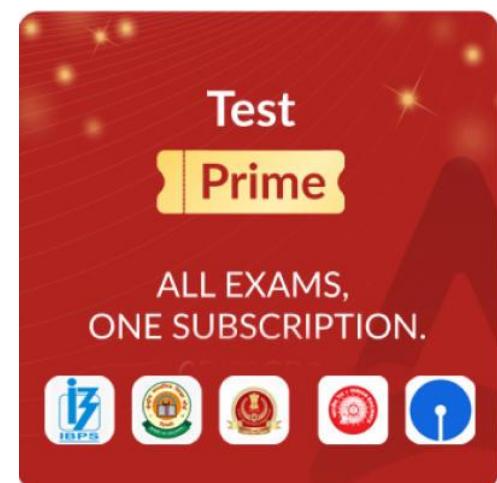
(C) while redesigning workflows and
(D) solve all inefficiencies alerted
(E) organizations to remain vigilant
(a) EDCAB
(b) BDECA
(c) EBDAC
(d) BEDAC
(e) No rearrangement required

Q9. In the question below, a sentence is divided into several parts. Select the most appropriate sequence to rearrange the parts into a grammatically correct and contextually coherent sentence.
(A) global inequality of opportunity, creating a
(B) those who merely consume technology
(C) new digital divide between those who build and
(D) advanced economies, risks widening the
(E) the AI revolution, concentrated in a handful of
(a) EDCAB
(b) BDECA
(c) EDACB
(d) BEDAC
(e) No rearrangement required

Directions (10-16) : Read the following passage carefully and answer the questions given below them.
Migration to Europe has emerged as one of the most complex and contentious issues of the twenty-first century, shaped by a convergence of economic disparities, political instability, demographic changes, and humanitarian crises. While Europe has historically been both a source and destination of migration, recent decades have witnessed a sharp rise in immigration from Africa, West Asia, and parts of Eastern Europe, fundamentally altering the continent's social and political landscape.
A primary driver of migration to Europe is economic inequality. Many migrants are drawn by the promise of better employment opportunities, higher wages, and social security systems unavailable in their home countries. For individuals from conflict-affected or economically fragile regions, Europe represents stability and upward mobility. Simultaneously, Europe's ageing population and declining birth rates have created labour shortages in sectors such as healthcare, construction, and agriculture, making immigrant labour economically indispensable despite political resistance.
Conflict and persecution also play a significant role. Wars in Syria, Afghanistan, and parts of Africa have forced millions to flee their homes, with Europe often perceived as a safe haven due to its commitment to human rights and asylum norms. However, the sudden influx of refugees has strained asylum systems, border management, and public services, exposing the limitations of existing institutional frameworks.
European responses to immigration have been uneven and deeply polarised. While some countries have adopted relatively open policies, emphasising humanitarian obligations and integration, others have prioritised border control and deterrence, driven by domestic political pressures and the rise of nationalist movements. The lack of a unified migration policy within the European Union has further complicated burden-sharing, leading to tensions between member states.
Beyond policy challenges, immigration has sparked broader debates about cultural identity, social cohesion, and security. Although evidence suggests that migrants contribute positively to host economies over time, public perception is often shaped by fears of job competition and cultural dilution.

In essence, migration to Europe is not a temporary phenomenon but a structural reality rooted in global inequalities and demographic trends. Addressing it effectively requires a balanced approach that combines humane asylum practices, legal migration pathways, integration policies, and cooperation with origin countries, rather than reactive and fragmented responses.

Q10. Why does the author describe migration to Europe as a "structural reality"?
(a) It is mainly the outcome of short-lived administrative shortcomings and policy lapses within European nations.
(b) It emerges from long-standing global inequalities along with persistent demographic trends shaping migration flows.
(c) It is shaped almost entirely by temporary economic fluctuations that influence migration only in the short run.
(d) It can be effectively undone by implementing more rigorous border controls and stricter enforcement mechanisms.
(e) It is confined largely to migration originating from a limited number of conflict-affected regions only.

Q11. Which of the following can be most logically inferred from the passage?
(a) Migration to Europe is primarily a short-term reaction to recent conflicts.
(b) Migration pressures on Europe are declining due to global development.
(c) Economic migration is replacing humanitarian migration entirely.
(d) Restrictive policies have eliminated labour shortages in Europe.
(e) Europe's demographic trends create labour shortages, sustaining immigration.

Q12. Consider the following statements:
I. Europe's labour demand and ageing population have reduced opposition to immigrants.
II. Economic disparity between regions is a significant push factor for migration.
III. Immigration has uniformly strengthened social cohesion across Europe.
Which of the statements given above is/are correct?
(a) Only I
(b) Both I and II
(c) Only II
(d) Both II and III
(e) Only III

Q13. The discussion on European policy responses in the passage primarily highlights:
(a) The success of strict border enforcement across all member states.
(b) The absence of political influence on migration decisions.
(c) Complete consensus on humanitarian responsibilities.
(d) Divergent national approaches causing internal disagreements.
(e) The replacement of national laws with a unified EU framework.

Q14. According to the passage, which of the following best explains the strain on asylum systems?
(a) The rapid influx of forcibly displaced people that overwhelms existing asylum and reception capacities.
(b) A steady rise in population movement occurring within European countries themselves.
(c) A significant reduction in financial assistance provided by international humanitarian organisations.
(d) The absence of well-defined legal and institutional mechanisms to regulate refugee movement.
(e) A gradual weakening of adherence to international treaties and humanitarian commitments.

Q15. Examine the following statements:

I. Migration to Europe has altered political discourse within several countries.

II. Nationalist movements have influenced migration-related policies.

III. Public opinion on immigration is shaped solely by economic evidence.

Which of the statements above is/are incorrect?

(a) Only I

(b) Only II

(c) Only I and II

(d) Only II and III

(e) Only III

Q16. The author's approach toward migration to Europe can best be described as:

(a) Alarmist and dismissive of humanitarian concerns

(b) Analytical with emphasis on structural realities

(c) Emotional and strongly advocative of open borders

(d) Critical without acknowledging economic benefits

(e) Optimistic about immediate policy resolutions

Directions (17-22) : In the following passage there are blanks, each of which has been denoted by a letter. For each blank, five options are given. Choose the most appropriate idiom from the options that fits the blank appropriately.

Ananya: "Alright, everyone. The situation with the national sports federation has become a hot potato. Mishandling it could _____ **(A)**, especially with international scrutiny increasing. Karan, where do we stand?"

Karan: "We've initiated talks with athletes' associations, but trust is fragile. Many players feel the system has failed them repeatedly. Still, we should _____ **(B)**—there's unprecedented public support for reform."

Ananya: "That's true. But this is a _____ **(C)**. If we delay structural changes, we risk losing credibility with global bodies. Mehul, what about accountability?"

Mehul: "Several officials accused of misconduct may need to be _____ **(D)**. Without firm action, cosmetic reforms won't convince anyone that we're serious."

Ananya: "I agree. Reform isn't just about policies; it's about enforcing standards. Remember, many athletes have gone from _____ **(E)** despite systemic barriers, purely on talent and resilience. They deserve a fair ecosystem."

Karan: "Absolutely. And we're not starting from scratch. Independent regulators, former Olympians, and legal experts are _____ **(F)**. They can step in to strengthen governance once the framework is approved."

Ananya: "Good. But we must proceed carefully. One wrong move, and vested interests will derail the process. Long-term credibility matters more than short-term applause."

Mehul: "If we combine transparency with strict enforcement, we can turn this crisis into an opportunity. Clean governance could redefine Indian sports administration."

Ananya: "Exactly. Let's move forward with clarity and resolve. If we get this right, it could set a benchmark for sports reforms globally."

Q17. Which of the following idioms will fit in the given blank (A)?

(a) steal the limelight

(b) jump the gun

(c) cut corners

(d) beat around the bush

(e) blow up in our face

Q18. Which of the following idioms will fit in the given blank (B)?
(a) add fuel to the fire
(b) cross the bridge when you come to it
(c) rain on someone's parade
(d) look on the bright side
(e) cry over spilled milk

Q19. Which of the following idioms will fit in the given blank (C)?
(a) blessing in disguise
(b) double-edged sword
(c) now or never moment
(d) uphill battle
(e) shot in the dark

Q20. Which of the following idioms will fit in the given blank (D)?
(a) given a free hand
(b) shown the red card
(c) swept under the carpet
(d) passed the buck
(e) turned a blind eye

Q21. Which of the following idioms will fit in the given blank (E)?
(a) rags to riches
(b) back to square one
(c) out of the blue
(d) on thin ice
(e) at one's wit's end

Q22. Which of the following idioms will fit in the given blank (F)?
(a) under the weather
(b) out of the loop
(c) waiting in the wings
(d) barking up the wrong tree
(e) in deep waters

Directions (23-27): In the following question, a paragraph is provided with a few highlighted words. Select the most appropriate option that can replace the highlighted word to ensure the paragraph is both grammatically and contextually accurate.
Recent advances in artificial intelligence have significantly **diluted (A)** productivity across multiple industries by automating repetitive tasks and enhancing decision-making efficiency. However, experts caution that negligent reliance on ethical frameworks may lead to unintended consequences, including algorithmic bias. While some policymakers view regulation as **a double blessing (B)**, others argue that premature constraints could hinder innovation. To address these concerns, governments must act **in a haphazard manner (C)**, ensuring transparency without stifling growth. Furthermore, lack of skilled oversight continues to **rectify (D)** accountability gaps in AI deployment. If left unchecked, these challenges could **open a can of harmony (E)** in global technological governance.

Q23. Which of the following is most suitable to replace (A)?
(a) No replacement required
(b) acquitted
(c) augmented
(d) undermined
(e) intensified

Q24. Which of the following is most suitable to replace (B)?
(a) an inevitable outcome
(b) a necessary safeguard
(c) No replacement required
(d) a calculated compromise
(e) a source of contention

Q25. Which of the following is most suitable to replace (C)?
(a) with deliberate caution
(b) without prior consultation
(c) No replacement required
(d) through unilateral action
(e) hastily and arbitrarily

Q26. Which of the following is most suitable to replace (D)?
(a) obscure
(b) No replacement required
(c) expose
(d) widen
(e) complicate

Q27. Which of the following is most suitable to replace (E)?
(a) set the ball rolling
(b) No replacement required
(c) open a can of worms
(d) change the status quo
(e) draw a fine line

Q28. Fill in the blanks with the most appropriate pairs of words. Select the best pair from the given options to make the sentence grammatically and contextually correct.
The outspoken actor managed to _____ public _____ through an unexpectedly candid interview that challenged long-held perceptions.
(a) confirm / generation
(b) deplore / aspiration
(c) astonish / expectation
(d) endorse / apparel
(e) banish / asset

Q29. Fill in the blanks with the most appropriate pairs of words. Select the best pair from the given options to make the sentence grammatically and contextually correct.
The prolonged heatwave began to _____ public patience and _____ everyday routines across several regions simultaneously.

(a) unsettle / reorganise
(b) soothe / preserve
(c) quantify / validate
(d) erode / disrupt
(e) narrate / compile

Q30. Fill in the blanks with the most appropriate pairs of words. Select the best pair from the given options to make the sentence grammatically and contextually correct.
The central bank announced measures to _____ stressed loans and _____ liquidity support to cooperative banks nationwide.
(a) detest / oppose
(b) redeem / allot
(c) graze / furnish
(d) assail / erupt
(e) barter / abet

Q31. Fill in the blanks with the most appropriate pairs of words. Select the best pair from the given options to make the sentence grammatically and contextually correct.
A sudden supply disruption threatened to _____ essential services and _____ public confidence within affected urban centres rapidly.
(a) paralyse / undermine
(b) embellish / magnify
(c) audit / reconcile
(d) pacify / stabilise
(e) imitate / rehearse

Directions (32-36): Rearrange the following sentences to form a logically coherent and meaningful paragraph.
(A) After processing and refinement, this cost rose sharply to around 1025 dollars due to limited supply and complex extraction.
(B) To reduce such extreme cost escalation, synthetic alternatives are developed to ensure consistency, scalability, and controlled pricing.
(C) In contrast, natural flavour sources like vanilla rely on agricultural conditions, labour availability, and lengthy extraction processes.
(D) Post-pandemic disruptions further intensified shortages, pushing market prices beyond 11000 dollars globally.
(E) Advances in formulation science make it possible to design artificial components that remain stable longer than natural ones.
(F) Prior to the pandemic, the price of raw natural vanilla was close to 125 dollars per kilogram.

Q32. Which sentence will come FIRST after rearrangement?
(a) A
(b) C
(c) E
(d) B
(e) D

Q33. Which sentence will come SECOND after rearrangement?
(a) C
(b) F
(c) A
(d) D
(e) B

Q34. Which sentence will come THIRD after rearrangement?
(a) F
(b) A
(c) D
(d) B
(e) C

Q35. Which sentence will come FIFTH after rearrangement?
(a) B
(b) D
(c) A
(d) C
(e) F

Q36. Which sentence will come LAST after rearrangement?
(a) A
(b) B
(c) C
(d) D
(e) F

Q37. Given below are four sentences, out of which one sentence is grammatically incorrect. Choose the option which points out the grammatically incorrect sentence. If all sentences are correct, choose 'All are correct' as the correct answer.
(a) Neither of the two solutions appears effective under the current circumstances.
(b) The number of applicants have increased significantly over the past few years.
(c) She was confident that the explanation would satisfy all reasonable doubts.
(d) Proper documentation helps in avoiding unnecessary delays during verification.
(e) All are correct

Q38. Given below are four sentences, out of which one sentence is grammatically incorrect. Choose the option which points out the grammatically incorrect sentence. If all sentences are correct, choose 'All are correct' as the correct answer.
(a) Hardly had the curtain risen than the audience sensed something unusual about the performance.
(b) The manuscript, along with several handwritten notes, was preserved carefully for future reference.
(c) Economic recovery often depends on factors that extend beyond immediate fiscal measures.
(d) The hikers were warned that the trail, though scenic, required considerable endurance.
(e) All are correct
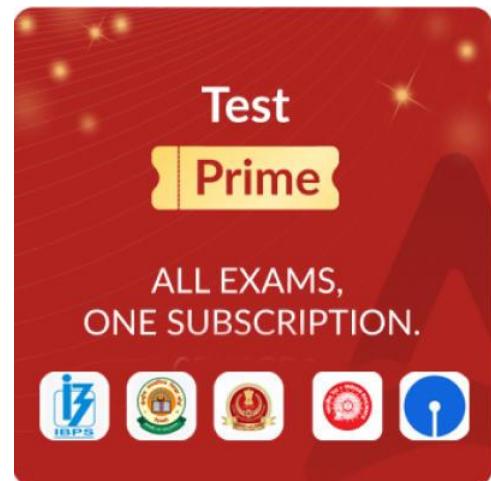
Q39. Given below are four sentences, out of which one sentence is grammatically incorrect. Choose the option which points out the grammatically incorrect sentence. If all sentences are correct, choose 'All are correct' as the correct answer.
(a) Despite repeated revisions, the final draft managed to retain clarity and coherence.
(b) The panel recommended that the issue be examined before any formal announcement.
(c) Little did she realize how profoundly the decision would alter subsequent events.
(d) He behaves as if he was unaware of the implications of his earlier actions.
(e) All are correct

Q40. Given below are four sentences, out of which only one sentence is grammatically correct. Choose the option which points out the grammatically correct sentence. If all sentences are incorrect, choose 'All are incorrect' as the correct answer.
(a) The extent to which these measures impacts public confidence remains unclear.
(b) Seldom people recognize how subtle changes alters long-term outcomes.
(c) The director, along with the senior advisors, have approved the revised framework.
(d) Greater emphasis on consistency help reduce avoidable procedural lapses.
(e) All are incorrect

Q41. Given below are four sentences, out of which only one sentence is grammatically correct. Choose the option which points out the grammatically correct sentence. If all sentences are incorrect, choose 'All are incorrect' as the correct answer.
(a) The researcher, along with several assistants, were documenting the observations carefully.
(b) She reacted as though she knew nothing about the decision taken earlier.
(c) Rarely people appreciate how minor adjustments improves long-term efficiency.
(d) The instructions given to him lacks clarity and consistency.
(e) All are incorrect

Solutions

S1. Ans.(a)
Sol. Let's analyse the sentence **step by step**, keeping **grammar, context (central banking & regulation)**, and **meaning** firmly in view.
Original sentence
The central bank has **eulogised** a framework to **exacerbate** monetary stability by **diluting** regulatory vigilance, while **impeding** financial resilience.
The sentence talks about a **central bank's policy framework**, which is **supposed to strengthen stability and resilience**, not weaken them.
So the highlighted words must align with **positive regulatory intent**, not negative or absurd actions.
Meanings of the highlighted words (Original)
1. Eulogised
- **English:** Praised highly, especially in a speech (often for someone who has died)
- **Hindi:** अत्यधिक प्रशंसा करना (विशेषकर मृत्यु के बाद)
Example (English):
The leader was eulogised for his service to the nation.
Why incorrect here:
A central bank does not eulogise a framework; it **introduces / adopts / institutes** it.
Also, eulogise is stylistically inappropriate for policy actions.
2. Exacerbate

- **English:** To make a problem worse
- **Hindi:** स्थिति को और बिगाड़ना

Example (English):
Poor planning exacerbated the economic crisis.
Why incorrect here:
You do not worsen monetary stability. Stability is something to be **strengthened or reinforced**.

3. Diluting
- **English:** Making something weaker or less strict
- **Hindi:** कमज़ोर करना / शिथिल करना

Example (English):
Diluting safety norms can increase risks.
Why incorrect here:
Central banks aim to **tighten**, not dilute, regulatory vigilance.

4. Impeding
- **English:** Hindering or obstructing progress
- **Hindi:** बाधा डालना

Example (English):
Poor infrastructure is impeding economic growth.
Why incorrect here:
Financial resilience should be **strengthened**, not obstructed.
Correct Option (a)
(a) instituted, reinforce, tightening, bolstering
Why option (a) is correct
All four replacements:
- Match **central bank objectives**
- Are **positive, policy-appropriate verbs**
- Maintain **logical coherence**

Revised sentence:
The central bank has **instituted** a framework to **reinforce** monetary stability by **tightening** regulatory vigilance, while **bolstering** financial resilience.
(Grammatically and contextually sound)
Option-wise Analysis (with meanings & examples)
Option (a) Correct

Word	Meaning (English)	Meaning (Hindi)	Example
instituted	formally introduced	औपचारिक रूप से लागू करना	The policy was instituted last year.
reinforce	strengthening	मज़बूत करना	New rules are reinforcing stability.
tightening	making stricter	कड़ा करना	The RBI is tightening regulations.
bolstering	supporting strongly	मज़बूती देना	Capital buffers bolster resilience.

Why correct:
Perfect alignment with regulatory language and intent.
Option (b) Incorrect

Word	Issue
absconded	means to run away → absurd for a central bank
enhance	acceptable alone
moderating	weakens the idea of vigilance
supporting	acceptable alone

Why incorrect:
"Absconded" makes the sentence nonsensical.
Option (c) Incorrect

Word	Issue
collapsed	implies failure
confine	restrictive, not stabilising
easing	opposite of vigilance
advancing	acceptable alone

Why incorrect:
Overall negative and contradictory to central bank goals.
Option (d) Incorrect

Word	Issue
endorsed	acceptable
rectify	does not collocate with "stability"
relaxing	opposite of vigilance
encouraging	weaker than "bolstering"

Why incorrect:
"Relaxing regulatory vigilance" undermines the sentence's logic.
Option (e) Incorrect
Why incorrect:
All original words convey **negative or inappropriate meanings** for a central bank framework.
Final Answer
Correct option: (a)

S2. Ans.(c)
Sol. Original sentence
The issued money advisory led to the disruption of assets and ultimately caused the restriction of the shell company.
The sentence is about **financial regulation / enforcement**.
Key ideas expected:
- an **official action** by authorities
- related to **money (illegal funds / shell companies)**
- resulting in **seizure of assets** and **closure of the shell company**

So, replacements must fit **legal–financial enforcement context**.
Meanings of the highlighted words (Original)
1. Issued
- **English:** officially released or made public
- **Hindi:** जारी किया गया

Example:
The government issued a new notification.
Partially acceptable, but vague for enforcement action.
2. Advisory
- **English:** a notice giving advice or guidance
- **Hindi:** परामर्श / सलाह-सूचना

Example:
The ministry released a travel advisory.

Why weak here:
An advisory usually **guides**, not **causes disruption, asset seizure, or closure**.
3. Disruption
- **English:** disturbance or interruption
- **Hindi:** व्यवधान

Example:
The strike caused disruption in services.
Why incorrect here:
Assets are not disrupted; they are **confiscated / seized**.
4. Restriction
- **English:** limitation or control
- **Hindi:** प्रतिबंध

Example:
Restrictions were imposed on travel.
Why incorrect here:
A shell company is typically **shut down / rendered defunct**, not merely restricted.
Best Option Analysis
Option (c) — Correct Answer
(c) attempted, laundering, confiscation, defunction
Meanings & fit

Replacement	Meaning (English)	Meaning (Hindi)	Example
attempted	tried to carry out	प्रयास किया हुआ	An attempted fraud was detected.
laundering	illegal concealment of money	धन शोधन	Money laundering is a serious crime.
confiscation	official seizure of property	ज़ब्ती	Assets were confiscated by the ED.
defunction	state of being closed/inoperative	निष्क्रियता	The firm went into defunction.

Why correct:
- Attempted money laundering → realistic legal trigger
- Confiscation of assets → precise legal action
- Defunction of shell company → exact legal outcome

Revised sentence (logical & precise):
The **attempted money laundering** led to the **confiscation of assets** and ultimately caused the **defunction of the shell company**.
Option-wise Rejection Analysis
Option (a)
planned, cursory, acquisition, survival
 Issue

"cursory" does not collocate with money

"acquisition of assets" is positive, not punitive

"survival of shell company" contradicts enforcement

Contextually illogical.
Option (b)
launched, delusory, adaptation, assumption

Issue

"delusory money" is meaningless

"adaptation of assets" is incorrect

"assumption of company" has no legal sense

Semantically invalid.

Option (d)

intended, incite, looting, concession

Issue

"incite money" is grammatically wrong

"looting of assets" suggests chaos, not law

"concession of shell company" is irrelevant

Grammatically and contextually flawed.

Option (e)

No replacement required

Incorrect because:

- Advisory does not lead to confiscation
- Disruption ≠ seizure
- Restriction ≠ closure

Final Answer

Correct option: (c)

S3. Ans.(e)

Sol. Original sentence

Attempts to fetter progress through dissipative policies that aim to communalize resources were met with widespread incredulity.

The sentence discusses:

- **Policies**
- That **restrict progress**
- Are **wasteful**
- Seek **collective ownership of resources**
- And are received with **public disbelief**

This is a **political–economic critique**, and all four highlighted words must align with that theme.

Meanings of the highlighted words (Original)

1. Fetter

- **English:** To restrain, restrict, or hold back
- **Hindi:** बंधन डालना / रोकना

Example (English):

Excessive regulations can fetter innovation.

Correct here:

"Fetter progress" is a **standard and precise collocation**.

2. Dissipative

- **English:** Wasteful; causing loss of energy or resources
- **Hindi:** अपव्ययी / संसाधनों को नष्ट करने वाला

Example (English):

Dissipative spending weakened the economy.

Correct here:

Policies can logically be dissipative.

3. Communalize
- **English:** To place under collective or community ownership
- **Hindi:** सामूहिक स्वामित्व में बदलना

Example (English):
The regime tried to communalize agricultural land.
Correct here:
Used accurately in political-economic contexts.

4. Incredulity
- **English:** Disbelief or skepticism
- **Hindi:** अविश्वास / संदेह

Example (English):
The announcement was greeted with incredulity.
Correct here:
Perfectly matches public reaction to controversial policies.

Option-wise Analysis

Option (a)
expedite, disillusionment, scrutinize, credibility

 Issue

 "expedite progress" is opposite of original meaning

 "disillusionment policies" is illogical

 "scrutinize resources" mismatches intent

 "credibility" ≠ reaction

Contextually wrong.

Option (b)
trammel, disburdened, revolutionize, habituality

 Issue

 "disburdened policies" is meaningless

 "revolutionize resources" is incorrect

 "habituality" does not fit reaction

Semantically incoherent.

Option (c)
dispatch, dissolutive, categorize, originality

 Issue

 "dispatch progress" is incorrect

 "categorize resources" misses ideological sense

 "originality" is not a public response

Incorrect replacements.

Option (d)
whisk, dissuasions, recognize, scalability

 Issue

 "whisk progress" is idiomatically wrong

 "dissuasion policies" incorrect

 "scalability" is technical, not emotional

Context mismatch.

Option (e) — Correct Answer
No replacement required
All four highlighted words:
- Are **grammatically correct**
- Are **contextually precise**
- Fit the **ideological, economic, and rhetorical tone** of the sentence

Final Answer
Correct option: (e)

S4. Ans.(d)
Sol. Let's analyse carefully, keeping **grammar, logic, and exam-level contextual accuracy** in focus.
Original sentence
The barrage that profits would rise unchecked threats investors to be cautious in grappling their finances despite attractive earnings.
Intended meaning (clearly):
- A **false belief/assumption**
- About **unchecked profit growth**
- **Warned investors**
- To be careful while **managing finances**
- Despite **tempting returns**

The original sentence fails because several highlighted words **do not fit grammatically or contextually**.
Meanings of the highlighted words (Original)
1. Barrage
- **English:** A sudden outpouring or bombardment (of questions, criticism, attacks)
- **Hindi:** बौछार / अचानक हमला

Example (English):
The minister faced a barrage of questions.
Why incorrect here:
"Barrage" cannot introduce a **belief or assumption**.
We need a word meaning false belief or misconception.
2. Threats
- **English:** Statements of intent to cause harm
- **Hindi:** धमकी

Example (English):
The criminals issued threats to witnesses.
Why incorrect here:
An **idea or belief does not threaten investors**.
It may **warn, alert, or caution** them.
(Also grammatically wrong: should be threatens, even if meaning worked.)
3. Grappling
- **English:** Struggling physically or mentally
- **Hindi:** जूझना

Example (English):
She is grappling with anxiety.
Why incorrect here:
You don't grapple finances; you **handle / manage** them.
4. Earnings

- **English:** Income or profits
- **Hindi:** आय / कमाई

Example (English):
The company reported higher earnings.
Contextually weak:
In investor context, **"dividends"** is more precise than generic earnings.
Option-wise Analysis
Option (a)
barge, insulting, exploring, remuneration
- "barge that profits…" incorrect
- "insulting investors" incorrect
- "exploring finances" incorrect
- "remuneration" ≠ investor returns

Completely illogical.
Option (b)
bias, complaints, dealing, associate
- "bias that profits…" incorrect
- "complaints investors" incorrect
- "associate finances" incorrect

Grammatically broken.
Option (c)
flooding, accusations, struggled, profits
- "flooding that profits…" incorrect
- "accusations investors" incorrect
- "struggled their finances" incorrect

Meaningless construction.
Option (d) — Correct Answer
delusion, warned, handling, dividends
Let's verify each replacement:

Replacement	Meaning (English)	Meaning (Hindi)	Example
delusion	false belief	भ्रम	The delusion of easy wealth misled many.
warned	cautioned	चेतावनी दी	Experts warned investors of risks.
handling	managing	प्रबंधन करना	He is careful in handling finances.
dividends	shareholder returns	लाभांश	Dividends attracted investors.

Revised sentence (logical & grammatical):
The **delusion** that profits would rise unchecked **warned** investors to be cautious in **handling** their finances despite attractive **dividends**.
Coherent
Contextually accurate
Exam-appropriate vocabulary
Option (e)
No replacement required
Incorrect because:
- "barrage" is wrong
- "threats" is grammatically wrong
- "grappling finances" is idiomatically incorrect

Final Answer

Correct option: (d)

S5. Ans.(c)
Sol. Step 1: Identify the opening part
A good sentence opening should:
- Introduce the **subject**
- Not depend on any previous information

(D)
the perception that experiences alone is
This clearly introduces the **core idea** and sets up what follows.
So, **D must come first**.
Step 2: Find what logically follows D
(D) ends with:
experience alone is …
It clearly demands completion.
(A) fits perfectly:
sufficient to ensure success warned
So we now have:
the perception that experiences alone is sufficient to ensure success warned
D → A is grammatically mandatory.
Step 3: Who is being warned?
(A) ends with **"warned"**, which must be followed by **who** is warned.
(B) fits naturally:
professionals against complacency, emphasizing
So far:
the perception that experiences alone is sufficient to ensure success warned professionals against complacency, emphasizing
D → A → B
Step 4: What is being emphasized?
(B) ends with **"emphasizing"**, which must be followed by **what is emphasized**.
(E):
the need to continuously update their skills in
This completes the idea.
D → A → B → E
Step 5: Final qualifier / context
(E) ends with:
skills in …
This clearly needs a **contextual phrase**.
(C) fits perfectly:
an increasingly competitive and evolving environment
Final order: **D → A → B → E → C**
Correct Option: (c) DABEC
Complete Correct Sentence
The perception that experiences alone is sufficient to ensure success warned professionals against complacency, emphasizing the need to continuously update their skills in an increasingly competitive and evolving environment.
Why other options are incorrect (briefly)
- **(a) BADEC** – starts mid-thought, no subject
- **(b) DCBAE** – breaks verb–object flow
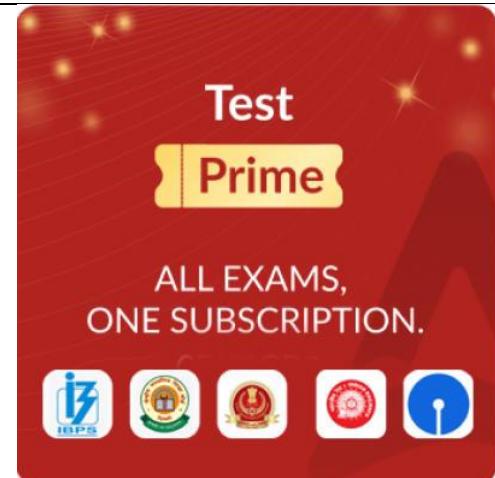
- **(d) BACED** – grammatically disjointed
- **(e)** incorrect because rearrangement is required

Final Answer
Correct option: (c)

S6. Ans.(a)
Sol. Correct option: **(a) CDEAB**
Why this sequence works
- **(C)** starts the sentence properly with the subject: "the belief that rapid expansion …"
- **(D)** completes that thought: "… guarantees stability …" and introduces the verb: "advised …"
- **(E)** gives the object: "entrepreneurs" and continues the idea: "to stay cautious when …"
- **(A)** and **(B)** complete the "when…" clause with parallel actions: "allocating capital and scaling operations prematurely."

Complete sentence
The belief that rapid expansion guarantees stability advised entrepreneurs to stay cautious when allocating capital and scaling operations prematurely.

Why the other options are incorrect (brief)
- **(b) BAECD** starts with a fragment ("scaling operations…"), no proper subject.
- **(c) CABDE** breaks the flow: "belief that rapid expansion … advised … guarantees" (misplaced verb/idea).
- **(d) BECAD** begins with a fragment and misorders the clause logic.
- **(e)** incorrect because rearrangement is needed.

S7. Ans.(d)
Sol. Option **(d) ACDBE** is correct.
Sequence explanation
- **(A) the expectation of immediate + (C) public approval urged administrators**
- → forms the subject + main verb idea: "The expectation of immediate public approval urged administrators…"
- **(D) to act prudently while drafting**
- → completes what the administrators were urged to do.
- **(B) policies that could have + (E) long-term social consequences**
- → completes the object with the correct relative clause: "policies that could have long-term social consequences."

Complete sentence
The expectation of immediate public approval urged administrators to act prudently while drafting policies that could have long-term social consequences.

S8. Ans.(b)
Sol. Option **(b) BDECA** is correct.
How the sequence works
- **(B)** introduces the subject clearly:
- "the assumption that automation would …"
- **(D)** completes that assumption and adds the verb:
- "… solve all inefficiencies alerted …"
- **(E)** gives the object of the verb:
- "… organizations to remain vigilant …"
- **(C)** adds the simultaneous condition:
- "… while redesigning workflows and …"

- **(A)** completes the parallel action:
- "... managing workforce transitions."

The sentence flows logically as:

assumption → warning → who is warned → while doing what (two parallel actions).

Complete coherent sentence

The assumption that automation would solve all inefficiencies alerted organizations to remain vigilant while redesigning workflows and managing workforce transitions.

Why other options are incorrect (brief)

- **(a) EDCAB**: starts with "organizations" but lacks a clear verb before it.
- **(c) EBDAC**: breaks the subject–verb relationship and misplaces "alerted."
- **(d) BEDAC**: disrupts the logical flow between assumption and consequence.
- **(e)**: rearrangement is clearly required.

Final answer: (b)

S9. Ans.(c)

Sol. Correct Answer: (c) EDACB

Step-by-step explanation of the sequence

Let's first look at **what kind of sentence** we are forming.

The sentence talks about **AI revolution**, its **concentration in advanced economies**, and how this **worsens global inequality by creating a digital divide**. So, the sentence must:

1. **Introduce the subject** (AI revolution),
2. **Explain where it is concentrated**,
3. **State the consequence** (widening inequality),
4. **Describe what inequality looks like** (digital divide),
5. **Specify the two groups being divided**.

Correct logical flow: E → D → A → C → B

E

"the AI revolution, concentrated in a handful of"

Introduces the **main subject**: *the AI revolution*.

D

"advanced economies, risks widening the"

Completes the idea of *where* AI is concentrated and introduces the **risk/consequence**.

"the AI revolution, concentrated in a handful of advanced economies, risks widening the ..."

A

"global inequality of opportunity, creating a"

Specifies **what is being widened**: *global inequality of opportunity*.

C

"new digital divide between those who build and"

Explains **how** this inequality manifests — as a *digital divide*.

B

"those who merely consume technology"

Completes the contrast introduced in C.

Final reconstructed sentence

"The AI revolution, concentrated in a handful of advanced economies, risks widening the global inequality of opportunity, creating a new digital divide between those who build and those who merely consume technology."

Why the other options don't work (briefly)

- **(a) EDCAB** – breaks the flow between *inequality* and *digital divide*.
- **(b) BDECA** – starts abruptly with "those who", which cannot begin a sentence.

- **(d) BEDAC** – illogical opening and misplaced modifiers.
- **(e) No rearrangement required** – original order is grammatically broken.

Final Answer:

(c) EDACB

S10. Ans.(b)

Sol. Correct Answer: (b)

It emerges from long-standing global inequalities along with persistent demographic trends shaping migration flows.

Textual Reference from the Passage

The answer comes **directly from the concluding paragraph**, where the author states:

"Migration to Europe is not a temporary phenomenon but a structural reality rooted in global inequalities and demographic trends."

This line explicitly explains **why** migration is called a structural reality:

- It is **not temporary**
- It is **rooted in long-term causes**, namely:
  - o   **Global inequalities**
  - o   **Demographic trends** (ageing population, declining birth rates)

Hence, option **(b)** accurately paraphrases this idea.

Option-wise Analysis

(a) Incorrect

"It is mainly the outcome of short-lived administrative shortcomings and policy lapses within European nations."

Why incorrect:

- The passage repeatedly emphasises **deep-rooted causes**, not administrative lapses.
- Migration is linked to **economic inequality, conflicts, and demographic shifts**, not temporary governance failures.

(b) Correct

"It emerges from long-standing global inequalities along with persistent demographic trends shaping migration flows."

Why correct:

- Directly reflects the author's concluding claim.
- Accurately captures:
  - o   **Global inequalities** (economic disparity, conflict, instability)
  - o   **Demographic trends** (ageing population, labour shortages)

(c) Incorrect

"It is shaped almost entirely by temporary economic fluctuations that influence migration only in the short run."

Why incorrect:

- The passage clearly rejects the idea of migration being short-term or cyclical.
- Economic factors discussed (inequality, labour shortages) are **structural and enduring**, not temporary.

(d) Incorrect

"It can be effectively undone by implementing more rigorous border controls and stricter enforcement mechanisms."

Why incorrect:

- The author argues against **reactive and fragmented responses**, including overreliance on deterrence.
- Structural problems cannot be "undone" by enforcement alone.

(e) Incorrect
"It is confined largely to migration originating from a limited number of conflict-affected regions only."
Why incorrect:
- Migration is shown to originate from **multiple regions** (Africa, West Asia, Eastern Europe).
- Causes include **economic, demographic, and humanitarian factors**, not just conflict.

Final Takeaway
The author calls migration a **"structural reality"** because it is:
- **Long-term**
- **Deeply rooted**
- Driven by **global inequalities** and **demographic forces**, not by temporary crises or policy failures.

Final Answer: (b)

S11. Ans.(e)
Sol. Correct Answer: (e)
Europe's demographic trends create labour shortages, sustaining immigration.
Reference from the passage (Textual basis)
The inference is drawn from the **second paragraph**, where the author states:
"Europe's ageing population and declining birth rates have created labour shortages in sectors such as healthcare, construction, and agriculture, making immigrant labour economically indispensable despite political resistance."
This line clearly indicates:
- **Demographic trends** (ageing population, low birth rates)
- → **Labour shortages**
- → **Economic dependence on immigrant labour**

Hence, it is logically inferred that these demographic trends **sustain continued immigration**, making option **(e)** correct.

Option-wise Analysis
(a) Migration to Europe is primarily a short-term reaction to recent conflicts.
Incorrect
Why:
The passage repeatedly describes migration as a **long-term and structural phenomenon**, not a short-term reaction.
Supporting line:
"Migration to Europe is not a temporary phenomenon but a structural reality…"
Thus, option (a) contradicts the passage.

(b) Migration pressures on Europe are declining due to global development.
Incorrect
Why:
Nowhere does the passage suggest that migration pressures are declining. Instead, it highlights:
- Rising immigration in recent decades
- Persistent economic and demographic drivers

Hence, this option introduces an idea **not supported** by the text.

(c) Economic migration is replacing humanitarian migration entirely.
Incorrect
Why:
The passage discusses **both** forms of migration:
- Economic migration (labour shortages, inequality)
- Humanitarian migration (wars, persecution, asylum)

Supporting lines:

"A primary driver of migration… is economic inequality."

"Conflict and persecution also play a significant role."

This shows **coexistence**, not replacement.

(d) Restrictive policies have eliminated labour shortages in Europe.

Incorrect

Why:

The passage explicitly states that labour shortages **continue**:

"…making immigrant labour economically indispensable despite political resistance."

This implies that restrictive policies have **not eliminated** labour shortages.

(e) Europe's demographic trends create labour shortages, sustaining immigration.

Correct

Why:

This option accurately **infers** what is clearly implied:

- Demographic trends → labour shortages
- Labour shortages → continued immigration

It neither exaggerates nor adds new information beyond the passage.

Final Answer

(e)

S12. Ans.(c)

Sol. Correct Answer: (c) Only II

Statement-wise Analysis with passage references

Statement I: Incorrect

Europe's labour demand and ageing population have reduced opposition to immigrants.

Why incorrect:

While the passage acknowledges that Europe's ageing population and labour shortages make immigrant labour **economically indispensable**, it clearly states that **political resistance and opposition still persist**.

Relevant line from the passage:

"…making immigrant labour economically indispensable **despite political resistance**."

This shows that labour demand has **not reduced opposition**; instead, opposition continues alongside economic dependence.

Statement II: Correct

Economic disparity between regions is a significant push factor for migration.

Why correct:

The passage explicitly identifies **economic inequality** as a primary driver of migration.

Supporting lines:

"A primary driver of migration to Europe is economic inequality."

"Many migrants are drawn by the promise of better employment opportunities, higher wages, and social security systems unavailable in their home countries."

Thus, Statement II is **directly supported** by the passage.

Statement III: Incorrect

Immigration has uniformly strengthened social cohesion across Europe.

Why incorrect:

The passage presents a **mixed picture**, highlighting debates, fears, and polarisation rather than uniform strengthening.

Supporting lines:

"European responses to immigration have been uneven and deeply polarised."

"Immigration has sparked broader debates about cultural identity, social cohesion, and security."
This contradicts the claim of **uniform strengthening**.
Final Answer
(c) Only II

S13. Ans.(d)
Sol. Correct Answer: (d)
Divergent national approaches causing internal disagreements
Reference from the passage
The answer is supported mainly by the **fourth paragraph**, which states:
"European responses to immigration have been uneven and deeply polarised."
"The lack of a unified migration policy within the European Union has further complicated burden-sharing, leading to tensions between member states."
These lines clearly point to:
  • **Divergent national approaches**
  • **Internal disagreements and tensions** among EU members
Hence, option **(d)** best captures the core idea of the discussion on policy responses.
Why the other options are incorrect:
(a) The success of strict border enforcement across all member states
Incorrect
The passage does not describe border enforcement as uniformly successful; instead, it highlights **strain, polarisation, and limitations**.
(b) The absence of political influence on migration decisions
Incorrect
The passage explicitly mentions **domestic political pressures** and **nationalist movements** shaping policies.
Supporting line:
"…driven by domestic political pressures and the rise of nationalist movements."
(c) Complete consensus on humanitarian responsibilities
Incorrect
The passage stresses **lack of consensus**, not unanimity.
(e) The replacement of national laws with a unified EU framework
Incorrect
The passage says the **lack of a unified migration policy** has complicated matters, meaning such a framework does **not exist**.
Final Answer
(d)

S14. Ans.(a)
Sol. Correct Answer: (a)
The rapid influx of forcibly displaced people that overwhelms existing asylum and reception capacities.
Textual reference from the passage
The explanation comes from the **third paragraph**, where the author notes:
"The sudden influx of refugees has strained asylum systems, border management, and public services, exposing the limitations of existing institutional frameworks."
Key points from this line:
  • **Sudden / rapid influx**
  • **Refugees (forcibly displaced people)**

- **Strain on asylum systems due to capacity overload**

Option **(a)** accurately paraphrases this idea.

Option-wise Analysis

(a) The rapid influx of forcibly displaced people that overwhelms existing asylum and reception capacities.

Correct

Why:

- Directly reflects "sudden influx of refugees"
- Clearly explains **why** systems are strained (overwhelmed capacities)

(b) A steady rise in population movement occurring within European countries themselves.

Incorrect

Why:

- The passage discusses **cross-border refugee inflows**, not internal migration within Europe.
- Also, the strain is attributed to a **sudden influx**, not a steady rise.

(c) A significant reduction in financial assistance provided by international humanitarian organisations.

Incorrect

Why:

- The passage makes **no mention** of reduced funding or international aid cuts.
- Introducing this idea goes beyond the text.

(d) The absence of well-defined legal and institutional mechanisms to regulate refugee movement.

Incorrect

Why:

- The passage says systems were **strained**, not absent.
- It refers to **limitations of existing frameworks**, not a complete lack of mechanisms.

Relevant phrase:

"exposing the limitations of existing institutional frameworks"

This implies **inadequacy**, not non-existence.

(e) A gradual weakening of adherence to international treaties and humanitarian commitments.

Incorrect

Why:

- The passage actually highlights Europe's **commitment to human rights and asylum norms**, not weakening adherence.

Supporting line:

"Europe often perceived as a safe haven due to its commitment to human rights and asylum norms."

Final Answer

(a)

S15. Ans.(e)

Sol. Correct Answer: **(e) Only III**

Statement-wise Analysis with reference to the passage

Statement I

Migration to Europe has altered political discourse within several countries.

Correct (NOT incorrect)

Why:

The passage clearly indicates that migration has reshaped political debates and policies across Europe.

Supporting lines:

"…fundamentally altering the continent's social and political landscape."

"European responses to immigration have been uneven and deeply polarised."
These lines show that migration has influenced political discourse and debates in multiple countries.

Statement II
Nationalist movements have influenced migration-related policies.
Correct (NOT incorrect)
Why:
The passage explicitly mentions the role of nationalist movements in shaping restrictive policies.
Supporting line:
"…driven by domestic political pressures and the rise of nationalist movements."
Thus, Statement II is directly supported by the passage.

Statement III
Public opinion on immigration is shaped solely by economic evidence.
Incorrect
Why:
The passage makes it clear that public opinion is influenced by **multiple factors**, not just economic evidence.
Supporting lines:
"Beyond policy challenges, immigration has sparked broader debates about cultural identity, social cohesion, and security."
"Although evidence suggests that migrants contribute positively to host economies over time, public perception is often shaped by fears of job competition and cultural dilution."
This shows that:
- Economic evidence exists, **but**
- Public opinion is also shaped by **fears, cultural concerns, and security issues**

Hence, saying it is shaped solely by economic evidence is incorrect.
Final Answer
(e) Only III

S16. Ans.(b)
Sol. Correct Answer: (b)
Analytical with emphasis on structural realities
Why option (b) is correct (with passage reference)
Throughout the passage, the author:
- Examines **multiple drivers** of migration (economic inequality, demographic change, conflict, policy gaps)
- Avoids emotional or moralistic language
- Repeatedly frames migration as **long-term and structural**, not temporary

Most clearly stated in the concluding paragraph:
"Migration to Europe is not a temporary phenomenon but a structural reality rooted in global inequalities and demographic trends."
The author:
- Analyses causes
- Assesses policy responses
- Weighs economic benefits against political and social challenges

This confirms an **analytical, balanced approach** grounded in structural realities.
Why the other options are incorrect:
(a) Alarmist and dismissive of humanitarian concerns
Incorrect
The author acknowledges humanitarian crises and asylum norms respectfully:

"...Europe often perceived as a safe haven due to its commitment to human rights and asylum norms."
This shows concern, not dismissal.

(c) Emotional and strongly advocative of open borders

Incorrect

The tone is **measured and analytical**, not emotional or activist.

The author does not advocate open borders but calls for **balanced approaches**.

(d) Critical without acknowledging economic benefits

Incorrect

The passage explicitly recognises economic contributions:

"Evidence suggests that migrants contribute positively to host economies over time."

So the author does acknowledge benefits.

(e) Optimistic about immediate policy resolutions

Incorrect

The author rejects quick fixes and criticises **reactive and fragmented responses**, implying no immediate resolution.

Final Answer

(b)

S17. Ans.(e)

Sol. Correct answer for Blank (A): (e) *blow up in our face*

Why "blow up in our face" fits best

Context from the passage:

"Mishandling it could _____, especially with international scrutiny increasing."

The speaker is warning that **any wrong handling of the issue could lead to serious negative consequences**, particularly embarrassment or backlash at an international level.

"Blow up in our face" perfectly captures this idea.

Meaning, Example & Explanation

(e) *blow up in our face* — **Correct**

English Meaning:

To backfire badly; to result in serious trouble or embarrassment instead of the intended outcome.

Hindi Meaning:

उलटा पड़ जाना; कोई काम ऐसा बिगड़ जाना जिससे गंभीर नुकसान या शर्मिंदगी हो।

Example (English):

- *Ignoring the athletes' complaints could blow up in our face when international bodies step in.*

Why correct:

- The idiom clearly conveys **risk, backlash, and unintended negative consequences**, which aligns exactly with the warning tone of Ananya's statement.
- It fits both **logically and idiomatically** with "mishandling" and "international scrutiny."

Why the other options are incorrect:

(a) *steal the limelight*

English Meaning:

To attract all the attention.

Hindi Meaning:

सारी सुर्खियाँ बटोर लेना।

Why incorrect:

- The sentence is about **risk and failure**, not about gaining attention.
- Completely mismatched with the negative consequence implied.

(b) *jump the gun*

English Meaning:

To act too early or prematurely.
Hindi Meaning:
जल्दबाज़ी करना।
Why incorrect:
- The issue here is **mishandling**, not acting too early.
- Premature action ≠ disastrous consequences.

(c) *cut corners*
English Meaning:
To do something cheaply or carelessly by skipping proper procedures.
Hindi Meaning:
काम में शॉर्टकट अपनाना; गुणवत्ता से समझौता करना।
Why incorrect:
- This describes a **method**, not a **result**.
- The blank requires an outcome that may occur *because of* mishandling, not the act itself.

(d) *beat around the bush*
English Meaning:
To avoid speaking directly about an issue.
Hindi Meaning:
सीधी बात से बचना; गोलमोल बात करना।
Why incorrect:
- This idiom refers to **communication style**, not consequences.
- Does not fit grammatically or logically in the sentence.

Final Answer:
(e) blow up in our face

S18. Ans.(d)
Sol. Correct answer for Blank (B): **(d)** *look on the bright side*
Why "look on the bright side" fits best
Context from the passage:
"Still, we should _____—there's unprecedented public support for reform."
Here, Karan is urging optimism despite fragile trust. He points out a **positive aspect** of the situation—strong public backing. The idiom must therefore convey **finding hope or positivity in a difficult situation**.
"Look on the bright side" fits both the **tone** and **meaning** perfectly.
Meaning, Example & Explanation
(d) *look on the bright side* — **Correct**
English Meaning:
To focus on the positive aspects of a situation, even when circumstances are difficult.
Hindi Meaning:
स्थिति के सकारात्मक पक्ष पर ध्यान देना; मुश्किल हालात में भी अच्छाई देखना।
Example (English):
- *The reforms will take time, but let's look on the bright side—public support has never been stronger.*
Why correct:
- The idiom aligns directly with the justification that follows the dash.
- It expresses **optimism grounded in reality**, which suits the reform-oriented discussion.
Why the other options are incorrect
(a) *add fuel to the fire* — **Incorrect**
English Meaning:

To make a bad situation worse.

Hindi Meaning:

आग में घी डालना; हालात और बिगाड़ देना।

Why incorrect:

- The speaker is trying to **encourage confidence**, not worsen the situation.
- Opposite in meaning to the context.

(b) *cross the bridge when you come to it* — **Incorrect**

English Meaning:

To deal with a problem only when it actually arises.

Hindi Meaning:

समस्या आने पर ही उससे निपटना।

Why incorrect:

- The sentence is about **current attitude**, not postponing decisions.
- Does not connect logically with public support.

(c) *rain on someone's parade* — **Incorrect**

English Meaning:

To spoil someone's happiness or plans.

Hindi Meaning:

किसी की खुशी खराब करना।

Why incorrect:

- The idiom suggests negativity, whereas the speaker is highlighting encouragement.
- Contextually mismatched.

(e) *cry over spilled milk* — **Incorrect**

English Meaning:

To complain about something that has already happened and cannot be changed.

Hindi Meaning:

बीती बातों पर पछताना।

Why incorrect:

- The conversation is future-focused and solution-oriented.
- No sense of regret is expressed in the line.

Final Answer:

(d) look on the bright side

S19. Ans.(c)
Sol. Correct answer for Blank (C): (c) *now or never moment*
Why "now or never moment" fits best
Context from the passage:
"That's true. But this is a _____. If we delay structural changes, we risk losing credibility with global bodies."

The speaker stresses **urgency** and warns that **delay will cause irreversible damage**. The idiom must therefore convey a **critical point in time where action is imperative**.

"Now or never moment" captures exactly this sense of **decisive urgency**.

Meaning, Example & Explanation

(c) *now or never moment* — **Correct**

English Meaning:

A situation where action must be taken immediately, or the opportunity will be lost forever.

Hindi Meaning:

अब नहीं तो कभी नहीं की स्थिति; ऐसा समय जब तुरंत निर्णय लेना अनिवार्य हो।

Example (English):

- *This reform is a now or never moment for restoring faith in the sports federation.*

Why correct:

- It directly aligns with the warning that **delaying action will lead to loss of credibility**.
- The idiom emphasizes **time sensitivity and irreversible consequences**, which is central to the sentence.

Why the other options are incorrect:

(a) *blessing in disguise* **— Incorrect**

English Meaning:

Something that seems bad at first but turns out to be good.

Hindi Meaning:

छुपा हुआ वरदान।

Why incorrect:

- The sentence highlights **risk due to delay**, not unexpected benefit.
- The tone is cautionary, not reassuring.

(b) *double-edged sword* **— Incorrect**

English Meaning:

A situation with both positive and negative consequences.

Hindi Meaning:

दोनों ओर नुकसान और फायदा रखने वाली स्थिति।

Why incorrect:

- The focus here is on **urgency**, not dual outcomes.
- No contrast of pros and cons is being discussed.

(d) *uphill battle* **— Incorrect**

English Meaning:

A difficult struggle with little chance of success.

Hindi Meaning:

कठिन और संघर्षपूर्ण प्रयास।

Why incorrect:

- The issue is not about difficulty but about **timing**.
- The passage does not suggest low chances of success.

(e) *shot in the dark* **— Incorrect**

English Meaning:

A guess or attempt with little chance of success.

Hindi Meaning:

अंदाज़े से किया गया प्रयास।

Why incorrect:

- Structural reforms are presented as **necessary and calculated**, not random guesses.
- Completely misaligned with the seriousness of the context.

Final Answer:

(c) now or never moment

S20. Ans.(b)
Sol. Correct answer for Blank (D): (b) *shown the red card*
Why "shown the red card" fits best
Context from the passage:
"Several officials accused of misconduct may need to be _____. Without firm action, cosmetic reforms won't convince anyone that we're serious."

The speaker is clearly arguing for **strict punitive action** against officials accused of wrongdoing. The idiom must therefore imply **removal, dismissal, or expulsion as a disciplinary measure**.

"Shown the red card", borrowed from sports terminology, aptly conveys **being expelled or removed for misconduct**, making it especially relevant in a sports governance context.

Meaning, Example & Explanation

(b) *shown the red card* — Correct

English Meaning:

To be dismissed or expelled for unacceptable behaviour.

Hindi Meaning:

दुराचार के कारण पद या भूमिका से हटाया जाना; कड़ी सज़ा मिलना।

Example (English):

- *Officials found guilty of corruption must be shown the red card to restore trust.*

Why correct:

- The idiom directly aligns with **accountability and enforcement**.
- It reinforces the idea that **strong action**, not superficial reform, is necessary.
- The sports-based idiom fits naturally in a discussion about a sports federation.

Why the other options are incorrect:

(a) *given a free hand* — Incorrect

English Meaning:

To allow someone complete freedom to act.

Hindi Meaning:

पूरी छूट देना।

Why incorrect:

- The context demands **punishment**, not empowerment.
- Opposite in meaning to disciplinary action.

(c) *swept under the carpet* — Incorrect

English Meaning:

To hide or ignore a problem.

Hindi Meaning:

समस्या को दबा देना।

Why incorrect:

- The speaker explicitly criticises cosmetic reforms and lack of action.
- This idiom contradicts the demand for accountability.

(d) *passed the buck* — Incorrect

English Meaning:

To shift responsibility onto someone else.

Hindi Meaning:

ज़िम्मेदारी टालना।

Why incorrect:

- The sentence argues for **taking responsibility**, not avoiding it.
- Does not fit grammatically with "may need to be".

(e) *turned a blind eye* — Incorrect

English Meaning:

To deliberately ignore wrongdoing.

Hindi Meaning:

जानबूझकर अनदेखा करना।

Why incorrect:

- The speaker is advocating **action**, not ignorance.

- Semantically opposite to the intent of the sentence.

Final Answer:

(b) shown the red card

S21. Ans.(a)

Sol. Correct answer for Blank (E): (a) *rags to riches*

Why "rags to riches" fits best

Context from the passage:

"Remember, many athletes have gone from _____ despite systemic barriers, purely on talent and resilience."

The sentence highlights **extraordinary upward journeys**, where athletes succeed **despite hardship and lack of support**. The idiom must therefore convey **a rise from poverty or disadvantage to success**.

"Rags to riches" perfectly captures this transformation.

Meaning, Example & Explanation

(a) *rags to riches* — Correct

English Meaning:

A situation in which someone rises from poverty or an extremely disadvantaged position to wealth, success, or fame.

Hindi Meaning:

गरीबी से समृद्धि तक का सफर; अत्यंत कठिन परिस्थितियों से सफलता प्राप्त करना।

Example (English):

- *Her journey from rags to riches inspired young athletes across the country.*

Why correct:

- It directly matches the idea of **overcoming systemic barriers**.
- The idiom emphasises **talent, perseverance, and social mobility**, all of which are central to the sentence.

Why the other options are incorrect:

(b) *back to square one* — Incorrect

English Meaning:

To return to the starting point after a failure.

Hindi Meaning:

फिर से शुरुआत की स्थिति में लौट जाना।

Why incorrect:

- The sentence talks about **progress and success**, not failure or restarting.

(c) *out of the blue* — Incorrect

English Meaning:

Something that happens suddenly and unexpectedly.

Hindi Meaning:

अचानक; बिना किसी पूर्व संकेत के।

Why incorrect:

- The success described is due to **talent and resilience**, not sudden or random events.

(d) *on thin ice* — Incorrect

English Meaning:

In a risky or precarious situation.

Hindi Meaning:

खतरे की स्थिति में होना।
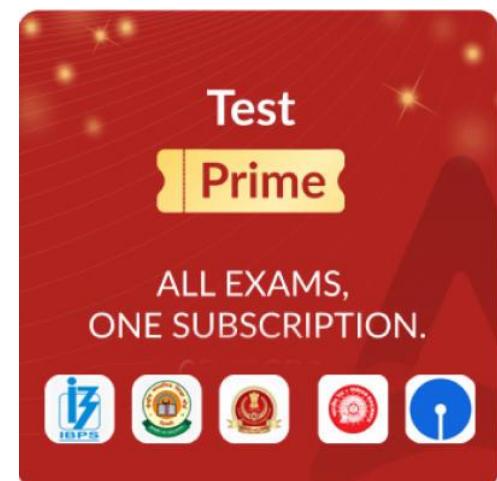
Why incorrect:
- The focus is on **achievement**, not ongoing risk or danger.

(e) *at one's wit's end* **— Incorrect**

English Meaning:

To be extremely frustrated or confused, not knowing what to do.

Hindi Meaning:

बेहद परेशान या हताश होना।

Why incorrect:
- The idiom conveys despair, whereas the passage celebrates **success despite adversity**.

Final Answer:

(a) rags to riches

S22. Ans.(c)

Sol. Correct answer for Blank (F): (c) *waiting in the wings*

Why "waiting in the wings" fits best

Context from the passage:

"Independent regulators, former Olympians, and legal experts are _____. They can step in to strengthen governance once the framework is approved."

The sentence clearly suggests that **capable people are ready and available**, but will act **once the right moment arrives**. The idiom must therefore convey **readiness without current involvement**.

"Waiting in the wings" fits this idea precisely.

Meaning, Example & Explanation

(c) *waiting in the wings* **— Correct**

English Meaning:

Ready to act or take over when the time is right.

Hindi Meaning:

परदे के पीछे तैयार रहना; अवसर मिलने की प्रतीक्षा में होना।

Example (English):
- *Several experienced administrators are waiting in the wings to take charge once reforms are implemented.*

Why correct:
- It perfectly matches "can step in once the framework is approved."
- Conveys preparedness, expertise, and timely intervention.

Why the other options are incorrect:

(a) *under the weather* **— Incorrect**

English Meaning:

Feeling unwell or sick.

Hindi Meaning:

अस्वस्थ महसूस करना।

Why incorrect:
- The context is about **availability and readiness**, not health.

(b) *out of the loop* **— Incorrect**

English Meaning:

Not informed or excluded from information.

Hindi Meaning:

जानकारी से बाहर होना।

Why incorrect:
- These experts are clearly informed and involved in planning.

(d) *barking up the wrong tree* **— Incorrect**
English Meaning:
Pursuing a mistaken or misguided course of action.
Hindi Meaning:
गलत दिशा में प्रयास करना।
Why incorrect:
- The sentence expresses confidence in their role, not error.

(e) *in deep waters* **— Incorrect**
English Meaning:
In serious trouble or difficulty.
Hindi Meaning:
गंभीर परेशानी में होना।
Why incorrect:
- No sense of danger or crisis is associated with these experts.

Final Answer:
(c) waiting in the wings

S23. Ans.(c)
Sol. Replacement for highlighted word (A): *diluted*
*"Recent advances in artificial intelligence have significantly **diluted** productivity across multiple industries by automating repetitive tasks and enhancing decision-making efficiency."*

1. Meaning & evaluation of the highlighted word
Highlighted word: *diluted*
English meaning:
Made weaker, reduced in strength or concentration.
Hindi meaning:
कमज़ोर करना; प्रभाव या तीव्रता घटा देना।
Example (English):
- *Excessive regulations diluted the impact of the reform.*

Why the highlighted word is incorrect:
In the given sentence, artificial intelligence is described as **automating tasks and improving efficiency**, which clearly **increases** productivity.
However, **"diluted"** means *weakened or reduced*, which is **contradictory to the positive impact** being described.
Hence, the highlighted word is **contextually incorrect**.

2. Evaluation of the options
(a) No replacement required — Incorrect
Why incorrect:
- Retaining *diluted* preserves the contradiction.
- Productivity is not weakened; it is improved.

(b) acquitted — Incorrect
English meaning:
Freed from blame or criminal charges.
Hindi meaning:
दोषमुक्त करना।
Example (English):
- *The court acquitted the accused due to lack of evidence.*

Why incorrect:

- Used in legal contexts, not with abstract concepts like productivity.
- Grammatically and semantically unsuitable.

(c) augmented — Correct
English meaning:
Increased or enhanced in size, amount, or degree.
Hindi meaning:
बढ़ाना; सुदृढ़ करना।
Example (English):
- *Automation has augmented productivity in manufacturing.*

Why correct:
- Accurately reflects the idea that AI **boosts productivity**.
- Fits both **grammatically** and **contextually** with the sentence.

(d) undermined — Incorrect
English meaning:
Weakened or damaged gradually.
Hindi meaning:
कमज़ोर करना; नुकसान पहुँचाना।
Example (English):
- *Corruption undermined public trust.*

Why incorrect:
- Like *diluted*, it conveys a negative impact.
- Contradicts the efficiency-enhancing role of AI.

(e) intensified — Incorrect
English meaning:
Made stronger or more extreme.
Hindi meaning:
तीव्र करना।
Example (English):
- *Competition intensified after deregulation.*

Why incorrect:
- Productivity is typically **augmented or enhanced**, not "intensified."
- Less precise and slightly awkward collocation with *productivity*.

Final Answer:
(c) augmented

S24. Ans.(e)
Sol. Replacement for highlighted word (B): *double blessing*
*"While some policymakers view regulation as a **double blessing (B)**, others argue that premature constraints could hinder innovation."*
1. Meaning & evaluation of the highlighted phrase
Highlighted phrase: *double blessing*
English meaning:
Something that brings two benefits or advantages.
Hindi meaning:
दोहरा लाभ; ऐसी चीज़ जो एक से अधिक फायदे दे।
Example (English):
- *Working from home is a double blessing—it saves time and money.*
Why the highlighted phrase is incorrect:

The phrase **"double blessing"** is **not an established or idiomatic expression** in standard English. The commonly accepted idiom is **"double-edged sword"**, which refers to something having both advantages and disadvantages. In the given sentence, regulation is being viewed **positively by some** and **critically by others**, indicating **debate and disagreement**, not purely benefits.

Hence, *double blessing* is **contextually and idiomatically incorrect**.

2. Evaluation of the options

(a) an inevitable outcome — Incorrect

English meaning:

Something that is certain to happen.

Hindi meaning:

अपरिहार्य परिणाम।

Example (English):

- *Automation is an inevitable outcome of technological progress.*

Why incorrect:

- The sentence discusses **opinions about regulation**, not certainty.
- Does not contrast with "others argue" effectively.

(b) a necessary safeguard — Incorrect

English meaning:

A protective measure essential to prevent harm.

Hindi meaning:

आवश्यक सुरक्षा उपाय।

Example (English):

- *Data protection laws are a necessary safeguard against misuse.*

Why incorrect:

- Too **one-sided and positive**.
- The sentence requires a phrase that allows room for disagreement, which this does not.

(c) No replacement required — Incorrect

Why incorrect:

- *Double blessing* is not a standard collocation.
- Fails the idiomatic accuracy required by the question.

(d) a calculated compromise — Incorrect

English meaning:

A carefully planned middle ground.

Hindi meaning:

सोच-समझकर किया गया समझौता।

Example (English):

- *The policy was a calculated compromise between growth and control.*

Why incorrect:

- The sentence is about **perception of regulation**, not about how it was designed.
- Context mismatch.

(e) a source of contention — Correct

English meaning:

Something that causes disagreement or debate.

Hindi meaning:

विवाद या मतभेद का कारण।

Example (English):

- *AI regulation has become a source of contention among policymakers.*

Why correct:

- Perfectly captures the **conflicting viewpoints** mentioned in the sentence.
- Aligns logically with "others argue that premature constraints could hinder innovation."

Final Answer:

(e) a source of contention

S25. Ans.(a)

Sol. Replacement for highlighted phrase (C): *in a haphazard manner*

*"To address these concerns, governments must act **in a haphazard manner (C)**, ensuring transparency without stifling growth."*

1. Meaning & evaluation of the highlighted phrase

Highlighted phrase: *in a haphazard manner*

English meaning:

Done without planning, order, or careful thought; randomly.

Hindi meaning:

बिना योजना के; अव्यवस्थित ढंग से।

Example (English):

- *The files were arranged in a haphazard manner.*

Why the highlighted phrase is incorrect:

The sentence stresses that governments should **ensure transparency without stifling growth**, which clearly demands **careful, balanced, and thoughtful action**.

However, **"in a haphazard manner"** implies **carelessness and lack of planning**, which contradicts the intended meaning.

Hence, the highlighted phrase is **contextually incorrect**.

2. Evaluation of the options

(a) with deliberate caution — Correct

English meaning:

Acting carefully and thoughtfully, after due consideration.

Hindi meaning:

सोच-समझकर और सावधानी से।

Example (English):

- *Governments must regulate emerging technologies with deliberate caution.*

Why correct:

- Matches the idea of **balancing transparency and innovation**.
- Aligns perfectly with the responsible tone of the sentence.

(b) without prior consultation — Incorrect

English meaning:

Acting without seeking advice or discussion beforehand.

Hindi meaning:

बिना पूर्व परामर्श के।

Example (English):

- *The decision was taken without prior consultation.*

Why incorrect:

- Suggests impulsiveness and lack of inclusivity.
- Conflicts with the idea of careful governance.

(c) No replacement required — Incorrect

Why incorrect:

- Retaining *haphazard* contradicts the intent of careful policymaking.
- Makes the sentence logically inconsistent.

(d) through unilateral action — Incorrect
English meaning:
Acting independently without agreement from others.
Hindi meaning:
एकतरफा कार्रवाई के माध्यम से।
Example (English):
- *Unilateral action often leads to diplomatic friction.*
Why incorrect:
- The sentence does not discuss cooperation vs independence.
- Focus is on *manner*, not *authority*.
(e) hastily and arbitrarily — Incorrect
English meaning:
Done too quickly and without reason.
Hindi meaning:
जल्दबाज़ी और मनमाने ढंग से।
Example (English):
- *Rules were changed hastily and arbitrarily.*
Why incorrect:
- Same negative sense as *haphazard*.
- Opposite of what is required in governance.
Final Answer:
(a) with deliberate caution

S26. Ans.(d)
Sol. Replacement for highlighted word (D): *rectify*
*"Furthermore, lack of skilled oversight continues to **rectify (D)** accountability gaps in AI deployment."*
1. Meaning & evaluation of the highlighted word
Highlighted word: *rectify*
English meaning:
To correct or fix a problem.
Hindi meaning:
सुधारना; ठीक करना।
Example (English):
- *The new policy helped rectify long-standing errors in the system.*
Why the highlighted word is incorrect:
In the given sentence, **lack of skilled oversight** is being discussed as a **problem**, not a solution.
However, *rectify* means *to fix or correct*, which is **logically opposite** to what lack of oversight would do.
Lack of oversight **worsens** accountability gaps; it does not fix them.
Hence, *rectify* is **contextually incorrect**.
2. Evaluation of the options
(a) obscure — Incorrect
Meaning: To hide or make unclear
Why incorrect:
- Accountability gaps are not being hidden; they are being worsened.
(b) No replacement required — Incorrect
Why incorrect:
- *Rectify* directly contradicts the cause–effect logic of the sentence.
(c) expose — Incorrect

Meaning: To reveal
Why incorrect:
- The sentence focuses on **impact**, not disclosure.

(d) widen — Correct
English meaning:
To increase the size or extent of something.
Hindi meaning:
फैलाना; बढ़ाना।
Example (English):
- *Weak monitoring can widen accountability gaps.*

Why correct:
- Perfectly captures the idea that lack of oversight makes gaps larger.
- Fits grammatically and contextually.

(e) complicate — Incorrect
Meaning: To make something more complex
Why incorrect:
- Accountability gaps are becoming **larger/severe**, not merely complex.

Final Answer:
(d) widen

S27. Ans.(c)
Sol. Replacement for highlighted word (E): *open a can of harmony*
"If left unchecked, these challenges could open a can of harmony (E) in global technological governance."
1. Meaning & evaluation of the highlighted phrase
Highlighted phrase: *open a can of harmony*
English meaning:
No established meaning; this is **not a recognised idiom** in English.
Hindi meaning:
कोई प्रचलित मुहावरा नहीं; अर्थहीन प्रयोग।
Example (English):
The policy opened a can of harmony among nations. (unnatural and incorrect)
Why the highlighted phrase is incorrect:
- The standard idiom is **"open a can of worms"**, not *harmony*.
- The context clearly suggests **chaos, disputes, and complications**, not peace or agreement.
- Using *harmony* reverses the intended meaning and makes the sentence illogical.

Hence, the highlighted phrase is **idiomatically and contextually incorrect**.
2. Evaluation of the options
(a) set the ball rolling — Incorrect
English meaning:
To start a process.
Hindi meaning:
किसी प्रक्रिया की शुरुआत करना।
Example (English):
- *The announcement set the ball rolling on reforms.*

Why incorrect:
- The sentence warns about **negative consequences**, not initiation.
- Meaning mismatch.

(b) No replacement required — Incorrect

Why incorrect:
- *Open a can of harmony* is not a valid idiom.
- Retaining it breaks idiomatic correctness.

(c) open a can of worms — Correct

English meaning:

To create a complicated, messy situation with many new problems.

Hindi meaning:

कई नई और जटिल समस्याओं को जन्म देना।

Example (English):
- *Poorly designed AI laws could open a can of worms internationally.*

Why correct:
- Perfectly aligns with the warning about **unchecked challenges**.
- Accurately reflects **complex disputes and governance issues**.
- Correct and commonly used idiom.

(d) change the status quo — Incorrect

English meaning:

To alter the existing state of affairs.

Hindi meaning:

मौजूदा स्थिति को बदलना।

Example (English):
- *The reform aims to change the status quo.*

Why incorrect:
- Neutral or positive in tone.
- Does not convey unintended negative consequences.

(e) draw a fine line — Incorrect

English meaning:

To make a subtle distinction.

Hindi meaning:

सूक्ष्म अंतर करना।

Example (English):
- *It is hard to draw a fine line between regulation and control.*

Why incorrect:
- Refers to distinction, not escalation of problems.
- Context mismatch.

Final Answer:

(c) open a can of worms

S28. Ans.(c)

Sol. The correct answer is: (**C**)

Explanation:

(A) CONFIRM / GENERATION

• Confirm: to verify or establish truth

• Hindi meaning: पुष्टि करना

• Generation: a group of people born around the same time

• Hindi meaning: पीढ़ी

Context: An interview does not "confirm a generation"; the pairing is logically mismatched.

(B) DEPLORE / ASPIRATION

• Deplore: to strongly disapprove of

• Hindi meaning: कड़ी निंदा करना

• Aspiration: a strong desire or ambition

• Hindi meaning: आकांक्षा

Context: An actor may challenge aspirations, but "deplore public aspiration" is contextually awkward and overly negative.

(C) ASTONISH / EXPECTATION

• Astonish: to surprise greatly

• Hindi meaning: चकित करना

• Expectation: a belief about what will happen

• Hindi meaning: अपेक्षा

Context: A candid interview can genuinely surprise the public and alter what people expect from the actor, making this pair perfectly suitable.

(D) ENDORSE / APPAREL

• Endorse: to approve or support publicly

• Hindi meaning: समर्थन करना

• Apparel: clothing

• Hindi meaning: परिधान

Context: Interviews may endorse ideas, not clothing; the second filler is irrelevant.

(E) BANISH / ASSET

• Banish: to remove completely

• Hindi meaning: निष्कासित करना

• Asset: something valuable

• Hindi meaning: संपत्ति

Context: "Banish public asset" is illogical and does not align with perception or reaction.

S29. Ans.(d)
Sol. The correct answer is: (**D**)
Explanation:
(A) UNSETTLE / REORGANISE
• Unsettle: to disturb mental calm or stability

• Hindi meaning: अस्थिर करना

• Reorganise: to arrange again in a new order

• Hindi meaning: पुनः व्यवस्थित करना

Context: A heatwave may unsettle people, but it does not deliberately reorganise routines; disruption is more accurate than planned rearrangement.

(B) SOOTHE / PRESERVE

• Soothe: to calm or reduce discomfort

• Hindi meaning: शांत करना

• Preserve: to maintain in original condition

• Hindi meaning: सुरक्षित रखना

Context: Heatwaves do the opposite of soothing and preserving; they intensify discomfort and disturb routines.

(C) QUANTIFY / VALIDATE

• Quantify: to measure numerically

• Hindi meaning: मात्रात्मक करना

• Validate: to confirm correctness

• Hindi meaning: सत्यापित करना

Context: These are analytical actions, not effects caused by extreme weather on daily life.
(D) ERODE / DISRUPT
• Erode: to gradually wear away strength or patience
• Hindi meaning: धीरे-धीरे क्षीण करना
• Disrupt: to interrupt normal functioning
• Hindi meaning: बाधित करना

Context: Extended heat weakens patience over time and interrupts normal routines, making this pair contextually precise.
(E) NARRATE / COMPILE
• Narrate: to describe or tell a story
• Hindi meaning: वर्णन करना
• Compile: to collect information
• Hindi meaning: संकलित करना

Context: A heatwave does not tell or collect routines; these verbs do not express impact.

S30. Ans.(b)
Sol. The correct answer is: **(B)**
Explanation:
(A) DETEST / OPPOSE
• Detest: to hate strongly
• Hindi meaning: घृणा करना
• Oppose: to resist or be against
• Hindi meaning: विरोध करना

Context: The central bank does not hate or oppose loans or liquidity; it regulates and supports financial stability.
(B) REDEEM / ALLOT
• Redeem: to recover, restore, or compensate for losses
• Hindi meaning: पुनः प्राप्त करना, सुधार करना
• Allot: to distribute or assign officially
• Hindi meaning: आवंटित करना

Context: Banking authorities aim to recover stressed loans and officially distribute liquidity support to banks, making this pair contextually accurate.
(C) GRAZE / FURNISH
• Graze: to feed lightly or touch slightly
• Hindi meaning: चरना / हल्का छूना
• Furnish: to provide or supply
• Hindi meaning: उपलब्ध कराना

Context: "Graze loans" is incorrect usage, though furnish partially fits; the pair fails together.
(D) ASSAIL / ERUPT
• Assail: to attack verbally or physically
• Hindi meaning: आक्रमण करना
• Erupt: to burst out suddenly
• Hindi meaning: फूट पड़ना

Context: Banking measures do not involve attacking loans or erupting liquidity.
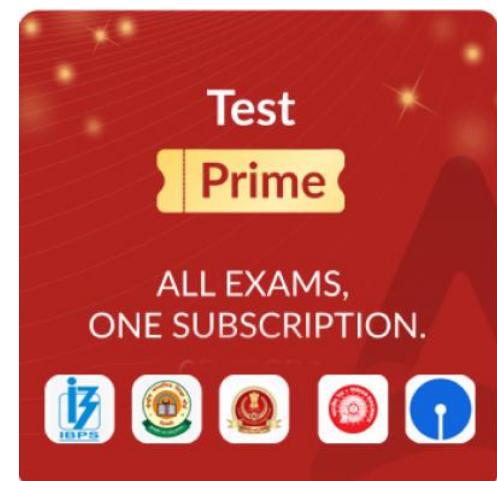
(E) BARTER / ABET
• Barter: to exchange goods without money
• Hindi meaning: वस्तु-विनिमय करना
• Abet: to encourage wrongdoing
• Hindi meaning: अपराध में सहायता करना

Context: Monetary policy neither relies on barter nor supports wrongdoing, making this option illogical.

S31. Ans.(a)
Sol. The correct answer is: (**A**)
Explanation:
(A) PARALYSE / UNDERMINE
• Paralyse: to make unable to function normally
• Hindi meaning: पंगु कर देना
• Undermine: to weaken gradually or damage credibility
• Hindi meaning: धीरे-धीरे कमजोर करना

Context: Supply disruptions can halt essential services and slowly weaken public trust, fitting the cause–effect tone perfectly.
(B) EMBELLISH / MAGNIFY
• Embellish: to decorate or add exaggerated details
• Hindi meaning: सजाना
• Magnify: to increase size or importance
• Hindi meaning: बढ़ाना

Context: Disruptions do not decorate services or deliberately increase confidence.
(C) AUDIT / RECONCILE
• Audit: to examine accounts formally
• Hindi meaning: लेखा-परीक्षा करना
• Reconcile: to restore harmony or agreement
• Hindi meaning: सुलह करना

Context: These are administrative processes, not immediate impacts of disruption.
(D) PACIFY / STABILISE
• Pacify: to calm or appease
• Hindi meaning: शांत करना
• Stabilise: to make steady
• Hindi meaning: स्थिर करना

Context: The sentence suggests threat and damage, not calming or stabilising outcomes.
(E) IMITATE / REHEARSE
• Imitate: to copy
• Hindi meaning: नकल करना
• Rehearse: to practise beforehand
• Hindi meaning: अभ्यास करना

Context: These actions have no logical connection with service disruption or public confidence.

S32. Ans.(c)
Sol. The correct answer is: **E**
Explanation:
The first sentence of a parajumble should introduce the **broad theme** without depending on prior information.

- **E** serves as a conceptual opener. It introduces the central idea of artificial components and their extended stability, which sets the direction of the paragraph.
- The remaining sentences either depend on comparison (**C**), pricing history (**F**), cost escalation (**A**, **D**), or solution-based reasoning (**B**), all of which require the core idea in (E) to be established first.

Therefore, **(E)** is the most logical opening sentence.

Correct sequence:

E → C → F → A → D → B

Explanation:

- **E** opens with the broad idea that artificial components can be designed to last longer than natural ones, setting the theme.
- **C** follows logically because it begins with "In contrast" and explains why natural flavours like vanilla are vulnerable due to dependence on agriculture, labour, and lengthy extraction.
- **F** comes next to give the baseline price of raw natural vanilla (125 dollars), which is needed before any increase can be discussed.
- **A** must follow because it explicitly refers to the price after processing and refinement (1025 dollars), which depends on the raw price mentioned in (F).
- **D** then extends the same price trend to the post-pandemic period, stating that disruptions pushed prices beyond 11000 dollars, making it the peak of the problem.
- **B** concludes the paragraph by offering the solution direction: developing synthetic alternatives to achieve consistency, scalability, and controlled pricing, directly responding to the cost escalation stated in (D).

S33. Ans.(a)

Sol. The correct answer is: **C**

Explanation:

Once the paragraph opens with **E**, which introduces the idea of artificial components and their durability, the next logical step is to establish a **contrast** with natural alternatives.

- **C** begins with "In contrast," directly responding to the idea introduced in (E). It explains how natural flavour sources like vanilla depend on agriculture, labour, and time-intensive extraction.

Correct sequence:

E → C → F → A → D → B

Explanation:

- **E** opens with the broad idea that artificial components can be designed to last longer than natural ones, setting the theme.
- **C** follows logically because it begins with "In contrast" and explains why natural flavours like vanilla are vulnerable due to dependence on agriculture, labour, and lengthy extraction.
- **F** comes next to give the baseline price of raw natural vanilla (125 dollars), which is needed before any increase can be discussed.
- **A** must follow because it explicitly refers to the price after processing and refinement (1025 dollars), which depends on the raw price mentioned in (F).
- **D** then extends the same price trend to the post-pandemic period, stating that disruptions pushed prices beyond 11000 dollars, making it the peak of the problem.
- **B** concludes the paragraph by offering the solution direction: developing synthetic alternatives to achieve consistency, scalability, and controlled pricing, directly responding to the cost escalation stated in (D).

S34. Ans.(a)

Sol. The correct answer is: **F**

Explanation:

After **E** introduces artificial stability and **C** contrasts it with the fragile nature of natural vanilla sourcing, the paragraph must logically establish the **baseline price** before any discussion of increases.

- **F** provides that baseline: the pre-pandemic price of raw natural vanilla at about 125 dollars per kilogram.
- This is necessary groundwork because the next sentences build a step-wise escalation: raw price → processed price → post-pandemic surge → solution.

Correct sequence:

E → C → F → A → D → B

Explanation:

- **E** opens with the broad idea that artificial components can be designed to last longer than natural ones, setting the theme.
- **C** follows logically because it begins with "In contrast" and explains why natural flavours like vanilla are vulnerable due to dependence on agriculture, labour, and lengthy extraction.
- **F** comes next to give the baseline price of raw natural vanilla (125 dollars), which is needed before any increase can be discussed.
- **A** must follow because it explicitly refers to the price after processing and refinement (1025 dollars), which depends on the raw price mentioned in (F).
- **D** then extends the same price trend to the post-pandemic period, stating that disruptions pushed prices beyond 11000 dollars, making it the peak of the problem.
- **B** concludes the paragraph by offering the solution direction: developing synthetic alternatives to achieve consistency, scalability, and controlled pricing, directly responding to the cost escalation stated in (D).

S35. Ans.(b)

Sol. The correct answer is: **D**

Explanation:

The paragraph follows a clear escalation path: concept → contrast → pre-pandemic baseline → post-processing cost → post-pandemic spike → solution.

So, the fifth sentence must logically present the **next and biggest escalation**, which is the post-pandemic surge.

- **D** does exactly that by stating that disruptions pushed prices **beyond 11000 dollars globally**. This is a direct continuation of the cost trend established earlier and must appear just before the concluding solution.

Correct sequence:

E → C → F → A → D → B

Explanation:

- **E** opens with the broad idea that artificial components can be designed to last longer than natural ones, setting the theme.
- **C** follows logically because it begins with "In contrast" and explains why natural flavours like vanilla are vulnerable due to dependence on agriculture, labour, and lengthy extraction.
- **F** comes next to give the baseline price of raw natural vanilla (125 dollars), which is needed before any increase can be discussed.
- **A** must follow because it explicitly refers to the price after processing and refinement (1025 dollars), which depends on the raw price mentioned in (F).
- **D** then extends the same price trend to the post-pandemic period, stating that disruptions pushed prices beyond 11000 dollars, making it the peak of the problem.

- **B** concludes the paragraph by offering the solution direction: developing synthetic alternatives to achieve consistency, scalability, and controlled pricing, directly responding to the cost escalation stated in (D).

S36. Ans.(b)
Sol. The correct answer is: **B**
Explanation:
The final sentence must logically provide the **response/solution** to the problem presented.

- **B** performs this concluding function by explaining that synthetic alternatives are developed to reduce extreme cost escalation through consistency, scalability, and controlled pricing. It directly addresses the issue raised by the preceding cost spike and gives the paragraph a complete, purposeful ending.

Correct sequence:
E → C → F → A → D → B
Explanation:

- **E** opens with the broad idea that artificial components can be designed to last longer than natural ones, setting the theme.
- **C** follows logically because it begins with "In contrast" and explains why natural flavours like vanilla are vulnerable due to dependence on agriculture, labour, and lengthy extraction.
- **F** comes next to give the baseline price of raw natural vanilla (125 dollars), which is needed before any increase can be discussed.
- **A** must follow because it explicitly refers to the price after processing and refinement (1025 dollars), which depends on the raw price mentioned in (F).
- **D** then extends the same price trend to the post-pandemic period, stating that disruptions pushed prices beyond 11000 dollars, making it the peak of the problem.
- **B** concludes the paragraph by offering the solution direction: developing synthetic alternatives to achieve consistency, scalability, and controlled pricing, directly responding to the cost escalation stated in (D).

S37. Ans.(b)
Sol. The correct answer is **(B)**.
Explanation:
Option-wise analysis:

- **(A)** Correct.
- "Neither" is a singular subject and correctly takes the singular verb "appears." The sentence follows proper subject–verb agreement.
- **(B)** Incorrect.
- The subject is **"the number"**, which is singular and must take a singular verb.
- The correct form should be:
- *"The number of applicants **has** increased significantly over the past few years."*
- **(C)** Correct.
- The sentence maintains proper tense consistency and logical structure. "Would satisfy" correctly follows "was confident."
- **(D)** Correct.
- The gerund phrase "helps in avoiding" is correctly used, and the sentence is grammatically sound.

Since only sentence **(B)** contains a grammatical error, option **(B)** is the correct answer.

S38. Ans.(a)
Sol. The correct answer is **(A)**.

Option-wise analysis:
- **(A)** Incorrect.
- The correlative conjunction used with **"hardly"** must be **"when"**, not "than."
- Correct structure:
- *Hardly had the curtain risen **when** the audience sensed something unusual about the performance.*
- **(B)** Correct.
- The true subject is **"the manuscript"**, which is singular. The phrase "along with several handwritten notes" is additional information and does not affect verb agreement. Hence, **"was preserved"** is correct.
- **(C)** Correct.
- The sentence is grammatically sound and correctly uses a relative clause to explain dependency factors.
- **(D)** Correct.
- The concessive phrase "though scenic" is properly placed, and the verb agreement and overall structure are accurate.

Since only sentence **(A)** contains a grammatical error, option **(A)** is the correct answer.

S39. Ans.(d)
Sol. The correct answer is **(D)**.
Option-wise analysis:
- **(A)** Correct.
- The sentence correctly uses "despite" followed by a noun phrase, and the verb forms are appropriate.
- **(B)** Correct.
- The verb "recommended" is correctly followed by a **subjunctive structure** ("that the issue be examined"), which is standard in formal English.
- **(C)** Correct.
- The inverted structure "Little did she realize" is grammatically sound and correctly used for emphasis.
- **(D)** Incorrect.
- After **"as if / as though"**, when the situation is unreal or hypothetical, English prefers the **past perfect** to indicate unreality.
- The sentence should be:
- *He behaves as if he **had been** unaware of the implications of his earlier actions.*

Since sentence **(D)** contains the grammatical error, option **(D)** is the correct answer.

S40. Ans.(e)
Sol. The correct answer is **(E)**.
Option-wise analysis:
- **(A)** Incorrect.
- The subject is **"extent"**, which is singular. Therefore, the verb must also be singular.
- Correct form:
- *The extent to which these measures **impact** public confidence remains unclear.*
- **(B)** Incorrect.
- "Seldom" is a negative adverb and requires **inversion**. Also, there is a subject–verb agreement error.
- Correct form:
- *Seldom **do people recognize** how subtle changes **alter** long-term outcomes.*
- **(C)** Incorrect.

- The true subject is **"the director"**, which is singular. The phrase "along with the senior advisors" does not affect verb agreement.
- Correct form:
- *The director, along with the senior advisors, **has** approved the revised framework.*
- **(D)** Incorrect.
- The subject is **"emphasis"**, which is singular and requires a singular verb.
- Correct form:
- *Greater emphasis on consistency **helps** reduce avoidable procedural lapses.*

Since **all sentences (A–D)** contain grammatical errors, the correct answer is **(E) All are incorrect**.

S41. Ans.(b)
Sol. The correct answer is **(B)**.
Option-wise analysis:
- **(A)** Incorrect.
- The true subject is **"the researcher"**, which is singular. The phrase "along with several assistants" does not affect verb agreement.
- Correct form:
- *The researcher, along with several assistants, **was** documenting the observations carefully.*
- **(B)** Correct.
- The structure **"as though + past tense"** is correctly used here to indicate an assumed or unreal situation in the past. The sentence is grammatically sound and contextually appropriate.
- **(C)** Incorrect.
- "Rarely" is a negative adverb and requires **auxiliary inversion**. There is also a subject–verb agreement error.
- Correct form:
- *Rarely **do people appreciate** how minor adjustments **improve** long-term efficiency.*
- **(D)** Incorrect.
- The subject **"instructions"** is plural, but the verb **"lacks"** is singular.
- Correct form:
- *The instructions given to him **lack** clarity and consistency.*
- **(E)** Incorrect because option **(B)** is grammatically correct.

Hence, option **(B)** is the only grammatically correct sentence.
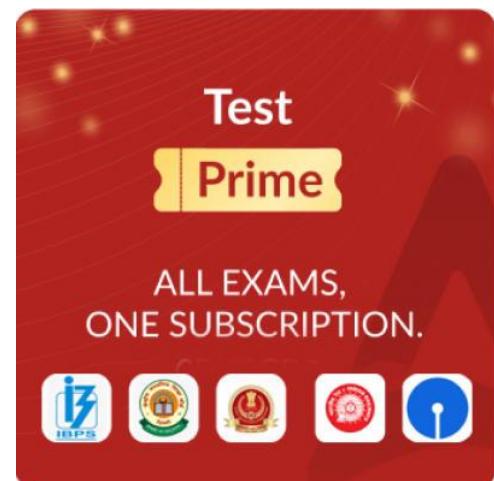
RRB PO Mains 2025 Computer Knowledge Section Memory-Based Paper (28 Dec 2025)

Q1. The PS/2 port was primarily developed by which company?
(a) Microsoft
(b) Intel
(c) IBM
(d) Apple
(e) Dell

Q2. In MS Excel, Which formula adds only values stored in cells A2 and A4?
(a) =SUM(A2+A4)
(b) =SUM(A2,A4)
(c) =ADD(A2,A4)
(d) =SUM(A2:A4)
(e) None of the above

Q3. The POP3 protocol is primarily used for?
(a) Sending emails from client to server
(b) Retrieving and downloading emails from server to client
(c) Real-time email synchronization across multiple devices
(d) Encrypting email messages during transmission
(e) Managing email folders on the mail server

Q4. In MS PowerPoint, when a new blank slide is opened, how many default text placeholders appear on the slide?
(a) 1 placeholder
(b) 2 placeholders
(c) 3 placeholders
(d) 4 placeholders
(e) 5 placeholders

Q5. In a computer's audio port color coding, which color port is used to connect speakers or headphones?
(a) Pink
(b) Blue
(c) Lime Green
(d) Black
(e) Orange

Q6. Letters, journals, resumes, and other text-based documents can be easily created, edited, and formatted using which MS Office application?
(a) Microsoft Excel
(b) Microsoft PowerPoint
(c) Microsoft Word
(d) Microsoft Access
(e) Microsoft Outlook

Q7. Where is BIOS software stored and loaded from?
(a) Hard Disk Drive
(b) RAM memory
(c) ROM chip on motherboard
(d) CPU cache
(e) SSD storage

Q8. Compared to a traditional Hard Disk Drive, Solid-State Drives generally lack which characteristic?
(a) Non-volatile data storage
(b) Mechanical moving parts
(c) Support for operating system installation
(d) Ability to store large files
(e) Compatibility with SATA interface

Q9. During an online meeting, a presenter wants to keep the audience's attention focused on their video feed. Which meeting feature helps the presenter highlight their own video on everyone's screen?
(a) Raise hand
(b) Pin video
(c) Share screen
(d) Spotlight video
(e) Enable gallery view

Q10. 3D Printing technology is primarily based on which of the following manufacturing processes?
(a) Subtractive manufacturing
(b) Casting process
(c) Forming process
(d) Additive manufacturing
(e) Injection molding

Q11. Which of the following is not considered an example of an operating system used in computers?
(a) Windows
(b) Linux
(c) macOS
(d) Python
(e) Android

Q12. The process of converting readable data into an unreadable or scrambled form to prevent access by unauthorized users is known as:
(a) Decryption
(b) Encryption
(c) Compression
(d) Encoding
(e) Firewalling

Q13. What is the primary and most important function performed by the CPU in a computer system?
(a) Managing input and output devices
(b) Storing data permanently
(c) Controlling network communication
(d) Fetching, decoding, and executing instructions
(e) Managing files and folders

Q14. It is the central point of a network that connects multiple hosting devices together to form one network. Which of the following networking devices performs this function?
(a) Router
(b) Hub
(c) Repeater
(d) Bridge
(e) Gateway

Q15. Which output device is used to produce a printed, physical copy of digital data stored in a computer?
(a) Monitor
(b) Speaker
(c) Printer
(d) Plotter
(e) Projector

Q16. Which programming language was developed as a third-generation high-level language (3GL) designed to be easier for humans to read and write?
(a) Assembly Language
(b) COBOL
(c) Machine Language
(d) Binary Code
(e) Microprocessor Language

Q17. Which multi-user, time-sharing operating system was developed at Bell Labs and became highly influential in the history of computing?
(a) MS-DOS
(b) UNIX
(c) Windows NT
(d) macOS
(e) CP/M.

Q18. Which protocol operates at Layer 3 of the OSI reference model, enabling logical addressing and routing?
(a) TCP
(b) IP
(c) HTTP
(d) FTP
(e) ARP
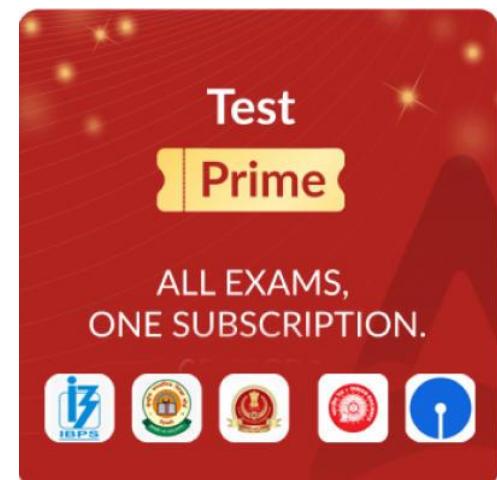
Q19. Which of the following is not available under the Insert tab in MS Excel?
(a) Table
(b) Chart
(c) Picture
(d) Macros
(e) Shapes

Q20. What do we call the area of a computer that temporarily stores data and instructions before they are processed by the CPU?
(a) Hard Disk
(b) ROM
(c) RAM
(d) Cache
(e) Register

Q21. Which HTML elements help search engines better understand and interpret webpage content for indexing and ranking?
(a) div tags
(b) meta tags
(c) br tags
(d) table tags
(e) form tags

Q22. Which function in MS Excel returns the remainder when one number is divided by another?
(a) QUOTIENT()
(b) DIVIDE()
(c) REMAINDER()
(d) MOD()
(e) ROUND()

Q23. What is the process called in which a user creates another copy of stored data to protect it from loss or damage?
(a) Formatting
(b) Backup
(c) Restoration
(d) Archiving
(e) Encryption

Q24. In the UNIX operating system, which program acts as an interface between the user and the system kernel, allowing communication with the hardware?
(a) Compiler
(b) Shell
(c) Terminal
(d) Command
(e) Process

Q25. Which of the following is commonly used in a Personal Area Network (PAN) for communication?
(a) Twisted Pair Cable

(b) Coaxial Cable
(c) Infrared
(d) Satellite
(e) Fiber Optic Cable

Q26. Which keyboard shortcut key is used to activate and access the Menu Bar options in MS Excel?
(a) Ctrl
(b) Shift
(c) Alt
(d) Tab
(e) Esc

Q27. IC chips are used in which type of computer?
(a) Mini Computer
(b) Micro Computer
(c) Mainframe Computer
(d) Super Computer
(e) Hybrid Computer

Q28. Which of the following is not considered a component of a URL?
(a) Protocol
(b) Domain
(c) Path
(d) Query
(e) Bandwidth

Q29. In which format is an IPv6 address represented?
(a) Binary
(b) Decimal
(c) Hexadecimal
(d) Octal
(e) ASCII

Q30. Which of the following statements best describes the characteristics and behaviour of a dynamic website?
(a) Displays fixed content to all users
(b) Created only with static HTML pages
(c) The website which updates frequently based on user interaction
(d) Cannot be modified once published
(e) Contains only text and images

Q31. Which of the following operating systems is primarily recognized for its strong security features?
(a) Windows
(b) macOS
(c) UNIX
(d) Android
(e) MS-DOS

Q32. Which type of malware can self-replicate and transfer from one computer to another automatically?
(a) Virus
(b) Worm
(c) Trojan
(d) Spyware
(e) Adware

Q33. Which service set includes only platforms that operate purely on core Voice-over-IP technology?
(a) Skype, Zoom, Google Meet
(b) WhatsApp, Facebook, Instagram
(c) Gmail, Outlook, Yahoo
(d) Telegram, Signal, Messenger
(e) YouTube, Netflix, Spotify

Q34. In research methodology, which element is responsible for clearly defining the scope, boundaries, and objectives of a project under the research design?
(a) Research Hypothesis
(b) Feasibility Study
(c) System Requirement Specification (SRS)
(d) Research Plan
(e) Project Proposal

Q35. What do we call the radio-based navigation system that consists of a sender, a computer, and a receiver working together for communication?
(a) Bluetooth
(b) GPS
(c) Wi-Fi
(d) Radar
(e) Infrared

Q36. Which of the following operating systems runs on servers and provides the capacity to manage, control, and distribute data or services to connected systems?
(a) Windows Server
(b) Solaris
(c) MS-DOS
(d) VxWorks
(e) UNIX

Q37. What does the Strikethrough option in MS Word do to the selected text?
(a) Underlines the text
(b) Draws a line above the text
(c) Draws a line through the middle of the text
(d) Changes text color
(e) Converts text to uppercase

Q38. Which of the following groups contains only valid File Explorer View modes used in Windows?
(a) Icons, Tiles, List, Details
(b) Preview, Table, Grid, Zoom
(c) Outline, Summary, Report, Icon
(d) Sort, Filter, Group, Arrange
(e) Folder, Link, Tree, Network

Q39. What do we call the combination of headers used in networking to carry data packets from the source to the final destination?
(a) Data Link
(b) Data Encapsulation
(c) Packet Switching
(d) Protocol Stack
(e) Frame Segmentation

Q40. Which technology helps to store duplicate copies of data in a balanced way to improve performance and reliability?
(a) Cloud Storage
(b) RAID
(c) Virtual Memory
(d) Cache Memory
(e) SSD

Solutions

S1. Ans.(c)
The **PS/2 port** is a 6-pin mini-DIN connector used for connecting keyboards and mice to personal computers. It was introduced by **IBM** in 1987 with the launch of the **Personal System/2 (PS/2)** series of computers. The name "PS/2" directly comes from IBM's product line. This port became a standard in the PC industry for many years before being largely replaced by USB.
Important Key Points:
1. **PS/2 port** was introduced by **IBM** in 1987.
2. It was part of the **IBM Personal System/2 (PS/2)** computer series.
3. The port uses a **6-pin mini-DIN connector** and supports both keyboard and mouse.
4. **PS/2** interfaces allowed colour-coded ports (purple for keyboard, green for mouse).
Knowledge Booster:
- (a) Microsoft → Collaborated with IBM on OS/2 but did not develop the PS/2 hardware port.
- (b) Intel → Develops processors and chipsets, not the PS/2 connector standard.
- (d) Apple → Used different connectors (ADB initially, later USB); never adopted PS/2.
- (e) Dell → A PC manufacturer that used PS/2 ports but did not develop them.

S2. Ans.(b)
In Microsoft Excel, the **SUM** function can accept individual cell references separated by commas. The formula **=SUM(A2,A4)** adds only the values in cells A2 and A4, ignoring any cells in between. This is the correct way to sum non-contiguous cells. Other options either include extra cells or use incorrect syntax.
Important Key Points:

1. **SUM** function in Excel can take multiple individual arguments separated by commas.
2. **=SUM(A2,A4)** adds only the specified cells, skipping A3.
3. Comma separator treats arguments as separate ranges or values.
4. This method is useful for summing non-adjacent or non-contiguous cells.

Knowledge Booster:
- (a) =SUM(A2+A4) → First performs addition (A2+A4), then SUM on single result; works but unnecessary and less clear.
- (c) =ADD(A2,A4) → No **ADD** function exists in Excel; invalid formula.
- (d) =SUM(A2:A4) → Uses colon for contiguous range; adds A2, A3, and A4 together.
- (e) =none of the above → Incorrect since option (b) is valid and correct.

S3. Ans.(b)
POP3 (Post Office Protocol version 3) is an email retrieval protocol designed to download emails from a mail server to a local email client. It typically removes the emails from the server after download (unless configured otherwise). This makes it suitable for users who access email from a single device. POP3 operates on port 110 (or 995 for secure POP3S).

Important Key Points:
1. **POP3** is used primarily for downloading emails from server to client.
2. It usually deletes emails from the server after retrieval.
3. Default port is **110** (plain) or **995** (SSL/TLS).
4. Suitable for offline email access on one device.

Knowledge Booster:
- (a) Sending emails from client to server → Handled by **SMTP** protocol, not POP3.
- (c) Real-time email synchronization across multiple devices → Feature of **IMAP**, not POP3.
- (d) Encrypting email messages during transmission → Provided by **SSL/TLS** (POP3S), but not the primary purpose of POP3.
- (e) Managing email folders on the mail server → Supported by **IMAP**, not POP3.

S4. Ans.(b)
When you insert a new **blank slide** in Microsoft PowerPoint (using the "Blank" slide layout), it appears completely empty at first glance. However, it contains exactly two default **text placeholders**: one for the title ("Click to add title") and one for the subtitle ("Click to add subtitle"). These placeholders are centred on the slide and become visible when you click on them or start typing. No other placeholders (like bullets or content boxes) are present by default in a truly blank slide.

Important Key Points:
1. A **blank slide** uses the "Blank" layout in PowerPoint.
2. It has exactly **two text placeholders**: title and subtitle.
3. These placeholders are hidden until clicked or when text is added.
4. Other layouts (e.g., Title and Content) add more placeholders like bullet lists.

Knowledge Booster:
- (a) 1 placeholder → Incorrect; blank slide includes both title and subtitle.
- (c) 3 placeholders → No third placeholder exists in the blank layout.
- (d) 4 placeholders → Far too many; only two are present.
- (e) 5 placeholders → Far too many; only two are present.

S5. Ans.(c)
The standard PC audio port color coding (defined by Microsoft and Intel in the PC 99/PC 2001 specifications) assigns **Lime Green** to the **line-out** or **front stereo audio output** port. This port is used

to connect speakers or headphones for audio playback from the computer. It is the most common output for standard stereo sound in desktop and laptop systems.

Important Key Points:
1. **Lime Green** is the standard color for audio **line-out** (speaker/headphone output).
2. This coding is part of the **PC System Design Guide** for consistent identification.
3. Commonly found on motherboard rear I/O panels and front case connectors.
4. Headphones and powered speakers plug directly into this port.

Knowledge Booster:
- (a) Pink → Used for **microphone** input.
- (b) Blue → Used for **line-in** (external audio source input).
- (d) Black → Used for **rear surround** speakers in multi-channel setups.
- (e) Orange → Used for **center/subwoofer** output in surround sound systems.

S6. Ans.(c)

Microsoft Word is the premier **word processing** application in the MS Office suite, specifically designed for creating, editing, and formatting text-based documents like letters, journals, resumes, reports, and books. It offers advanced features such as **templates** (e.g., resume builders), **styles**, **mail merge**, **track changes**, rich text formatting (fonts, paragraphs, tables), spell-check, and grammar tools. Unlike other Office apps, Word focuses on textual content rather than spreadsheets, presentations, databases, or email.

Important Key Points:
1. **Microsoft Word** is a **word processor** for primarily text-heavy documents.
2. Key features include **templates**, **styles**, **mail merge**, and **track changes**.
3. Supports advanced formatting like **bullets**, **numbering**, **headers/footers**, and **sections**.
4. File formats: **.docx** (default), **.doc** (legacy), **.pdf** for sharing.

Knowledge Booster:
- (a) Microsoft Excel → **Spreadsheet** software for numerical data, calculations, charts; not for text documents.
- (b) Microsoft PowerPoint → **Presentation** software for slides, visuals; unsuitable for long-form text.
- (d) Microsoft Access → **Database** management system for structured data storage/queries; no text editing focus.
- (e) Microsoft Outlook → **Email** client for messaging, calendars; basic editor but lacks document formatting tools.

S7. Ans.(c)

The **BIOS** (Basic Input/Output System) is firmware that initializes hardware during the boot process and provides runtime services. It is stored in a non-volatile **ROM** (Read-Only Memory) chip, typically a **flashable EEPROM** or **UEFI firmware chip**, directly on the motherboard. During system startup, the CPU loads and executes the BIOS code directly from this chip before any storage devices are accessed.

Important Key Points:
1. **BIOS** is stored on a dedicated **ROM/Flash chip** on the motherboard.
2. It is **non-volatile**, retaining code even when power is off.
3. Modern systems use **UEFI** (successor to traditional BIOS) stored in the same type of chip.
4. BIOS executes first during POST (Power-On Self-Test) before loading the OS.

Knowledge Booster:
- (a) Hard Disk Drive → Contains the operating system and boot loader, not BIOS.
- (b) RAM memory → Volatile memory; BIOS is loaded into RAM for execution but not stored there.

- (d) CPU cache → High-speed temporary storage for instructions/data; too small and volatile for BIOS.
- (e) SSD storage → Fast storage medium like HDD; holds OS files, not firmware.

S8. Ans.(b)
Traditional **Hard Disk Drives (HDDs)** use spinning platters, read/write heads, and actuators, which are **mechanical moving parts**. **Solid-State Drives (SSDs)** use **NAND flash memory** chips with no moving components. This absence of mechanical parts makes SSDs faster, more durable, silent, and less prone to physical damage from drops or vibration.

Important Key Points:
1. **HDDs** rely on **mechanical moving parts** like platters and heads.
2. **SSDs** have **no moving parts**, using flash memory instead.
3. Lack of mechanical components gives SSDs higher speed and shock resistance.
4. This design difference is the primary reason SSDs are quieter and more reliable in mobile devices.

Knowledge Booster:
- (a) Non-volatile data storage → Both HDDs and SSDs are **non-volatile**; data persists without power.
- (c) Support for operating system installation → SSDs fully support OS installation, often preferred for faster boot times.
- (d) Ability to store large files → SSDs can store large files just like HDDs; capacity is independent of technology.
- (e) Compatibility with SATA interface → Many SSDs use **SATA** interface for backward compatibility with HDD systems.

S9. Ans.(d)
The **Spotlight video** feature (available in platforms like Zoom, Microsoft Teams, and Google Meet) allows a host or participant with permission to designate a specific video feed as the primary view for all attendees. When spotlighted, that person's video becomes the main or fixed view on everyone's screen, overriding individual pinning or gallery layouts. This is ideal for presenters who want to ensure the audience focuses on them rather than other participants.

Important Key Points:
1. **Spotlight video** makes one participant's video the primary/active view for all attendees.
2. It is typically controlled by the host or co-host.
3. Overrides personal **pin** settings and gallery view for everyone.
4. Commonly used in webinars, lectures, or presentations to focus attention on the speaker.

Knowledge Booster:
- (a) Raise hand → Notifies the host of a request to speak; does not highlight video.
- (b) Pin video → Allows individual users to fix a video on their own screen only; does not affect others.
- (c) Share screen → Displays presented content (slides/documents); hides or minimizes participant videos.
- (e) Enable gallery view → Shows all participants in a grid; no single video is highlighted.

S10. Ans.(d)
3D Printing, also known as **Additive Manufacturing**, builds objects by successively adding material layer by layer based on a digital 3D model. This contrasts with traditional methods that remove material or force it into shape. The term "additive" refers to the incremental deposition of material (plastic,

metal, resin, etc.) until the final part is complete. Standards bodies like ASTM International officially classify 3D printing under **additive manufacturing** processes.

Important Key Points:
1. **3D Printing** is synonymous with **Additive Manufacturing**.
2. It constructs objects **layer by layer** from a digital file (usually STL or AMF format).
3. Reduces material waste compared to subtractive methods.
4. Enables complex geometries, internal structures, and customization impossible with traditional processes.

Knowledge Booster:
- (a) Subtractive manufacturing → Involves removing material (e.g., CNC milling, lathe); opposite of 3D printing.
- (b) Casting process → Pours molten material into a mold; not layer-based.
- (c) Forming process → Shapes material by deformation (e.g., forging, bending); no material addition/removal.
- (e) Injection molding → Forces molten material into a mold under pressure; mass-production, not additive.

S11. Ans.(d)

An **operating system (OS)** is system software that manages computer hardware, resources, and provides common services for application programs. **Windows**, **Linux**, **macOS**, and **Android** are all full-fledged operating systems used on computers and devices. **Python**, however, is a high-level **programming language** and interpreter, not an operating system. It runs on top of an existing OS to execute scripts and programs.

Important Key Points:
1. **Operating System** manages hardware, memory, processes, and file systems.
2. Common OS examples include **Windows**, **Linux**, **macOS**, and **Android**.
3. **Python** is a **programming language**, not system software.
4. Python requires an underlying OS (like Windows or Linux) to run.

Knowledge Booster:
- (a) Windows → Full OS developed by Microsoft for PCs and servers.
- (b) Linux → Open-source Unix-like OS kernel used in desktops, servers, and embedded systems.
- (c) macOS → Apple's proprietary OS for Macintosh computers.
- (e) Android → Google's Linux-based mobile OS, also used on tablets and some computers.

S12. Ans.(b)

Encryption is the process of transforming plaintext (readable data) into ciphertext (unreadable scrambled form) using an algorithm and a key. This ensures that only authorized users with the correct key can reverse the process (via decryption) and access the original data. Encryption is a core component of data security and confidentiality in computing.

Important Key Points:
1. **Encryption** converts plaintext to ciphertext for security.
2. It uses cryptographic **algorithms** (e.g., AES, RSA) and **keys**.
3. Primary goal is to protect data from unauthorized access.
4. Reversible only through **decryption** with the proper key.

Knowledge Booster:
- (a) Decryption → Reverse process: converts ciphertext back to plaintext.
- (c) Compression → Reduces file size; data remains readable without a key.
- (d) Encoding → Transforms data for compatibility (e.g., Base64); not secure against reading.

- (e) Firewalling → Network security technique to filter traffic; not data transformation.

S13. Ans.(d)
The **Central Processing Unit (CPU)** is often called the "brain" of the computer. Its primary and most critical function is to execute program instructions by repeatedly performing the **fetch-decode-execute cycle**. In this cycle, the CPU fetches instructions from memory, decodes them to understand what operation is required, and then executes the operation. This process enables all software running on the computer to perform tasks.
Important Key Points:
1. **CPU** performs the **fetch-decode-execute** cycle continuously.
2. It processes instructions from programs stored in RAM.
3. All computations, logical operations, and data manipulations occur in the CPU.
4. Without this core function, no software can run on the system.
Knowledge Booster:
- (a) Managing input and output devices → Handled primarily by **I/O controllers** and the OS, not directly by CPU.
- (b) Storing data permanently → Responsibility of **storage devices** like HDD/SSD.
- (c) Controlling network communication → Managed by **network interface cards** and OS drivers.
- (e) Managing files and folders → Performed by the **operating system's file system**, not the CPU hardware.

S14. Ans.(b)
A **hub** is a basic networking device that serves as the central connection point in a star topology network. It connects multiple devices (such as computers and printers) together by broadcasting incoming data to all connected ports. This allows the devices to communicate within the same network segment. Hubs operate at the physical layer (Layer 1) of the OSI model and simply repeat signals without intelligent filtering.
Important Key Points:
1. **Hub** acts as a central multi-port repeater in a network.
2. It connects devices in a **star topology** to form a single collision domain.
3. Data received on one port is broadcast to all other ports.
4. Operates at **Layer 1** (Physical layer) of the OSI model.
Knowledge Booster:
- (a) Router → Connects different networks and routes traffic using IP addresses (Layer 3).
- (c) Repeater → Extends signal distance on a single network segment; not a central connection point.
- (d) Bridge → Connects and filters traffic between network segments (Layer 2); reduces collision domains.
- (e) Gateway → Connects networks with different protocols; acts as a translator between incompatible systems.

S15. Ans.(c)
A **printer** is the standard output device that converts digital data from a computer into a physical, printed copy on paper or other media. Common types include inkjet, laser, and thermal printers. They produce hard copies of documents, images, reports, and photos for offline use or distribution.
Important Key Points:
1. **Printer** creates **hard copies** (physical prints) from digital files.

2. It is the most common device for producing tangible output.
3. Types include **inkjet** (for photos), **laser** (for text/documents), and **dot-matrix** (impact printing).
4. Connects via USB, Wi-Fi, or network for receiving print jobs.

Knowledge Booster:
- (a) Monitor → Visual output device; displays data on screen only.
- (b) Speaker → Audio output device; produces sound.
- (d) Plotter → Specialized printer for large-format vector graphics (e.g., blueprints); not general-purpose.
- (e) Projector → Displays digital content on a surface/screen; no physical copy produced.

S16. Ans.(b)
COBOL (Common Business-Oriented Language) is a classic example of a **third-generation high-level language (3GL)**. It was developed in 1959–1960 specifically to make programming more accessible to business users and easier for humans to read and write. COBOL uses English-like syntax (e.g., verbs like ADD, MOVE, PERFORM) to handle business data processing tasks. This human-readable design was a key goal of its creators, led by Grace Hopper, to reduce dependence on low-level languages.

Important Key Points:
1. **COBOL** is a **3GL** (third-generation language) focused on business applications.
2. It uses **English-like statements** for better readability and maintainability.
3. Developed in the late 1950s by a committee including Grace Hopper.
4. Still widely used today in legacy systems for banking and finance.

Knowledge Booster:
- (a) Assembly Language → **Second-generation language (2GL)**; uses mnemonics but is hardware-specific and low-level.
- (c) Machine Language → **First-generation language (1GL)**; pure binary instructions directly understood by CPU.
- (d) Binary Code → Same as machine language; raw 0s and 1s, not human-readable.
- (e) Microprocessor Language → Not a standard programming language; likely refers to low-level machine or assembly code.

S17. Ans.(b)
UNIX is a multi-user, multitasking, time-sharing operating system originally developed in the early 1970s at **Bell Labs** by Ken Thompson, Dennis Ritchie, and others. Written initially in assembly and later rewritten in the **C programming language**, UNIX introduced groundbreaking concepts such as hierarchical file systems, pipes, and portability. Its design profoundly influenced modern operating systems, including Linux, macOS, and many others.

Important Key Points:
1. **UNIX** was created at **Bell Labs** starting in 1969–1970s.
2. It supports **multi-user** access and **time-sharing** for concurrent users.
3. Rewritten in **C** in 1973, enabling easy portability across hardware.
4. Highly influential; basis for POSIX standards and many modern OS.

Knowledge Booster:
- (a) MS-DOS → Single-user, single-tasking OS developed by Microsoft for IBM PC.
- (c) Windows NT → Microsoft-developed OS; influenced by VMS, not directly by Bell Labs UNIX.
- (d) macOS → Derived from NeXTSTEP/BSD UNIX, but originally developed by Apple/NeXT, not Bell Labs.
- (e) CP/M → Single-user OS for microcomputers developed by Digital Research.

S18. Ans.(b)

The **Internet Protocol (IP)** operates at **Layer 3** (Network Layer) of the OSI model. It provides **logical addressing** through IP addresses (e.g., IPv4 or IPv6) and enables **routing** of packets across different networks. IP is responsible for packet forwarding, fragmentation, and delivery on a best-effort basis without guaranteeing reliability.

Important Key Points:
1. **IP** is the primary protocol at **Layer 3** (Network Layer).
2. It handles **logical addressing** using IP addresses.
3. Enables **routing** between networks via routers.
4. Connectionless and unreliable; reliability is handled by upper layers.

Knowledge Booster:
- (a) TCP → Operates at **Layer 4** (Transport Layer); provides reliable, connection-oriented delivery.
- (c) HTTP → Operates at **Layer 7** (Application Layer); used for web data transfer.
- (d) FTP → Operates at **Layer 7** (Application Layer); file transfer protocol.
- (e) ARP → Operates at the boundary of **Layer 2** (Data Link) and **Layer 3**; maps IP addresses to MAC addresses.

S19. Ans.(d)

In Microsoft Excel, the **Insert** tab contains commands for adding various objects and elements to a worksheet. It includes options like **Table**, **Chart**, **Picture** (from file, online, or stock images), and **Shapes** (including icons and text boxes). However, **Macros** are not located under the Insert tab. Macros are managed through the **Developer** tab (which must be enabled in Excel options) using the **Macros** dialog, **Record Macro**, or **Visual Basic** editor.

Important Key Points:
1. **Insert** tab is used to add visual and structural elements to worksheets.
2. **Table**, **Chart**, **Picture**, and **Shapes** are all directly available under the **Insert** tab.
3. **Macros** are accessed via the **Developer** tab (not visible by default).
4. Developer tab can be enabled from File → Options → Customize Ribbon.

Knowledge Booster:
- (a) Table → Available under Insert → Table group (Insert Table or Format as Table).
- (b) Chart → Available under Insert → Charts group (recommended charts, column, pie, etc.).
- (c) Picture → Available under Insert → Illustrations group (Pictures, Online Pictures).
- (e) Shapes → Available under Insert → Illustrations group (Shapes, Icons, 3D Models).

S20. Ans.(c)

RAM (Random Access Memory) is the primary temporary storage area in a computer where data and instructions are held while waiting to be processed by the **CPU**. It is volatile memory, meaning contents are lost when power is off. The CPU frequently accesses RAM for quick read/write operations during program execution, making it essential for running applications.

Important Key Points:
1. **RAM** is the main **volatile memory** for temporary storage of data and instructions.
2. It allows fast random access by the CPU during processing.
3. Contents are erased when the computer is powered off.
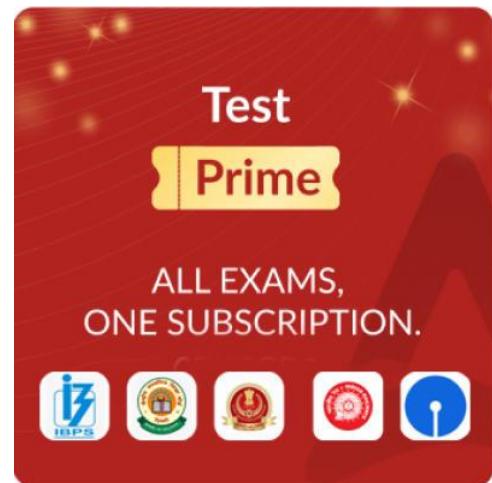
4. Larger RAM capacity improves multitasking and system performance.

Knowledge Booster:
- (a) Hard Disk → **Permanent** non-volatile storage for files and OS; much slower access.
- (b) ROM → **Non-volatile** memory for firmware; read-only, not used for temporary data.
- (d) Cache → Small, ultra-fast memory inside or near CPU; temporary but not the primary area.
- (e) Register → Tiny, fastest storage inside CPU; holds data during immediate processing only.

S21. Ans.(b)
Meta tags are HTML elements placed in the <head> section of a webpage that provide structured metadata about the page. Search engines like Google use this information to understand the page's content, purpose, title, description, keywords (historically), robots instructions, and canonical URLs. Key examples include <title>, <meta name="description">, <meta name="robots">, and Open Graph tags. These directly influence indexing, snippet display in search results, and overall SEO ranking.

Important Key Points:
1. **Meta tags** provide metadata in the head section for search engines.
2. Common ones: **title**, **description**, **robots**, **viewport**, and **canonical**.
3. They help with proper indexing, rich snippets, and search result appearance.
4. Semantic HTML elements also assist, but meta tags are primary for direct instructions.

Knowledge Booster:
- (a) div tags → Generic containers for layout/styling; no semantic meaning for search engines.
- (c) br tags → Line breaks for text formatting; purely presentational, no content understanding.
- (d) table tags → Used for tabular data; helpful if structured properly, but not primarily for SEO metadata.
- (e) form tags → Enable user input; searchable but do not provide metadata or content description.

S22. Ans.(d)
The **MOD** function in Microsoft Excel returns the **remainder** after a number is divided by a divisor. The syntax is **=MOD(number, divisor)**. For example, =MOD(10,3) returns 1 because 10 divided by 3 gives a quotient of 3 and a remainder of 1. It works with both positive and negative numbers, following the sign of the divisor.

Important Key Points:
1. **MOD(number, divisor)** returns the remainder of division.
2. Result has the same sign as the divisor.
3. Useful for checking even/odd numbers, cycling values, or extracting parts of numbers.
4. If divisor is 0, it returns #DIV/0! error.

Knowledge Booster:
- (a) QUOTIENT() → Returns only the integer portion (quotient) of division; discards remainder.
- (b) DIVIDE() → No such built-in function exists in Excel.
- (c) REMAINDER() → No such built-in function exists in Excel.
- (e) ROUND() → Rounds a number to a specified number of digits; not related to division remainder.

S23. Ans.(b)
The process of creating an additional copy of data to protect it from loss, corruption, or damage is called a **backup**. Backups are stored separately (on external drives, cloud storage, or tapes) and can be used to recover the original data in case of hardware failure, accidental deletion, ransomware, or disasters. Regular backups are a fundamental part of data protection and disaster recovery strategies.

Important Key Points:
1. **Backup** involves copying data to a separate location or medium.
2. Purpose is to enable recovery after data loss or damage.
3. Can be full, incremental, or differential depending on strategy.
4. Essential for personal, business, and enterprise data security.

Knowledge Booster:
- (a) Formatting → Erases all data on a storage device and prepares it for use.
- (c) Restoration → Process of recovering data from a previously created backup.
- (d) Archiving → Moving infrequently accessed data to long-term storage; not primarily for protection.
- (e) Encryption → Secures data by scrambling it; protects confidentiality, not against loss.

S24. Ans.(b)

In UNIX systems, the **shell** is the program that serves as the primary interface between the user and the operating system **kernel**. It accepts user commands, interprets them, and requests the kernel to execute programs, manage files, or interact with hardware resources through system calls. Common shells include **bash**, **sh**, **csh**, and **zsh**. The shell translates human-readable commands into actions performed by the kernel, which directly controls hardware.

Important Key Points:
1. **Shell** is a command-line interpreter in UNIX/Linux systems.
2. It acts as the intermediary between users and the **kernel**.
3. Handles input/output, command execution, scripting, and environment variables.
4. Kernel communicates with hardware; shell enables users to invoke kernel services indirectly.

Knowledge Booster:
- (a) Compiler → Translates high-level code to machine code; no direct user-kernel interface role.
- (c) Terminal → Hardware or software window for interacting with the shell; not the interface itself.
- (d) Command → Individual instructions executed by the shell; not the interface program.
- (e) Process → Running instance of a program; managed by the kernel, not the user interface.

S25. Ans.(c)

A **Personal Area Network (PAN)** connects devices within a very short range (typically up to 10 meters) around an individual. **Infrared (IrDA)** is a common wireless technology historically used for PAN communication, especially for direct device-to-device data transfer (e.g., between older mobile phones, PDAs, laptops, or remote controls). While Bluetooth is the dominant modern PAN technology, Infrared remains a recognized and commonly cited option in networking fundamentals for short-range, line-of-sight communication in PANs.

Important Key Points:
1. **PAN** operates over a very limited personal range (few meters).
2. **Infrared** uses light waves for direct, point-to-point wireless communication.
3. Requires **line-of-sight** and is low-cost with moderate speed.
4. Commonly associated with legacy PAN implementations alongside Bluetooth.

Knowledge Booster:
- (a) Twisted Pair Cable → Used in **LANs** (e.g., Ethernet UTP cables); wired, not typical for personal wireless PAN.
- (b) Coaxial Cable → Used in older **LANs** or cable TV; medium-range wired medium.
- (d) Satellite → Used for **WAN** communication over very long distances.

- (e) Fiber Optic Cable → High-speed medium for **LAN/MAN/WAN** backbones; not practical for personal area mobility.

S26. Ans.(c)

In Microsoft Excel, pressing the **Alt** key alone activates the ribbon menu bar. It displays **key tips** (small letters or numbers) overlaid on each ribbon tab (e.g., H for Home, N for Insert). The user can then press the corresponding key to access that tab and further keys to select commands. This provides full keyboard navigation of the menu options without using the mouse.

Important Key Points:
1. **Alt** key activates the ribbon **key tips** in Excel.
2. Subsequent key presses navigate tabs and commands hierarchically.
3. Works across all Microsoft Office applications with ribbon interface.
4. Pressing **Alt** again or **Esc** deactivates the key tips mode.

Knowledge Booster:
- (a) Ctrl → Used for command shortcuts (e.g., Ctrl+S for Save); does not activate menu bar.
- (b) Shift → Modifier for selection or case change; no menu activation role.
- (d) Tab → Moves focus between cells or dialog controls; not for ribbon access.
- (e) Esc → Cancels current action or closes dialogs; deactivates key tips if active.

S27. Ans.(b)

Integrated Circuits (ICs), particularly **microprocessors** built on IC chips, are the defining technology of **microcomputers**. Microcomputers (also called personal computers or PCs) rely on a single-chip CPU (e.g., Intel 4004 was the first microprocessor in 1971). This distinguishes them from earlier generations that used discrete transistors or multiple chips. While ICs are now used in all modern computer types, the question refers to the category originally defined by the use of IC-based microprocessors.

Important Key Points:
1. **Microcomputers** are built around **microprocessor** IC chips.
2. The invention of the **integrated circuit microprocessor** enabled small, affordable personal computers.
3. All modern computers use ICs, but microcomputers are specifically named after this technology.
4. First commercial microcomputer: Altair 8800 (1975) using Intel 8080 IC.

Knowledge Booster:
- (a) Mini Computer → Used multiple ICs but not single-chip microprocessor; larger than microcomputers (e.g., PDP-8).
- (c) Mainframe Computer → Large systems using many ICs; predated widespread microprocessor use.
- (d) Super Computer → High-performance systems using thousands of ICs/processors; not defined by single IC.
- (e) Hybrid Computer → Combines analog and digital; uses ICs but not specifically defined by them.

S28. Ans.(e)

A **Uniform Resource Locator (URL)** specifies the location of a resource on the internet. Its standard components include the **protocol** (e.g., HTTPS), **domain** (e.g., example.com), **path** (e.g., /page.html), and **query** (e.g., ?key=value). **Bandwidth** refers to the data transfer rate of a network connection and is not a part of a URL's structure.

Important Key Points:
1. **Protocol** indicates the access method (e.g., http:// or https://).

2. **Domain** specifies the server hostname or IP address.
3. **Path** identifies the specific resource or file on the server.
4. **Query** provides parameters for dynamic content in key-value pairs.

Knowledge Booster:
- (a) Protocol → Defines the communication scheme, mandatory in URLs.
- (b) Domain → Core component identifying the destination server.
- (c) Path → Points to the exact resource location on the server.
- (d) Query → Optional string for passing data to the resource.

S29. Ans.(c)
An **IPv6** address is a 128-bit address represented in **hexadecimal** format. It consists of eight groups of four hexadecimal digits, separated by colons (e.g., 2001:0db8:85a3:0000:0000:8a2e:0370:7334). Leading zeros in each group can be omitted, and consecutive sections of all zeros can be compressed with "::" once per address. This hexadecimal representation makes the long 128-bit address more compact and readable compared to binary or dotted-decimal formats.

Important Key Points:
1. **IPv6** addresses are **128 bits** long.
2. Represented as eight 16-bit blocks in **hexadecimal**, separated by colons.
3. Allows compression rules: omit leading zeros and replace one consecutive zero block with "::".
4. Hexadecimal digits range from 0–9 and A–F (case-insensitive).

Knowledge Booster:
- (a) Binary → Too lengthy (128 bits as 0s and 1s); not used for human-readable representation.
- (b) Decimal → Used in IPv4 (dotted-decimal); IPv6 would be extremely long if fully decimal.
- (d) Octal → Not used for IP addressing standards.
- (e) ASCII → Text encoding for characters; not a numeric representation for addresses.

S30. Ans.(c)
A **dynamic website** generates and updates content in real-time based on user interactions, database queries, session data, or external inputs. It uses server-side languages (e.g., PHP, Python, Node.js) or client-side scripting (e.g., JavaScript) to provide personalized and interactive experiences. Content changes frequently without manual page edits, such as showing different products, user profiles, or live feeds.

Important Key Points:
1. **Dynamic websites** render content on-the-fly using code and databases.
2. They respond to **user interaction** (e.g., searches, logins, forms).
3. Frequent updates occur automatically based on data or actions.
4. Examples include e-commerce sites, social media, and news portals.

Knowledge Booster:
- (a) Displays fixed content to all users → Describes **static websites**.
- (b) Created only with static HTML pages → **Static sites** use only HTML/CSS; dynamic require scripting.
- (d) Cannot be modified once published → Opposite of dynamic; static sites need manual edits.
- (e) Contains only text and images → Applies to basic static sites; dynamic can include multimedia and interactive elements.

S31. Ans.(c)
UNIX (and its derivatives like Linux, BSD) is historically and primarily recognized for its strong security features. Its design includes principles such as least privilege, modular architecture, user/group

permissions, secure process isolation, and robust access controls. These foundational security concepts originated in the original UNIX developed at Bell Labs and have influenced modern secure systems. UNIX-like systems are widely used in servers, critical infrastructure, and security-focused environments due to their proven reliability and security model.

Important Key Points:
1. **UNIX** introduced core security principles like file permissions and user isolation.
2. It uses a **multi-user** design with strict access controls (read/write/execute bits).
3. Features **least privilege** and process separation by default.
4. Basis for POSIX standards; highly auditable and configurable for security.

Knowledge Booster:
- (a) Windows → Has improved security over time but historically vulnerable due to large attack surface and legacy compatibility.
- (b) macOS → Strong security (e.g., SIP, Gatekeeper) but built on UNIX; not the primary historical reference.
- (d) Android → Linux-based but modified for mobile; weakened by app permissions and fragmentation.
- (e) MS-DOS → Single-user, no memory protection or access controls; highly insecure by modern standards.

S32. Ans.(b)
A **worm** is a standalone malware program that can **self-replicate** and spread automatically across networks or systems without needing to attach to another file or requiring user intervention. It exploits vulnerabilities in operating systems or networks to propagate rapidly (e.g., via email, shared drives, or open ports). Famous examples include the ILOVEYOU and Conficker worms. This autonomous spreading distinguishes worms from other malware types.

Important Key Points:
1. **Worms** self-replicate and spread independently over networks.
2. They do not require a host file or user action to propagate.
3. Often exploit security vulnerabilities for automatic transmission.
4. Can cause massive outbreaks by consuming bandwidth and resources.

Knowledge Booster:
- (a) Virus → Attaches to legitimate files/programs; requires user action (e.g., opening file) to spread.
- (c) Trojan → Disguises as useful software; does not self-replicate or spread automatically.
- (d) Spyware → Secretly monitors and collects user data; no self-replication or automatic spreading.
- (e) Adware → Displays unwanted advertisements; focuses on revenue, not replication or spreading.

S33. Ans.(a)
Core VoIP technology refers to platforms primarily designed for real-time voice (and video) communication over the internet using VoIP protocols. **Skype**, **Zoom**, and **Google Meet** are dedicated VoIP/video conferencing services built entirely around this technology. Skype pioneered consumer VoIP with its proprietary (later evolved) protocol. Zoom and Google Meet use VoIP standards with optimizations for high-quality audio/video calls and meetings. Other options include messaging apps with added VoIP features or non-VoIP streaming/email services.

Important Key Points:
1. **VoIP** transmits voice as digital packets over IP networks.

2. **Skype**, **Zoom**, and **Google Meet** are purpose-built VoIP/video calling platforms.
3. They support real-time audio/video without relying on traditional telephony as primary function.
4. "Purely" means the core service is VoIP-based communication.

Knowledge Booster:
- (b) WhatsApp, Facebook, Instagram → Primarily messaging/social apps; voice/video is secondary VoIP feature.
- (c) Gmail, Outlook, Yahoo → Email services; no native VoIP calling.
- (d) Telegram, Signal, Messenger → Messaging apps with optional VoIP calls; not core VoIP platforms.
- (e) YouTube, Netflix, Spotify → Video/audio streaming services; not real-time VoIP communication.

S34. Ans.(d)
In research methodology, the **Research Plan** (also known as research design or methodology section) is the element that clearly defines the **scope**, **boundaries**, **objectives**, procedures, data collection methods, and overall framework of the study. It outlines what will be studied, what will be excluded (delimitations), and how the research will be conducted to achieve reliable and valid results. This ensures the research remains focused and manageable.

Important Key Points:
1. **Research Plan** details the overall strategy and structure of the study.
2. It explicitly states **scope** (what is included) and **boundaries/delimitations** (what is excluded).
3. Includes clear **research objectives** (general and specific).
4. Forms the core of the research design in methodology.

Knowledge Booster:
- (a) Research Hypothesis → A testable prediction or assumed relationship; does not define overall scope or boundaries.
- (b) Feasibility Study → Assesses practicality and resources before starting; preliminary, not part of research design.
- (c) System Requirement Specification (SRS) → Document used in software engineering; not a research methodology element.
- (e) Project Proposal → Outlines idea, objectives, and justification to seek approval/funding; less detailed than the full research plan.

S35. Ans.(b)
GPS (Global Positioning System) is a radio-based satellite navigation system. It works using a constellation of satellites (senders/transmitters) that broadcast signals, a network of ground control computers that manage the system, and receivers (in devices like phones or GPS units) that calculate position by trilateration. The communication is one-way from satellites to receivers, enabling precise global location and timing services.

Important Key Points:
1. **GPS** uses radio signals from satellites for navigation.
2. System includes satellites (senders), control segment (computers), and user receivers.
3. Receivers compute position using time differences in signals from multiple satellites.
4. Operates worldwide, 24/7, independent of weather conditions.

Knowledge Booster:
- (a) Bluetooth → Short-range wireless technology for device-to-device communication; not a navigation system.

- (c) Wi-Fi → Wireless local network technology for internet access; no navigation capability.
- (d) Radar → Radio-based detection and ranging system; measures distance/speed of objects, not global positioning.
- (e) Infrared → Line-of-sight short-range communication (e.g., remote controls); not radio-based or used for navigation.

S36. Ans.(a)
Windows Server is a family of operating systems developed by Microsoft specifically for server environments. It is designed to manage networks, host applications, provide file and print services, act as a web server, and distribute data or services to multiple connected client systems. Features like Active Directory, IIS, remote desktop services, and robust networking make it the primary server OS focused on managing and distributing resources in enterprise settings.
Important Key Points:
1. **Windows Server** is Microsoft's dedicated **server operating system**.
2. It supports roles like domain controller, file server, web server, and application hosting.
3. Provides centralized management through tools like **Active Directory**.
4. Designed for high availability, scalability, and multi-user client access.

Knowledge Booster:
- (b) Solaris → Server-capable Unix OS (originally by Sun, now Oracle); suitable but not the primary example in most contexts.
- (c) MS-DOS → Single-user, single-tasking disk OS for personal computers; no server capabilities.
- (d) VxWorks → Real-time embedded OS for devices; not a general-purpose server OS.
- (e) UNIX (Time-sharing version) → Multi-user OS capable of server roles but refers to general Unix, not specifically a server edition.

-

Q37. Ans.(c)
The **Strikethrough** option in Microsoft Word applies a horizontal line that runs through the middle of the selected text. This formatting is commonly used to indicate deleted or no-longer-relevant content (e.g., in drafts or revisions) while keeping the original text visible. It is found in the Home tab under the Font group or via the shortcut **Ctrl + D** (Font dialog) or **Alt + K** in some versions.
Important Key Points:
1. **Strikethrough** draws a horizontal line through the center of text.
2. It is a font formatting option, not a color or case change.
3. Useful for showing deletions in tracked changes or editing.
4. Can be applied via Home tab → Font group → Strikethrough button.

Knowledge Booster:
- (a) Underlines the text → Performed by the **Underline** option.
- (b) Draws a line above the text → Known as **Overline** (not standard in Word).
- (d) Changes text color → Done via **Font Color** tool.
- (e) Converts text to uppercase → Achieved with **Change Case** → UPPERCASE.

S38. Ans.(a)
In Windows File Explorer, the **View** modes (available under the View tab or right-click menu) control how files and folders are displayed. The classic and still-valid modes include **Icons** (large, medium, small, extra large), **Tiles**, **List**, and **Details**. These were the primary options in older Windows versions (XP, Vista, 7) and remain accessible in modern Windows (10/11) via the "Layout" section in the View

tab or legacy contexts. Modern Windows adds "Content" and "Compact" views, but option (a) contains only historically valid and still-supported view modes.

Important Key Points:
1. **Icons**, **Tiles**, **List**, and **Details** are long-standing File Explorer view modes.
2. Accessed via View tab → Layout group in current Windows.
3. **Details** shows columns (name, size, date); **List** shows small icons vertically; **Tiles** shows medium icons with info.
4. These modes remain compatible and selectable in Windows 11.

Knowledge Booster:
- (b) Preview, Table, Grid, Zoom → **Preview** pane exists but is not a view mode; others are not valid modes.
- (c) Outline, Summary, Report, Icon → Legacy terms from very old Windows or other apps; not File Explorer modes.
- (d) Sort, Filter, Group, Arrange → These are organization commands, not display view modes.
- (e) Folder, Link, Tree, Network → Navigation concepts or panes; not view modes for file listing.

S39. Ans.(d)
In computer networking, data is transmitted by adding multiple layers of headers as it passes down the **protocol stack** (e.g., TCP/IP or OSI model). Each layer (Application, Transport, Network, Data Link) appends its own header (and sometimes trailer) to the payload from the layer above. This **combination of headers** accompanies the original data packet from source to destination, allowing proper processing, routing, and delivery at each hop and layer. The term that refers to this layered set of protocols and their associated headers is the **protocol stack**.

Important Key Points:
1. **Protocol stack** is the layered set of protocols (e.g., TCP/IP stack).
2. Each layer adds its own **header** during transmission (encapsulation).
3. The combined headers guide the packet through networks to the destination.
4. At the receiver, headers are removed layer by layer (decapsulation).

Knowledge Booster:
- (a) Data Link → Refers to Layer 2; handles framing, not the full header combination.
- (b) Data Encapsulation → The process of adding headers; not the name for the header combination itself.
- (c) Packet Switching → Network technique for routing packets; unrelated to headers.
- (e) Frame Segmentation → Breaking large packets into smaller frames; not about headers.

S40. Ans.(b)
RAID (Redundant Array of Independent Disks) is a storage technology that combines multiple physical disks into a single logical unit. Certain RAID levels (e.g., RAID 1, RAID 5, RAID 6, RAID 10) store **duplicate copies** of data across disks using techniques like mirroring and parity. This provides **redundancy** (reliability against drive failure) and often **striping** (balanced distribution) to improve read/write **performance**. Data is automatically rebuilt if a disk fails, ensuring both speed and fault tolerance.

Important Key Points:
1. **RAID** uses multiple disks to store redundant (duplicate) data copies.
2. Levels like **RAID 1** (mirroring) and **RAID 5** (striping with parity) balance performance and reliability.
3. Improves **fault tolerance** (data survives disk failure) and **I/O performance**.
4. Managed by hardware controllers or software in operating systems.

Knowledge Booster:

- (a) Cloud Storage → Provides remote storage with possible replication, but not specifically for balanced local duplicate copies.
- (c) Virtual Memory → Uses disk space to extend RAM; no duplication or redundancy for reliability.
- (d) Cache Memory → Fast temporary storage for frequently accessed data; no duplication across devices.
- (e) SSD → High-speed single storage drive; no built-in duplication or array management.