

SEBI Grade A Previous Year Paper 2022 (Phase 1 Paper 1)

Directions (1-8): Read the following passage carefully and answer the questions given below them.

Paper is an important part of modern life. People use it in school, at work, to make artwork and books, to wrap presents and much more. Trees are the most common ingredient for paper these days, but people have been taking notes and creating artworks for a very long time using lots of other kinds of surfaces and materials. Humans painted pictures on cave walls during the Ice Age. The oldest known drawing, found on a small rock in South Africa, was made 73,000 years ago. Written language came a long time later. The Sumerians, in what is now Iraq, and the Egyptians used pictures in the first written languages more than 5,000 years ago. They also wrote on slabs of wet clay, using a pen or brush made from a reed. Sometimes they baked these slabs hard in ovens to **preserve** them.

The Egyptians **pioneered** the first paper. Papyrus came from a 15-foot-tall (4.5 meter) plant of the same name that grew in marshlands along the Nile River. They cut the stalk into thin strips, pressed them together and dried them into the long rolls you can now see preserved in museums. They wrote in ink, which didn't smudge or blur on this new paper. Papyrus made it easy to carry their writing with them in rolled up scrolls – much easier than _____ around heavy clay tablets and rocks.

Making tons of paper from trees can harm the planet. Cutting forests and farms down for papers also contributes to climate change, and paper factories pollute the air. After you throw paper in the trash, a truck takes it to a dump, where it takes six to nine years to decompose. That's why recycling is important. It saves a lot of trees, slows climate change, reduce air pollution and helps protect endangered animals, birds and all creatures that rely on forests for their homes.

Q1. According to the passage, which of the following statements support the fact that paper is a crucial part of modern life?

- (a) More than two million trees are cut down annually to make paper.
- (b) Paper is an indispensable part of everyday tasks like in academics, desk work etc.
- (c) Many offices are adopting paperless office policies to reduce dependence on paper.
- (d) As the paper is made from natural ingredients it isn't harmful to the environment.
- (e) None of these

Q2. What was/were the ancient way(s) of inscription before the inception of papers, as mentioned in the passage?

- (a) Scribing on banana leaves using a pointed wooden stem.
- (b) Writing on a slab made of wet clay with a wooden brush.
- (c) Carving pictures on the walls of caves or on a small rock.
- (d) Only (a) and (b)
- (e) Only (b) and (c)

Q3. As mentioned in the passage, what was/were the features of the first paper developed?

- (I) The paper was made in a way in which ink didn't smear on it.
- (II) The paper was introduced by Egyptians and was made up of Papyrus plants.
- (III) The paper was flexible enough to be rolled up and was convenient to carry around.

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

Q4. As suggested by the author, why do we need to recycle paper?

- (a) Recycling will curtail the total number of trees cut down.
- (b) Extinction of various species can be ceased by protecting their habitats.
- (c) Recycling of papers will somehow decelerate climate change.
- (d) Air pollution will also be decreased as a result of the recycling of papers.
- (e) All of these

Q5. Which of the following statements is incorrect with reference to the paragraph?

- (a) Manufacturing of papers isn't in the interest of the environment.
- (b) A paper takes less than five years to get decomposed.
- (c) Papers made by Egyptians are still can be seen in museums.
- (d) The oldest known portrayal is still present in South Africa.
- (e) All are correct

Q6. Which of the following words is the most suitable word for the blank given in the passage?

- (a) carting
- (b) boding
- (c) seizing
- (d) swathing
- (e) animosity

Q7. Which of the following word has a similar meaning to the word 'pioneered'?

- (a) incumbent
- (b) developed
- (c) convicted
- (d) chastened
- (e) faltered

Q8. Which of the following word has an opposite meaning to the word 'preserve'?

- (a) maze
- (b) fudged
- (c) staple
- (d) vandalize
- (e) appease

Directions (9-13): In the following questions six sentences are given. Rearrange these sentences to make a contextually meaningful paragraph. Later, answer the follow-up questions.

- (A) But all of them have failed, primarily because of the mismatch between the two countries on the purposes for which they collaborated.
- (B) Unlike the earlier iterations, it comes at a time when India, too, is emerging as a major economic power.
- (C) Since the 1960s, both countries have made many attempts to jump on each other's technology bandwagon.

- (D) The ICET is perhaps better positioned.
(E) The promise of this initiative, if fulfilled, could have a transformative impact on India-U.S. relations.
(F) Earlier this month, the U.S. and India inaugurated their initiative on critical and emerging technologies (ICET).

Q9. Which is the SECOND sentence after rearrangement?

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

Q10. Which is the LAST sentence after rearrangement?

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

Q11. Which is the THIRD sentence after rearrangement?

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

Q12. Which is the FIRST sentence after rearrangement?

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

Q13. Which is the FOURTH sentence after rearrangement?

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

Directions (14-17): Read each of the sentences to find out whether there is any grammatical or idiomatic error in it. The error, if any, will be in one part of the sentence. The number of that part is the answer. If there is 'No error', the answer is 'e'. (Ignore errors of punctuation, if any)

Q14. A study has revealed (A)/that animals don't (B)/ harm you unless you (C)/ not harm them first (D)/
No error.

- (a) A
- (b) B
- (c) C
- (d) D
- (e) No error

Q15. The varieties of glass (A)/ differ widely in (B)/ chemical composition and (C) in physical qualities (D)/No error (E).

- (a) A
- (b) B
- (c) C
- (d) D
- (e) No error

Q16. No other (A)/ monument is (B)/so beautiful (C)/as the Taj Mahal (D)/ No error (E).

- (a) A
- (b) B
- (c) C
- (d) D
- (e) No error

Q17. A former player was (A)/invited for the school (B)/ sports championship for (C)/felicitating winners (D)/ No error (E).

- (a) A
- (b) B
- (c) C
- (d) D
- (e) No error

Directions (18-20): Each of the given questions contain a sentence with a bold word. Choose a word from the following options that can replace the bold word appropriately to make the sentence grammatically and contextually correct.

Q18. Despite his **exuberant** fascination with death, he maintained a surprisingly cheerful demeanor in social settings.

- (a) buoyant
- (b) jovial
- (c) morbid
- (d) vivacious
- (e) No replacement required

Q19. His **elusive** enthusiasm for the project was evident in his animated gestures and unwavering dedication.

- (a) cryptic
- (b) evasive
- (c) nebulous
- (d) overt
- (e) No replacement required

Q20. Despite the stressful situation, she maintained a/ an **indignant** demeanor, offering kind words and a supportive presence to those around her.

- (a) amiable
- (b) infuriate
- (c) exasperated
- (d) ireful
- (e) No replacement required

Direction (21-25): The table given below shows the average number students using either mobile or laptop in five different classes (A, B, C, D and E). It also shows the ratio of students using mobile to laptop in these five classes. Read the data carefully and answer the following questions.

Classes	Mobile: laptop	Average of students using mobile and laptop
A	4:3	35
B	2: 5	35
C	3: 4	70
D	11: 13	60
E	15: 7	55

Q21. Find the ratio of students using mobile in C and D together to the students using laptops in B and E together.

- (a) 21: 17
- (b) 23: 15
- (c) 23: 19
- (d) 23: 17
- (e) 21: 17

Q22. Total number of students using both the devices in A and B together is what percentage of the students using both the device in C.

- (a) 110%
- (b) 105%
- (c) 90%
- (d) 80%
- (e) 100%

Q23. Find the average number of students using laptop in all the five classes.

- (a) 58
- (b) 52
- (c) 56
- (d) 54
- (e) 50

Q24. Ratio of male to females in class C is 1: 3 and number of males using mobile in class C is 35. Find the number of females using laptops in class C.

- (a) 110
- (b) 125
- (c) 80
- (d) 95
- (e) 85

Q25. Number of students using laptops in all the classes is what percentage more/less than that of students using mobile in these classes.

- (a) 6%
- (b) 8%
- (c) 10%
- (d) 12%
- (e) 4%

Direction: (26 – 28): What will come in the place of questions (?) mark in following number series.

Q26. 32, 48, 120, ?, 1890, 10395

- (a) 420
- (b) 450
- (c) 430
- (d) 410
- (e) 400

Q27. 2, 5, 11, ?, 47, 95

- (a) 25
- (b) 24
- (c) 23
- (d) 20
- (e) 28

Q28. 197, 174, 145, 114, ?, 36

- (a) 65
- (b) 66
- (c) 75
- (d) 77
- (e) 72

Q29. The value of X is the product of 3 and 4 and a person 'A' can complete the work in X days and 'B' takes Y days to complete that work. If Y is the product of 3 and 4^2 , then find the number of days taken by C whose efficiency is double the average of A and B together to complete that work.

- (a) 9.6 days
- (b) 8.6 days
- (c) 7.6 days
- (d) 10.6 days
- (e) 11.6 days

Q30. The total cost of painting the four walls with ceiling is Rs. 5800. If the cost of painting is Rs. 20/meter² and length and height of the room are 10 meters and 8 meters respectively, then find the breadth of the room.

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

Q31. The present age of A is 35 years and the ratio of age of A five years hence to the age of B five years ago is m: n. If the difference between the age of A and B is five years, then find the value of m: n.

- (a) 8: 5
- (b) 7: 8
- (c) 8: 7
- (d) 5: 8
- (e) Both (a) and (c)

Q32. A shopkeeper offers two discount schemes A and B. In schemes A, he offers two T-shirt are free on buying five T-shirts while in scheme B, he offers 15% discount on buying five T- shirts. Which scheme is best for the buyer and shopkeeper respectively.

- (a) A, B
- (b) Can't be determined
- (c) Both of the schemes are same
- (d) B, A
- (e) None of these

Q33. A police man saw a thief when he was 100 meters away from the him. Policeman started running behind the thief with the average speed of 1800 meter/min. and thief started running with x meter/sec when he noticed that the policeman was just 50 meters behind and policeman caught the thief in total of $\frac{20}{3}$ sec. Find the value of x.

- (a) 25
- (b) 24
- (c) 16
- (d) 18
- (e) 20

Q34. A 50 liters mixture of alcohol and water are in the ratio 7:3. 10 liters of mixture is removed and replaced by pure water and this process is repeated for two more times. Find the quantity of alcohol in the newly formed mixture?

- (a) 16.52 liters
- (b) 19.52 liters
- (c) 15.92 liters
- (d) 17.82 liters
- (e) 17.92 liters

Q35. A, B, and C invested in a business with the investment of Rs. 3000, Rs. 4500 and Rs. 2000 respectively. After 4 months A and B increased their investment by 20% of their initial investment each whereas C decreased his investment by 15% of his initial investment. If the profit share of B is Rs. 7650, then find the total profit.

- (a) Rs. 15450
- (b) Rs. 16650
- (c) Rs. 10500
- (d) Rs. 18500
- (e) Rs. 12750

Direction (36-37): In each of these questions, two equation (I) and (II) are given. You have to solve both the equations and give answer.

- (a) If $x > y$
- (b) If $x \geq y$
- (c) If $x < y$
- (d) If $x \leq y$
- (e) If $x = y$ or no relation can be established between x and y

Q36. I. $x^2 - 2x - 35 = 0$

II.

Q37. I. $2x^2 - 11x + 15 = 0$

II. $y^2 - 14y + 48 = 0$

Directions (38-40): Read the following paragraph carefully and answer the following questions.

There are three different event companies, A, B and C, who organizes two different kinds of events, X and Y. The number of 'X' events organized by B are $\frac{300}{7}\%$ of number of 'Y' events organized by B and C together, which is also 33 more than the number of 'X' events organized by A and C together. The total number of 'X' and 'Y' events organized by all three companies are 87 and 129 respectively and the number of 'Y' events by organized A are $\frac{2}{3}$ rd more than the 'X' events organized by C. The total number of events organized by B are 90.

Q38. Find the total number of events organized by A.

- (a) 51
- (b) 69
- (c) 57
- (d) 63
- (e) 66

Q39. Find the 'X' events organized by B are how much more or less than the 'Y' events organized by C.

- (a) 8
- (b) 10
- (c) 6
- (d) 4
- (e) 2

Q40. Find the respective ratio of 'X' to 'Y' events organized by C.

- (a) 9 :10
- (b) 10: 9
- (c) 9:7
- (d) 7: 9
- (e) 7: 10

Directions (41-45): Study the following information carefully and answer the questions given below.

Seven persons sit around a circular table such that all of them face towards the centre. Each of them participates in competition and performed different dance styles i.e., Hip hop, Ballet, Jazz, Kathak, Kathakali, Odissi and Tap but not necessarily in the same order.

The one who performed Ballet sits third to the right of P. D sits adjacent to the one who performed Ballet. The number of persons sits between D and P is same as the number of persons sits between R and the one who performs Ballet. R sits adjacent to P. The one who performs odissi sits two places away from R. G sits immediate right of the one who performed odissi but not adjacent to R. M performed Kathakali and sits second to the right of Q. J sits adjacent to both the one who performed Hip hop and the other who performed Kathak. The one who performed Tap sits second to the right of the one who performed Hip hop.

Q41. Who among the following performed Jazz dance?

- (a) D
- (b) G
- (c) R
- (d) Q
- (e) P

Q42. How many persons sit between J and R when counts from the left of R?

- (a) Two
- (b) Three
- (c) Five
- (d) Four
- (e) Can't be determined

Q43. Which among the following combination is correct?

- (a) D-Ballet
- (b) G-Odissi
- (c) P- Tap
- (d) Q-Ballet
- (e) None is correct

Q44. Which among the following statement(s) is/are true?

- (a) D sits third to the left of P
- (b) P performed Kathak
- (c) G doesn't perform Tap
- (d) M and D sit adjacent to each other
- (e) All are true

Q45. Who among the following sits third to the left of the one who performed Kathak dance?

- (a) Q
- (b) D
- (c) M
- (d) G
- (e) None of these

Directions (46-48): Answer the following question based on the information given below.

In a certain code language,

'Sun and planets satellites' is written as 'vxz opt edf sbi'

'Satellites sun hotness' is written as 'sbi vxz jhr'

'Coldness and farthest sun' is written as 'bqr opt uhr vxz'

'Farthest planets life' is written as 'uhr edf ove'

Q46. How is 'Farthest Life' will be written in same language?

- (a) opt edf
- (b) uhr ove
- (c) vxz edf
- (d) ove bqr
- (e) None of the above

Q47. Which of the following words are written as 'sbi bqr'?

- (a) Hotness satellites
- (b) Sun planets
- (c) Satellites coldness
- (d) Planets coldness
- (e) None of the above

Q48. How is 'and planets' written in same language?

- (a) opt edf
- (b) sbi uhr
- (c) vxz ove
- (d) ove opt
- (e) None of the above

Q49. Find the odd one out?

- (a) KEJG
- (b) HBGD
- (c) SMRO
- (d) OINK
- (e) WQUS

Directions (50-53): Study the following information carefully and answer the questions given below.

A certain number of persons sit in a straight row face in the south direction but not more than 25. Only six persons sit between A and B. Y sits exactly between N and B. C sits third to the left of B. D sits seventh to the right of C. Number of persons sit between D and E is twice the number of persons sit between D and A. D sits sixth from the right end of the row. E sits at one of the extreme ends. K is an immediate neighbour of E. Only five persons sit between K and N. Four persons sit between C and Z. No one sits to the left of Z.

Q50. How many persons sit in the row?

- (a) 18
- (b) 24
- (c) 21
- (d) 17
- (e) None of these

Q51. What is the position of Y with respect to C?

- (a) 4th to the left
- (b) 4th to the right
- (c) 3rd to the left
- (d) 2nd to the right
- (e) None of these

Q52. How many persons sit between Y and D?

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

Q53. What is the position of A with respect to Z?

- (a) 14th to the left
- (b) 15th to the right
- (c) 16th to the left
- (d) 20th to the right
- (e) None of these

Directions (54-58): Study the information carefully and answer the questions given below.

Six persons were born in three different months i.e., January, August and November of the same year and on two different dates- 4th and 13th of the each given month. All of them like different colour.

K was born in the month having even number of days. D likes yellow and born just after K. More than two persons were born between D and the one who likes pink. P was born just before the one who likes pink. G was born on even numbered date but not after the one who likes yellow. The number of persons born before G is same as the number of persons born after the one who likes black. The one who likes blue born before J and born after the one who likes red. M doesn't like green.

Q54. Who among the following likes black colour?

- (a) P
- (b) J
- (c) M
- (d) G
- (e) None of these

Q55. How many persons are younger than M?

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

Q56. Which of the following combination is correct?

- (a) D-13th August
- (b) G-Green
- (c) M-Pink
- (d) J-4th June
- (e) None is correct

Q57. D likes which of the following colour?

- (a) Black
- (b) Yellow
- (c) Pink
- (d) Blue
- (e) None of these

Q58. Which of the following statement(s) is/are true?

- (a) J doesn't like green colour
- (b) D was born in November
- (c) Two persons were born before G
- (d) The one who likes green colour is younger to P
- (e) All are true

Q59. Which of the following is the third letter of the meaningful word formed from the First, fourth, sixth and eighth letters from the left end of the word "NUTRITION". If more than one word is formed your answer will be Z and if no word can be formed answer will be X?

- (a) O
- (b) X
- (c) R
- (d) Z
- (e) N

Q60. Which of the following expressions will be true if the given condition ' $Q > L \leq M = Y < T \leq S > K$ ' is definitely true?

- (a) $T < K$
- (b) $L > Y$
- (c) $M < S$
- (d) $K \leq M$
- (e) None is true

Solutions

S1. Ans.(b)

Sol. To validate the answer, refer to the first paragraph of the passage that mentions, **"Paper is an important part of modern life. People use it in school, at work, to make artwork and books, to wrap presents and much more."**

The passage mentions that people use paper in school, at work, to make artwork and books, to wrap presents, and more. This indicates that paper is an important and essential part of various activities in modern life.

Option (a) is not directly supported by the passage. Although the passage mentions that trees are commonly used for paper, it does not provide information about the specific number of trees cut down annually.

Option (c) is not mentioned in the passage. The passage does not discuss offices adopting paperless policies.

Option (d) is not supported by the passage. The passage mentions that making tons of paper from trees can harm the planet, indicating potential negative environmental impacts.

Therefore, **the correct answer is (b)** Paper is an indispensable part of everyday tasks like in academics, desk work, etc.

S2. Ans.(e)

Sol. To validate the answer, refer to the first paragraph of the passage that mentions, **"Humans painted pictures on cave walls during the Ice Age.... Sometimes they baked these slabs hard in ovens to preserve them."**

Explanation:

According to the passage, the ancient ways of inscription before the inception of papers mentioned are: (b) Writing on a slab made of wet clay with a wooden brush, and (c) Carving pictures on the walls of caves or on a small rock.

The passage mentions that humans painted pictures on cave walls during the Ice Age, indicating the practice of carving pictures on walls. It also states that the Sumerians and Egyptians used wet clay slabs for writing, using a pen or brush made from a reed. These slabs were sometimes baked to preserve them.

Option (a) is not mentioned in the passage. There is no specific mention of scribing on banana leaves using a pointed wooden stem.

Therefore, the correct answer is (e) Only (b) and (c) - Writing on a slab made of wet clay with a wooden brush, and carving pictures on the walls of caves or on a small rock.

S3. Ans.(d)

Sol. All the given statements are correct. To validate the answer, refer to the second paragraph of the passage that mentions, **"The Egyptians pioneered the first paper..... Papyrus made it easy to carry their writing with them in rolled up scrolls"**

S4. Ans.(e)

Sol. All the given sentences are correct with reference to the last line of the last paragraph of the passage. The line mentions, **"That's why recycling is important. It saves a lot of trees, slows climate change, reduce air pollution and helps protect endangered animals, birds and all creatures that rely on forests for their homes."**

S5. Ans.(b)

Sol. Option (b) is incorrect with reference to the passage.

For option (a), refer to the lines, "Making tons of paper from trees can harm the planet. Cutting forests and farms down for papers also contributes to climate change, and paper factories pollute the air."

For option (b), refer to the lines, "After you throw paper in the trash, a truck takes it to a dump, where it takes six to nine years to decompose."

For option (c), refer to the lines, "They cut the stalk into thin strips, pressed them together and dried them into the long rolls you can now see preserved in museums."

For option (d), refer to the lines, "The oldest known drawing, found on a small rock in South Africa, was made 73,000 years ago."

S6. Ans.(a)

Sol. The correct word for the blank is 'carting'.

(a) carting: carry (a heavy or cumbersome object) somewhere with difficulty.

(b) boding: be a portent of a particular outcome.

(c) seizing: take hold of suddenly and forcibly.

(d) swathing: wrap in several layers of fabric.

(e) animosity: strong hostility.

S7. Ans.(b)

Sol. 'Developed' has a similar meaning to the word 'pioneered'.

(a) incumbent: necessary for (someone) as a duty or responsibility.

(b) developed: grow or cause to grow and become more mature, advanced, or elaborate.

(c) convicted: having been declared guilty of a criminal offence by the verdict of a jury or the decision of a judge.

(d) chastened: (of a rebuke or misfortune) have a restraining or moderating effect on.

(e) faltered: lose strength or momentum.

S8. Ans.(d)

Sol. 'Vandalize' has the opposite meaning to 'preserve'.

(a) maze: a complex network of paths or passages.

(b) fudged: present or deal with (something) in a vague or inadequate way, especially so as to conceal the truth or mislead.

(c) staple: attach or secure with a staple or staples.

(d) vandalize: deliberately destroy or damage (public or private property).

(e) appease: pacify or placate (someone) by acceding to their demands.

S9. Ans.(e)

Sol. All the given sentences mention about U.S. and India's initiative on critical and emerging technologies (ICET). Therefore, the initial sentence will be sentence (F). Next in the sequence will be sentence (E) which mentions the possible impacts of the initiative on India-U.S. relations. Third in the sequence will be sentence (C) which mentions that both countries have tried many times to jump on each other's technology bandwagon. Fourth in the sequence will be sentence (A) which mentions the reason for the failure of attempts made by both countries. Sentence (A) is then followed by sentence (D) which mentions that this time they successfully inaugurated their initiative. Last in the sequence will be sentence (B) which mentions that ICET has come at a time when India too is emerging as a major economic power. **Therefore, to form a meaningful paragraph, the correct sequence will be FECADB.**

S10. Ans.(b)

Sol. All the given sentences mention about U.S. and India's initiative on critical and emerging technologies (ICET). Therefore, the initial sentence will be sentence (F). Next in the sequence will be sentence (E) which mentions the possible impacts of the initiative on India-U.S. relations. Third in the sequence will be sentence (C) which mentions that both countries have tried many times to jump on each other's technology bandwagon. Fourth in the sequence will be sentence (A) which mentions the reason for the failure of attempts made by both countries. Sentence (A) is then followed by sentence (D) which mentions that this time they successfully inaugurated their initiative. Last in the sequence will be sentence (B) which mentions that ICET has come at a time when India too is emerging as a major economic power. **Therefore, to form a meaningful paragraph, the correct sequence will be FECADB.**

S11. Ans.(c)

Sol. All the given sentences mention about U.S. and India's initiative on critical and emerging technologies (ICET). Therefore, the initial sentence will be sentence (F). Next in the sequence will be sentence (E) which mentions the possible impacts of the initiative on India-U.S. relations. Third in the sequence will be sentence (C) which mentions that both countries have tried many times to jump on each other's technology bandwagon. Fourth in the sequence will be sentence (A) which mentions the reason for the failure of attempts made by both countries. Sentence (A) is then followed by sentence (D) which mentions that this time they successfully inaugurated their initiative. Last in the sequence will be sentence (B) which mentions that ICET has come at a time when India too is emerging as a major economic power. **Therefore, to form a meaningful paragraph, the correct sequence will be FECADB.**

S12. Ans.(a)

Sol. All the given sentences mention about U.S. and India's initiative on critical and emerging technologies (ICET). Therefore, the initial sentence will be sentence (F). Next in the sequence will be sentence (E) which mentions the possible impacts of the initiative on India-U.S. relations. Third in the sequence will be sentence (C) which mentions that both countries have tried many times to jump on each other's technology bandwagon. Fourth in the sequence will be sentence (A) which mentions the reason for the failure of attempts made by both countries. Sentence (A) is then followed by sentence (D) which mentions that this time they successfully inaugurated their initiative. Last in the sequence will be sentence (B) which mentions that ICET has come at a time when India too is emerging as a major economic power. **Therefore, to form a meaningful paragraph, the correct sequence will be FECADB.**

S13. Ans.(a)

Sol. All the given sentences mention about U.S. and India's initiative on critical and emerging technologies (ICET). Therefore, the initial sentence will be sentence (F). Next in the sequence will be sentence (E) which mentions the possible impacts of the initiative on India-U.S. relations. Third in the sequence will be sentence (C) which mentions that both countries have tried many times to jump on each other's technology bandwagon. Fourth in the sequence will be sentence (A) which mentions the reason for the failure of attempts made by both countries. Sentence (A) is then followed by sentence (D) which mentions that this time they successfully inaugurated their initiative. Last in the sequence will be sentence (B) which mentions that ICET has come at a time when India too is emerging as a major economic power. **Therefore, to form a meaningful paragraph, the correct sequence will be FECADB.**

S14. Ans.(d)

Sol. The error lies in part (d). In the part (D), 'not' should be removed because we don't use 'not' with 'unless'. Hence, the correct statement formed will be "A study has revealed that animals don't harm you unless you harm them first."

S15. Ans.(e)

Sol. The sentence doesn't contain any error.

S16. Ans.(c)

Sol. The error is in part (C). We use as + adjective/adverb + as to make comparisons when the things we are comparing are equal in some way. Hence, the correct statement formed will be "No other monument is as beautiful as the Taj Mahal."

S17. Ans.(b)

Sol. The error is in part (B). The correct preposition after 'invite' is 'to'. When you invite someone to an event or a place. Hence, the correct statement formed will be "A former player was invited to the school sports championship for felicitating winners."

S18. Ans.(c)

Sol. The correct option is "morbid."

The word "exuberant" in this context, while it conveys enthusiasm, does not necessarily link to the topic of death, which is typically viewed as a darker subject. Replacing "exuberant" with "morbid," which directly pertains to a grim or unhealthy interest in death, enhances the contrast described in the sentence between his grim interest and cheerful social demeanor.

(a) buoyant: Cheerful and optimistic.

(b) jovial: Marked by good humour and conviviality.

(c) morbid: Characterized by an unhealthy interest in disturbing and unpleasant subjects, especially death and disease.

(d) vivacious: Lively and animated in spirit or body.

S19. Ans.(d)

Sol. The correct option is "overt."

The term "elusive" generally implies something that is hard to grasp or understand, which contradicts the rest of the sentence that describes visible enthusiasm. "Overt" meaning open and observable, is the correct replacement as it aligns with the description of his enthusiasm being evident.

(a) cryptic: Having a meaning that is mysterious or obscure.

(b) evasive: Tending to avoid commitment or self-revelation, especially by responding only indirectly.

(c) nebulous: Vague or ill-defined.

(d) overt: Open and observable; not hidden or secret.

S20. Ans.(a)

Sol. The correct option is "amiable."

"Indignant" means showing anger at what is perceived as unfair treatment, which contradicts her kind words and support. "Amiable," meaning friendly and pleasant, correctly describes her demeanor as supportive and kind.

(a) amiable: Displaying a friendly and pleasant manner.

(b) infuriate: To make (someone) extremely angry and impatient.

(c) exasperated: Intensely irritated and frustrated.

(d) ireful: Full of or showing anger.

Solutions. (21-25):

Classes	Student using mobile	Students using laptops	Total students
A	$\frac{4}{7} \times 70 = 40$	$70 - 40 = 30$	$35 \times 2 = 70$
B	$\frac{2}{7} \times 70 = 20$	$70 - 20 = 50$	$35 \times 2 = 70$
C	$\frac{3}{7} \times 140 = 60$	$140 - 60 = 80$	$70 \times 2 = 140$
D	$\frac{11}{24} \times 120 = 55$	$120 - 55 = 65$	$60 \times 2 = 120$
E	$\frac{15}{22} \times 110 = 75$	$110 - 75 = 35$	$55 \times 2 = 110$

S21. Ans.(d)

Sol. Required ratio = $\frac{60+55}{50+35} = \frac{115}{85} = \frac{23}{17} = 23:17$

S22. Ans.(e)

Sol. Required percentage = $\frac{70+70}{140} \times 100 = 100\%$

S23. Ans.(b)

Sol. Required average = $\frac{30+50+80+65+35}{5} = \frac{260}{5} = 52$

S24. Ans.(c)

Sol. Number males in class C = $\frac{1}{4} \times 140 = 35$

Number of females in class C = $140 - 35 = 105$

Number of females using mobile in class C = $60 - 35 = 25$

Number of females using laptops in class C = $105 - 25 = 80$

S25. Ans.(e)

Sol. Total students using laptops in all the classes = $30+50+80+65+35 = 260$

Total number of students using mobile in all the classes = $40+20+60+55+75 = 250$

Required percentage = $\frac{260-250}{250} \times 100 = \frac{10}{250} \times 100 = 4\%$

S26. Ans.(a)

Sol. Pattern of the series:

32, 48, 120, 420, 1890, 10395

$\times 1.5$ $\times 2.5$ $\times 3.5$ $\times 4.5$ $\times 5.5$

S27. Ans.(c)

Sol. Pattern of the series

2, 5, 11, 23, 47, 95

$\times 2+1$ $\times 2+1$ $\times 2+1$ $\times 2+1$ $\times 2+1$

S28. Ans.(d)**Sol.** Pattern of the series

197, 174, 145, 114, 77, 36
 -23 -29 -31 -37 -41

S29. Ans.(a)**Sol.** Given,

$$X = 3 \times 4 = 12$$

$$Y = 3 \times 4^2 = 48$$

Let the total work be 48 units, LCM (12, 48)

$$\text{Efficiency of A} = \frac{48}{12} = 4 \text{ units/day}$$

$$\text{Efficiency of B} = \frac{48}{48} = 1 \text{ units/day}$$

$$\text{Efficiency of C} = 2 \times \frac{4+1}{2} = 5 \text{ units/day}$$

$$\text{Required days} = \frac{48}{5} = 9.6 \text{ days}$$

S30. Ans.(d)**Sol.** Let the breadth of the room be b meters

$$\text{Area of painting in the room} = \frac{5800}{20} = 290 \text{ meter}^2$$

ATQ,

$$2(10 + b) \times 8 + 10 \times b = 290$$

$$160 + 16b + 10b = 290$$

$$26b = 290 - 160$$

$$26b = 130$$

$$b = 5 \text{ meters}$$

S31. Ans. (e)**Sol.** Age of B = 35 + 5 = 40, if B is older than A.

Age of B = 35 - 5 = 30, if B is younger than A.

$$\text{Required ratio when B is older than A} = \frac{35+5}{40-5} = \frac{40}{35} = 8:7$$

$$\text{Required ratio when B is younger than A} = \frac{35+5}{30-5} = \frac{40}{25} = 8:5$$

So, m: n is either 8:7 or 8:5.

S32. Ans.(a)**Sol.** In scheme A,

Let the marked price of one T shirt be Rs. x

Marked price of 5 T shirts = Rs.5x

Discount of two T-shirts = Rs.2x

$$\text{Discount percentage} = \frac{2x}{7x} \times 100 = 28\frac{4}{7}\%$$

In scheme B,

He gets the discount of 15%

Hence A is best for the buyer and B is best for the shopkeeper.

S33. Ans.(e)**Sol.** Speed of policeman =Policeman covered a distance of 50 meters = $\frac{50}{30} = \frac{5}{3}$ secs.Total time in catching the thief = $\frac{20}{3}$

ATQ,

$$\frac{50}{30-x} = \frac{20}{3} - \frac{5}{3}$$

$$50 = (30 - x) \times 5$$

$$10 = 30 - x$$

$$x = 20 \text{ m/sec.}$$

S34. Ans.(e)**Sol.** Quantity of alcohol in the initial mixture = $\frac{7}{10} \times 50 = 35$ litersQuantity of water in the initial mixture = $50 - 35 = 15$ liters

ATQ,

$$\frac{W_R}{W_O} = \left(1 - \frac{R}{M}\right)^n$$

Where W_R = Quantity of alcohol in the final mixture W_O = Quantity of alcohol in the initial mixture

R = amount of mixture replaced

M = total volume of the mixture.

n = number of times the process is repeated

$$\frac{W_R}{35} = \left(1 - \frac{10}{50}\right)^3$$

$$W_R = \frac{4}{5} \times \frac{4}{5} \times \frac{4}{5} \times 35$$

$$W_R = 17.92 \text{ liters}$$

S35. Ans.(a)**Sol.** Profit share ratio of A: B: C

$$= 3000 \times 4 + 3600 \times 8 : 4500 \times 4 + 5400 \times 8 : 2000 \times 4 + 1700 \times 8$$

$$= 34 : 51 : 18$$

Let the profit share of B is 51x.

ATQ,

$$51x = 7650$$

$$x = 150$$

$$\text{Total profit} = 34x + 51x + 18x = 103x = \text{Rs. } 15450$$

S36. Ans(a)

$$\text{Sol. I: } x^2 - 2x - 35 = 0$$

$$x^2 - 7x + 5x - 35 = 0$$

$$x(x - 7) + 5(x - 7) = 0$$

$$(x + 5)(x - 7) = 0$$

$$x = -5, 7$$

II:

$$y(y + 7) + 6(y + 7) = 0$$

$$(y + 6)(y + 7) = 0$$

$$y = -6, -7$$

$$\text{So, } x > y$$

S37. Ans.(c)

$$\text{Sol. I: } 2x^2 - 11x + 15 = 0$$

$$2x^2 - 6x - 5x + 15 = 0$$

$$2x(x - 3) - 5(x - 3) = 0$$

$$(x - 3)(2x - 5) = 0$$

$$x = 3, \frac{5}{2}$$

$$\text{II: } y^2 - 14y + 48 = 0$$

$$y^2 - 8y - 6y + 48 = 0$$

$$y(y - 8) - 6(y - 8) = 0$$

$$(y - 6)(y - 8) = 0$$

$$y = 6, 8$$

$$\text{So, } x < y$$

Solutions (38-40):

Let the number of 'Y' events organized by B and C together be $7x$.

$$\text{So, number of 'X' events organized by B} = \frac{300}{700} \times 7x = 3x$$

$$\text{So, number of 'X' events organized by A and C together} = 7x - 33$$

$$\text{Given, Total 'X' events} = 87$$

$$\text{Given, Total 'Y' events} = 129$$

$$\text{Given, number of events organized by B} = 90.$$

ATQ,

$$7x - 33 + 3x = 87$$

$$10x = 120$$

$$x = 12$$

$$\text{So, number of 'Y' events organized by A} = 129 - 7x$$

$$129 - 84 = 45$$

$$\text{So, number of 'X' events by C} = \frac{3}{5} \times 45 = 27$$

$$\text{So, number of 'X' events by B} = 3x = 36$$

$$\text{So, number of 'Y' events by B} = 90 - 36 = 54$$

$$\text{So, number of 'X' events by A} = 87 - (36 + 27) = 24$$

$$\text{So, number of 'Y' events by C} = 129 - 45 - 54 = 30$$

Companies	Event X	Event Y
A	24	45
B	36	54
C	27	30

S38. Ans.(b)

Sol. Required number= $24 + 45 = 69$

S39. Ans.(c)

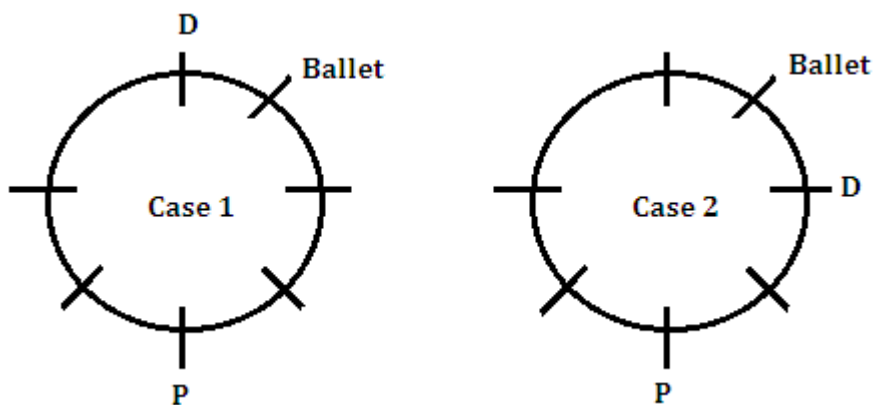
Sol. Required percent= $36 - 30 = 6$

S40. Ans.(a)

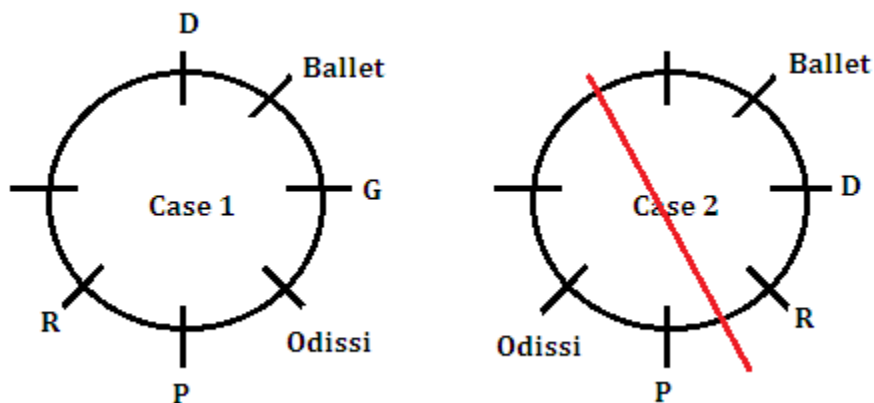
Sol. Required ratio= $27:30 = 9:10$

Direction (41-45):

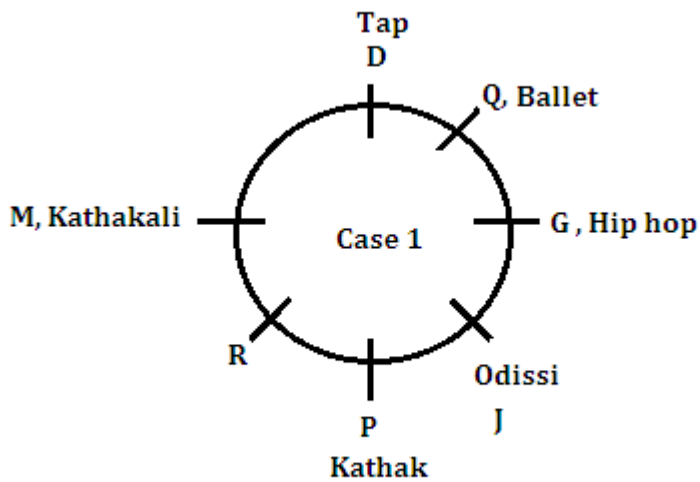
Sol. The one who performed Ballet sits third to the right of P. D sits adjacent to the one who performed Ballet. So, here we have two possible cases.



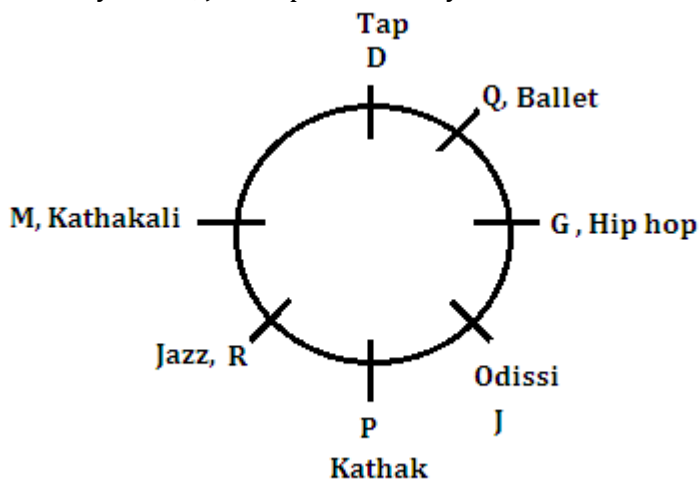
The number of persons sits between D and P is same as the number of persons sits between R and the one who performs Ballet. R sits adjacent to P. The one who performs odissi sits two places away from R. G sits immediate right of the one who performed odissi but not adjacent to R. So, case 2 gets eliminated here.



M performed Kathakali and sits second to the right of Q. J sits adjacent to both the one who performed Hip hop and the other who performed Kathak. The one who performed Tap sits second to the right of the one who performed Hip hop.



Jazz is only left so, Jazz is performed by R and the final arrangement is:



S41. Ans.(c)

Sol. R performed Jazz dance.

S42. Ans.(d)

Sol. Four persons sit between J and R when counts from the left of R.

S43. Ans.(d)

Sol. Q-Ballet is the correct combination.

S44. Ans.(e)

Sol. All statements are true.

S45. Ans.(b)

Sol. D sits third to the left of the one who performed Kathak dance (P).

Direction (46-48):

Sol.

Words	Codes
Sun	Vxz
And	Opt
Planets	Edf
Satellites	Sbi
Hotness	Jhr
Coldness	Bqr
Farthest	Uhr
Life	Ove

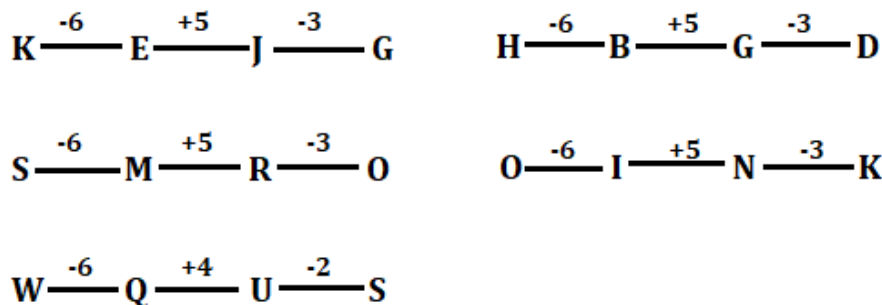
S46. Ans.(b)

S47. Ans.(c)

S48. Ans.(a)

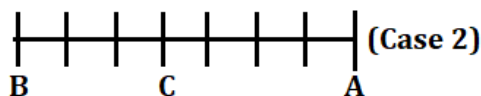
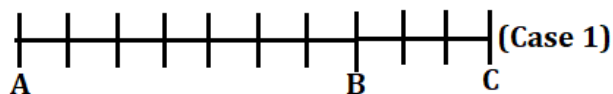
S49. Ans.(e)

Sol.

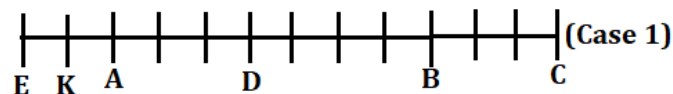


Direction (50-53):

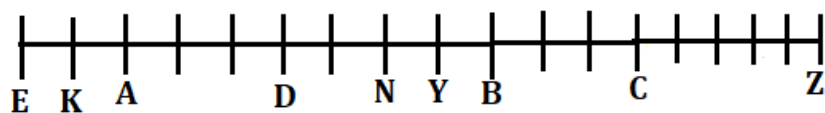
Sol. Only six persons sit between A and B. C sits third to the left of B.



D sits seventh to the right of C. Number of persons sit between D and E is twice the number of persons sit between D and A. D sits sixth from the right end of the row. E sits at one of the extreme ends. K is an immediate neighbor of E. Here, Case 2 is cancelled because it is given that not more than 25 persons sit in the row.



Only five persons sit between K and N. Y sits exactly between N and B. Four persons sit between C and Z. No one sits to the left of Z. Thus, the final arrangement is: -



S50. Ans.(a)

Sol. 18 persons sit in the row.

S51. Ans.(b)

Sol. Y sits 4th to the right of C.

S52. Ans.(e)

Sol. Two persons sit between Y and D.

S53. Ans.(b)

Sol. A sits 15th to the right of Z.

Directions (54-58):

Sol. K was born in the month having even number of days. D likes yellow and born just after K. More than two persons were born between D and the one who likes pink. P was born just before the one who likes pink. So, we have two possible cases here.

Months	Dates	Case 1		Case 2	
		Persons	Colours	Persons	Colours
January	4	K		P	
	13	D	Yellow		Pink
August	4				
	13				
November	4	P		K	
	13		Pink	D	Yellow

G was born on even numbered date but not after the one who likes yellow. So, case 1 gets eliminated here. The number of persons born before G is same as the number of persons born after the one who likes black.

Months	Dates	Case 1		Case 2	
		Persons	Colours	Persons	Colours
January	4	K		P	
	13	D	Yellow		Pink
August	4	G		G	
	13				Black
November	4	P		K	
	13		Pink	D	Yellow

The one who likes blue born before J and born after the one who likes red. M doesn't like green. And the final arrangement is:

Months	Dates	Persons	Colours
January	4	P	Red
	13	M	Pink
August	4	G	Blue
	13	J	Black
November	4	K	Green
	13	D	Yellow

S54. Ans.(b)

Sol. J likes black colour.

S55. Ans.(c)

Sol. Four persons are younger than M.

S56. Ans.(c)

Sol. M-Pink

S57. Ans.(b)

Sol. D likes Yellow.

S58. Ans.(e)

Sol. All are true.

S59. Ans.(c)

Sol. Meaningful word formed by using letter N, R, T , O is TORN.

S60. Ans.(c)

Sol. M<S is true.