

Previous Years' Paper
Common University Entrance Test
CUET-PG-MBA Entrance Exam, 2022

(Exam held on 05/09/2022)

1. From among the four options given, choose the pair of phrases that will be the most suitable to complete the following and make a meaningful sentence:

The best advice that my parents gave me is don't _____ and _____.

- A. put all your eggs in one basket; a penny saved is a penny earned
 - B. break the ice; do something at the drop of a hat
 - C. give someone the cold shoulder; go on a wild goose chase
 - D. hit the nail on the head; kill two birds with one stone
2. Find out which part of the sentence has an error, if there is no error, mark option (D)
- A. Countries dealing with existing humanitarian crises
 - B. or emergencies are particularly exposed
 - C. to effects of COVID-19
 - D. No Error
3. From among the four options given, choose the one that has been spelt correctly.
- A. Thesarus
 - B. Thesaurus
 - C. Thesaurs
 - D. Thsaurus
4. Choose the correct pair of prepositions, in the correct sequence, from among the four options given, to fill in the blanks in the following sentence:

_____ he climbed _____ the train, he bought a bottle of water for the journey.

- A. Upon; in
- B. Until: before
- C. Before: aboard
- D. During; onto

5. From among the four options given, choose the idiom that will be the most suitable to complete the following statement:

'The police realised that they had been _____ when it was proved that the man they had arrested was innocent'.

- A. comparing apples and oranges
- B. getting a taste of their own medicine
- C. barking up the wrong tree
- D. saving for a rainy day

6. From among the four options given, choose the phrase that will best answer the question below:

Do you visit your grandparents often?

- A. Everyone knows it
- B. He is very annoying
- C. From time to time
- D. I don't want to bother you

7. Find out which part of the sentence has an error, if there is no error, mark option (D).

- A. Online education is an amenable instructional
- B. delivery process includes any learning
- C. that takes place via the internet.
- D. No Error

8. From among the four options given, choose the phrase that will be the most suitable to complete the following and make a meaningful sentence:

Studying in a private University _____

- A. is like comparing apples and oranges
- B. costs an arm and a leg
- C. is like going on a wild goose chase
- D. happens once in a blue moon

9. From among the four options given, choose the one in which the word has been spelt correctly.

- A. Excreable
- B. Execrable
- C. Excreble
- D. Execrable

10. From among the four options given, choose the correct sequence of the four phrases given below, to make a meaningful sentence:

- (a) Single thought or idea
- (b) A verb and an object and
- (c) A simple sentence contains a subject
- (d) Normally conveys a

- A. (d), (a), (c), (b)
- B. (a), (c), (b), (d)
- C. (b), (d), (a), (c)
- D. (c), (b), (d), (a)

11. From among the four options given, choose the one word substitute for the phrase:

'a young person who commits a crime'

- A. Teenager
- B. Adolescent
- C. Delinquent
- D. Student

12. From among the four options given, choose the correct sequence of the four phrases given below, to make a meaningful sentence:

- (a) my father rose at 5.30, went to his study
- (b) and then went back to work for the rest of the morning
- (c) every morning, no matter how late he had been up

(d) wrote for a couple of hours, made us all breakfast

- A. (a), (b), (c), (d)
- B. (c), (a), (d), (b)
- C. (b), (d), (a), (c)
- D. (d), (c), (b), (a)

13. Match List-I with List-II:

List-I

List-II

- | | |
|---------------------|---|
| (a) alma mater | I. Unexpected or improbable explanation |
| (b) deus ex machina | II. One's old university or school |
| (c) genius loci | III. Fair exchange |
| (d) quid pro quo | IV. Spirit of the place |

Choose the correct answer from the options given below:

- | | (a) | (b) | (c) | (d) |
|----|-----|-----|-----|-----|
| A. | I | III | II | IV |
| B. | II | I | IV | III |
| C. | III | I | II | IV |
| D. | II | IV | I | III |

14. From among the four options given, choose the one which is a grammatically correct sentence.

- A. A powerful voice inside me whisper that I am be foolish, that a woman sixty year old should have more sense than too undertake a journey like one this.
- B. A powerful voice insides me whispered that I was be fool, that a sixty year old woman shall have more senses than to undertake a journey like these one.
- C. A powerful voice inside me whispered that I was being foolish, that a sixty year old woman should have more sense than to undertake a journey like this one ,
- D. A powerful voices inside I whispered that me was being foolish, that a sixty years oldest woman should having more senses than to undertake a journey like this one.

15. From among the four options given, choose the correct sequence of the four phrases given below, to make a meaningful sentence

- (a) destination, make sure to
 (b) plan your itinerary carefully
 (c) once you reach your
 (d) since you only have a few days to see everything
- A. (a), (d), (c), (b)
 B. (d), (b), (a), (c)
 C. (b), (c), (d), (a)
 D. (c), (a), (b), (d)
16. Choose one word substitute for the following:
 One who walks at night
 A. Somnambulist
 B. Somniloquist
 C. Noctambulist
 D. Ventriloquist
17. From among the four options given, choose pair of words that are antonyms of each other
 A. Various; many
 B. Vivid; dreary
 C. Vile; evil
 D. Victory; award
18. From among the four options given, choose the pair of words that are synonyms of each other.
 A. Sensible; ridiculous
 B. Ridiculous; funny
 C. Funny; tragic
 D. Tragic; romance
19. Choose the correct indirect speech form of the following sentence:
 She said to me, "I am writing a letter to my father."
 A. She said to me that she is writing a letter to her father.
 B. She told me that she was writing a letter to her brother.
 C. She says that she has been writing a letter to her father.
 D. She told that she wrote a letter to her father.
20. From among the four options given, choose the correct idiom to complete the following sentence:
 When her parents got to know that she had cheated in the exams, they
- A. beat around the bush
 B. read her the riot act
 C. spilled the beans
 D. told her, "the proof is in the pudding"
21. From among the four options given, choose the one which is a grammatically correct sentence.
 A. He and she go to the market every Sunday to buys fresh vegetable.
 B. He and she goes to market every Sunday to buy fresh vegetables.
 C. He and she go to the market every Sunday to buy fresh vegetables.
 D. He and she goes to the market every Sunday to buys fresh vegetables.
22. Choose the correct sentence.
 A. I look forward to hear from you soon.
 B. I look forward to hearing from you soon.
 C. I look forward with hearing from you soon.
 D. I look forward to heard from you soon.
23. Identify the correct passive voice form of the following sentence:
 I saw the dog eating it.
 A. I saw it being eaten by the dog.
 B. I saw it was being eaten by the dog.
 C. I saw it is being eaten by the dog.
 D. I saw something eaten by the dog.
24. From among the four options given, choose the one word substitute for the phrase:
 'an expression of sympathy'
 A. apology
 B. condolence
 C. pity
 D. charity
25. Choose the correct order of the paragraph to create a meaning out of PQRS set:
 This part of the argument shows
 P : such as the legal, the political and welfare systems.
 Q : how intermediate social institutions in America.
 R : and their role in the transformation of rehabilitation into a commodity.

S : contribute to the specific way in which disability is produced

- A. RSQP B. PQRS
C. QPSR D. SQRP

26. Select the pair which has the same relationship the pair below:

- Grammy : Music
A. Booker : Literature
B. Fame : Television
C. Mutton : Sheep
D. War : UNO

Directions (Qs. No. 27-30): Read the passage below and answer the four questions that follow:

Hunting out cafes is probably the last thing one would expect to do on a trip to the magical land of Ladakh, where one expects to find restaurants serving fresh dim sums, steaming tingmos and cubes of yak cheese. But on a recent trip to Leh, I ended up on an interesting adventure hopping across quaint little cafes and brought back some wonderful memories.

Arriving in Ladakh, I was advised to take some rest to acclimatise myself to the cold weather and sparse oxygen. But after a short nap, I realised I was feeling just fine, and headed out to explore the local market to prepare myself for more arduous adventures the following day.

In a bid to try something local and refrain from indulging in the usual fare of cappuccinos and macchiatos that I generally love experimenting with in cafes, I hunted out a lovely little cafe right in the heart of Leh's bustling market. Seeing my inquisitive eyes, the owner, who seemed to know exactly what each customer needed, told me she would get me a hot cup of local kahwa, which I accepted without a second thought. I clearly needed something warm and nourishing to get me ready for the evening.

27. From among the four options given, find the word in the passage that means the same as 'old fashioned'

- A. Bustling B. Nourishing
C. Quaint D. Fascinating

28. What would you normally expect to find on the menu of a restaurant in Ladakh?

- A. Dimsums, tingmos and samosas
B. Tingmos, cappuccino and cubes of yak cheese
C. Cappuccionno, macchiato and dimsums
D. Dimsums, tingmos and cubes of yak cheese

29. Why was the writer advised to take some rest on arrival at Ladakh?

- A. To get acclimatised to the cold weather and the lack of oxygen
B. To enjoy the traditional Ladakhi cuisine being put together by his hosts
C. To prepare himself for more arduous adventures the following day
D. To enjoy some kehwa later in the afternoon

30. From among the four options given, find the word in the passage that means the opposite of 'deserted'

- A. Quaint B. Bustling
C. Explore D. Arduous

31. A company has 10 software engineers and 6 civil engineers. In how many ways can a committee of 4 engineers be formed from them such that the committee must contain exactly 1 civil engineer?

- A. 800 B. 780
C. 740 D. 720

32. A bag contains 7 green and 5 black balls. Three balls are drawn one after the other. The probability of all three balls being green, if the balls drawn are not replaced will be:

- A. $\frac{7}{44}$ B. $\frac{17}{44}$
C. $\frac{23}{67}$ D. $\frac{12}{67}$

33. In how many different ways can the letters of the word 'OPTICAL' be arranged so that the vowels always come together?

- A. 120 B. 720
C. 4320 D. 2160

34. A bag contains 5 red smileys, 6 yellow smileys and 3 green smileys. If two smileys are picked at random, what is the probability that both are red or both are green in colour?

A. $\frac{1}{14}$ B. $\frac{3}{7}$
C. $\frac{2}{7}$ D. $\frac{1}{7}$

35. There are two regular polygons with number of sides equal to $(n - 1)$ and $(n + 2)$. Their exterior angles differ by 6° . The value of n is:

A. 11 B. 12
C. 13 D. 14

36. In a mixture of milk and water, there is only 26% water. After replacing the mixture with 7 litres of pure milk, the percentage of milk in the mixture become 76%. The quantity of mixture is:

A. 65 litres B. 91 litres
C. 38 litres D. 78 litres

37. The average temperature of the town in the first four days of a month was 58°F . The average for the second, third, fourth and fifth days was 60°F . If the temperatures of the first and fifth days were in the ratio 7 : 8, then what is the temperature on the fifth day?

A. 62°F B. 64°F
C. 65°F D. 66°F

38. The roots of the equation $ax^2 + x + b = 0$ are equal if

A. $b^2 = 4a$ B. $b^2 < 4a$
C. $b^2 > 4a$ D. $ab = \frac{1}{4}$

39. If $(x - 6)$ is the HCF $x^2 - 2x - 24$ and $x^2 - kx - 6$ then what is the value of k ?

A. 3 B. 5
C. 6 D. 8

40. 50 men took a dip in a water tank 40 m long and 20 m broad on a religious day. If the average displacement of water by a man is

4 m^3 , then the rise in the water level in the tank will be:

A. 25 cm B. 35 cm
C. 40 cm D. 30 cm

41. A large field of 700 hectares is divided into two parts. The difference of the areas of the two parts is one-fifth of the average of the two areas. What is the area of the smaller part in hectares?

A. 415 B. 485
C. 315 D. 385

42. The sides of an equilateral triangle are $(2a - b)$ cm, $(a + 3b)$ cm and $(2a - 2b + 1)$ cm then the perimeter of the triangle is

A. 21 cm B. 15 cm
C. 12 cm D. 3 cm

43. A starts a business with ₹ 40,000. After 2 months, B joined him with ₹ 60,000. C joined them after some more time with ₹ 1,20,000. At the end of the year, out of a total profit of ₹ 375,000, C gets ₹ 1,50,000 as his share. How many months after B joined the business did C join?

A. 5 months
B. 6 months
C. 4 months
D. 7 months

44. Sumit read $\frac{6}{13}$ th of a book in 1st week and $\frac{5}{9}$ th of the remaining book in 2nd week. If there were 100 pages unread after 2nd week, how many pages were there in the book?

A. 404 B. 416
C. 418 D. 420

$$45. \frac{?}{\sqrt{128}} = \frac{\sqrt{162}}{?}$$

A. 12 B. 14
C. 144 D. 196

46. What is the difference between the biggest and

the smallest fraction among $\frac{2}{3}$, $\frac{3}{4}$, $\frac{4}{5}$ and $\frac{5}{6}$?

A. $\frac{1}{6}$ B. $\frac{1}{12}$

C. $\frac{1}{30}$ D. $\frac{1}{20}$

47. Simplify the following equation

$$\frac{(K-L)^2 - (K+L)^2}{4K} = \frac{a}{b}$$

A. $K = \frac{b}{a}$ B. $bL = -a$

C. $KL = 1$ D. $aK = -b$

48. On selling 17 balls at ₹ 720, there is a loss equal to the cost price of 5 balls, the cost price of a ball is?

A. ₹ 70 B. ₹ 65

C. ₹ 60 D. ₹ 55

49. Fresh fruit contains 68% water and dry fruit contains 20% water. How much dry fruit can be obtained from 100 kg of fresh fruits?

A. 50 kg B. 40 kg

C. 30 kg D. 20 kg

50. In what time would a cistern be filled by three pipes which diameters are 2 cm, 3 cm and 4 cm running together, when the largest alone can fill it in 58 minutes? The amount of water flowing in each pipe is proportional to the square of its diameter.

A. 26 min B. 42 min

C. 32 min D. 36 min

51. A vessel is filled with liquid, 3 parts of which are water and 5 parts of syrup. How much of the mixture must be drawn off and replaced with water so that the mixture may be half water and half syrup?

A. $\frac{1}{3}$ B. $\frac{1}{4}$

C. $\frac{1}{5}$ D. $\frac{1}{7}$

52. 4 kg of a metal contains $\frac{1}{5}$ copper and rest in

Zinc. Another 5 kg of metal contains $\frac{1}{6}$ copper

and rest in Zinc. The ratio of Copper and Zinc into the mixture of these two metals:

A. 94 : 181

B. 49 : 221

C. 39 : 231

D. 49 : 223

53. The mean of 50 observations was 36. It was found later that an observation 48 was wrongly taken as 23. The collected new mean is

A. 35

B. 36.5

C. 40

D. 42

54. How many 3-letter words with or without meaning, can be formed out of the letters of the word, 'LOGARITHMS', if repetition of letters is not allowed?

A. 420

B. 720

C. 5040

D. 120

55. In a group of 6 boys and 4 girls, four children are to be selected. In how many different ways can they be selected such that at least one boy should be there?

A. 162

B. 195

C. 200

D. 209

56. In a box there are 10 apples and $\frac{2}{5}$ th of the apples are rotten. If three apples are taken out from the box, what will be the probability that at least one apple is rotten.

A. $\frac{3}{4}$

B. $\frac{9}{10}$

C. $\frac{5}{6}$

D. $\frac{4}{7}$

57. There are 3 green, 4 orange and 5 white color bulbs in a bag. If a bulb is picked at random, what is the probability of having either a green or a white bulb?

A. $\frac{2}{3}$

B. $\frac{4}{3}$

C. $\frac{2}{5}$

D. $\frac{3}{4}$

58. The annual interest rate earned by an investment increased by 10 per cent from last year to this year. If the annual interest rate earned by the investment this year was 11 per cent, what was the annual interest rate last year?

A. 1% B. 1.1%
C. 9.1% D. 10%

59. 3 partners A, B and C start a business. 4 times of A's capital is equal to 6 times of B's Capital and B's Capital is 8 times of C's capital if profit of B is ₹ 6300. Then find the average profit A and C.

A. 5118.75
B. 4475.25
C. 7000.50
D. 5000.00

60. What is the thousandths digit in the decimal equivalent of $\frac{53}{5000}$?

A. 3 B. 1
C. 6 D. 0

61. In an Academic Council meeting of 120 faculty members, it was found that 50 take tea (T), 52 take juice (J), 52 take lassi (L), 18 take both T and L, 22 take both T and J, 16 take both J and L and 6 take all the three drinks.

The number of faculty members who take atleast one of the three drinks is

A. 75 B. 78
C. 104 D. 102

62. In an Academic Council meeting of 120 faculty members, it was found that 50 take tea (T), 52 take juice (J), 52 take lassi (L), 18 take both T and L, 22 take both T and J, 16 take both J and L and 6 take all the three drinks.

The number of faculty members who take exactly one drink is

A. 44 B. 60
C. 62 D. 64

63. Five sports events A, B, C, D and E are to be organized from Monday to Friday of a week.

On each day, only one event will be organized. E should be immediately followed by C. B should be organized immediately after D. One event is organized between A and B. D or E should not be the first or last event. Which is the second event to be organized?

A. C B. E
C. D D. A

64. Indu starts from point A and travels towards north for 5 km. She then takes a right turn and travels for 7 km. She then takes a left turn and travels another 7 km. Finally, she takes another left turn and travels for 2 km arriving at a point B. What is the distance between point A and B?

A. 13 km B. 12.33 km
C. 12 km D. 10 km

65. At the end of a faculty Development Programme, 10 faculty members shook hands with each other once. How many handshakes will there be altogether?

A. 20 B. 45
C. 55 D. 90

66. In a school, there are 250 students, and every student plays atleast one of the three indoor games of Chess, Carrom or Sudoku. 110, 90 and 100 students play Chess, Carrom and Sudoku, respectively. 20 students play Chess and Carrom, 20 students play Carrom and Sudoku and 25 students play Chess and Sudoku.

The number of students who play all the three games is

A. 15 B. 13
C. 20 D. 18

67. In a school, there are 250 students, and every student plays atleast one of the three indoor games of Chess, Carrom or Sudoku. 110, 90 and 100 students play Chess, Carrom and Sudoku, respectively. 20 students play Chess and Carrom, 20 students play Carrom and Sudoku and 25 students play Chess and Sudoku.

The number of students who play only chess is

- A. 60 B. 70
C. 80 D. 85

68. Sangeeta and Madhuri are ranked 7th and 11th respectively from the top in a class of 31 students. What will be their respective ranks from the bottom in the class?

- A. 20th and 24th
B. 24th and 20th
C. 25th and 21th
D. 25th and 20th

69. Identify the missing number in place of ? in the following matrix, in which the numbers are arranged in a certain way.

1	7	9
2	14	?
3	105	117

- A. 16 B. 12
C. 13 D. 14

70. From the three statements (A-C) and four conclusions (1-4) given below, identify the conclusions that could be logically inferred.

Statement (A): Some firefighters are drivers.

(B): No driver is a cleaner.

(C): All cleaners are firefighters.

Conclusion: 1 : Some drivers are firefighters.

2 : All firefighters are cleaners.

3 : No cleanser is a driver.

4 : Some cleaners are drivers.

- A. 1 only
B. 1 and 3 only
C. 1 and 4 only
D. 3 only

71. In the context of four statements (a-d) given below, which two of these statements cannot be true simultaneously, assuming that there is at least one teacher in the college?

- (a) All teachers are enthusiastic.
(b) Some teachers are enthusiastic.

(c) No teacher is enthusiastic.

(d) Some teachers are not enthusiastic.

Choose the correct answer from the option given below:

- A. (a) and (b) only
B. (c) and (d) only
C. (a) and (c) only
D. (b) and (d) only

72. From the statement and two assumptions 1 and 2 given below, identify the assumption(s) that is/are implicit in the statement.

Statement : The nutritional status of children in India is better compared to that in other developing countries.

Assumption 1 : It is not possible to estimate nutritional requirement of children in other countries.

Assumption 2 : India can become a developed country.

- A. 1 only
B. 2 only
C. Both 1 and 2
D. Neither 1 nor 2

73. From the statement and two arguments 1 and 2 given below, identify the argument(s) that hold(s) strong as per the situation described in the statement.

Statement : Should government stop spending huge amounts of money on International sports?

Argument 1 : Yes. This money can be utilized for upliftment of the poor.

Argument 2 : No. Sports persons will be frustrated and will not get International exposure.

- A. 1 only
B. 2 only
C. either 1 or 2
D. neither 1 nor 2

74. P and Q are brothers. S is brother of T, R is a father of P, T is a daughter of Q, then who is unde of S?

- A. P
C. R
- B. Q
D. T

75. Given below are two statements:

Statement I: In the number series 1, 6, 15, P, 45, 66, 91, ____, the value of P is 28.

Statement II: In the number series 4, 1, -8, P, -20, 29, -32, 43, -44, 57, ____, the value of P is 15.

In light of the above statements, choose the correct answer from the options given below:

- A. Both Statement I and Statement II are true
B. Both Statement I and Statement II are false
C. Statement I is true but Statement II is false
D. Statement I is false but Statement II is true

76. In a certain coding system, if DESK is written as #5\$2 and RIDE is written as %7#\$, then how will you code RISK?

- A. %725
C. %7#2
- B. %752
D. %7\$#

77. If the word 'LIGHT' is coded as 20-17-15-16-28, then how would you code 'KEADER'?

- A. 20-12-11-9-13-26
B. 20-11-9-12-13-25
C. 20-13-9-12-13-26
D. 20-12-9-11-13-26

78. In a certain code 'always help old people' is written as 'ba ri sh gi', 'people and old schemes' is written as 'fa gi ma ri', 'help schemes and support' is written as 'ma jo ba fa', and 'old and better solution' is written as 'ki ri to fa'. What does the code 'fa' stand for?

- A. schemes
C. old
- B. support
D. and

79. Which of the following pairs of words express the relationship that is most similar to the pair Spider : Web?

- A. Ink : Pen
B. Cock : Hen
C. Teacher : Student
D. Poet : Poetry

80. Trigonometry is related to Triangles in the same way as Mensuration is related to

- A. Geometry
B. Circles
C. Areas
D. Polygons

81. Which of the following word is least like the other words?

- A. Cabbage
C. Cucumber
- B. Papaya
D. Brinjal

82. A statement is followed by two inferences 1 and 2. Considering the statement to be true, which of the inference 1 and 2 logically follow?

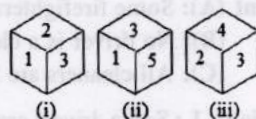
Statement: Spirituality helps us to lead a blissful life.

Inference 1 : Without the help of spirituality, one cannot lead a blissful life.

2 : Spirituality can help bring peace of mind in an individual.

- A. 1 only
B. 2 only
C. Both 1 and 2
D. Neither 1 nor 2

83. Based on the three positions of the same dice, what should be the number opposite to 3?



- A. 1
C. 5
- B. 6
D. 4

84. In a town of 130 people, 66 read the magazine L, 56 read the magazine M and 63 read the magazine N. Only 27 read L and M, only 25 read M and N and only 23 read L and N. Five people read all of the three magazines.

How many people read only magazine L?

- A. 18
C. 21
- B. 20
D. 22

85. In a town of 130 people, 66 read the magazine L, 56 read the magazine M and 63 read the

magazine N. Only 27 read L and M, only 25 read M and N and only 23 read L and N. Five people read all of the three magazines.

How many people read exactly one magazine?

- A. 55 B. 40
C. 60 D. 50

86. The square root of 0.09 is

- A. 0.3 B. 0.03
C. 0.81 D. 0.081

87. By using the digits 0, 1 and 5 once in each number, how many three digit numbers are possible which are divisible by 3?

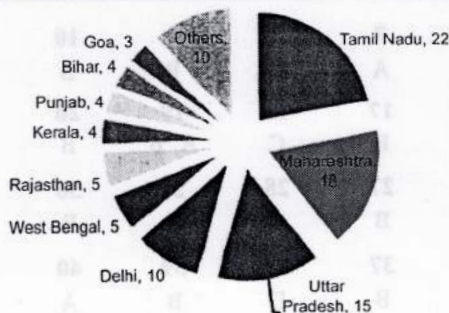
- A. 12 B. 205
C. 3 D. 4

88. Which of the following statements concerning rational numbers are true?

- I. Rational numbers follow associative rule addition.
II. Rational numbers follow commutative rule for subtraction.
III. Difference of two rational numbers is a rational number.
IV. Rational numbers follow associative rule for subtraction.
- A. I and III B. II and III
C. II and IV D. I, II and III

Directions (Qs. No. 89 and 90): T

The following data gives the percentage of the top 10 states in terms of the number of foreign tourist visits in India in 2019 (Source: tourism.gov.in). The total number of foreign tourists visiting India in 2019 is 31408666.



89. How many people visited Tamil Nadu in 2019?

- A. 6009907 B. 6909907
C. 6990907 D. 660907

90. What is the difference between the highest number of foreign tourists visiting any state out of the top ten states and the lowest number?

- A. 5976647 B. 600000
C. 5967647 D. 6967647

Directions (Qs. No. 91-93): The following table shows the amount of money spent by six university students living in student accommodation on food, travel, rent and miscellaneous expenses, along with their monthly budget. (The gender of the students are mentioned in brackets. M-Male, F-Female). Answer the following questions based on this table.

	Monthly Budget (in ₹)	Food	Travel	Rent for Accommodation	Miscellaneous
Sonia (F)	27000	12000	4000	7000	4000
Deepak (M)	25000	10000	5000	5000	5000
Komal (F)	27000	12000	4500	6500	4000
Gaurav (M)	22000	9500	4500	5500	2500
Arnav (M)	25000	11000	5000	5000	4000
Shruti (F)	22000	10000	4500	5000	2500

91. What percentage of their total expenditure do the female students together spend on travel?

- A. 50%
B. 45%
C. 17%
D. 25%

92. Who among all the six students spends the highest percentage of their monthly budget on food?

- A. Sonia
B. Komal
C. Arnav
D. Shruti

93. Who among all the six students spends the least percentage of their monthly budget on travel?

- A. Sonia
B. Komal
C. Arnav
D. Shruti

Directions (Qs. No. 94 and 95): In a survey of 400 college students regarding their preference for three kinds of food – pasta, pizza and burgers, 25% said they like pasta and pizza, 25% said they like pasta and burgers and 20% like pizza and burgers, 10% said they like all three. 60% of the students like pasta, 65% like pizza and 55% like burgers. Answer the following questions related to this data.

94. What is the percentage of students who like at least two out of pasta, pizza and burgers?
A. 50% B. 60%
C. 70% D. 80%
95. How many students like only pizza out of the three kinds of food?
A. 100 B. 160
C. 80 D. 120
96. The abscissa of a point is negative in
A. First quadrant
B. Second and third quadrant
C. Second quadrant
D. Third and fourth quadrant
97. Which of the following is/are rational number/numbers?
(i) 0.67
(ii) $\sqrt{144}$
(iii) $\sqrt{2}$
(iv) $\sqrt{3}$
A. (i) only

- B. (ii), (iii) and (iv) only
C. (iii) and (iv) only
D. (i) and (ii) only

98. What is the sum of cubes of the first 12 natural numbers?
A. 78 B. 6084
C. 6500 D. 19500
99. Five colleagues A, B, C, D and E come to office by car pooling and start working at their desk at the exact same time. They put their mobile phones on silent mode to avoid distractions and check their phones at fixed regular intervals for any important message. The interval in which A, B, C, D and E check their phones are 45, 60, 30, 45 and 90 minutes, respectively. If they start working at 10 am, sharp, at what time will all of them be checking their respective phones together for the first time?
A. 1 pm
B. 12 noon
C. 12:30 pm
D. 11:30 am
100. 25% of a class of students take up extra curricular activities (ECA). They chose at least one option from music and sports. If 20% of ECA students chose both music and sports, and 50% of them opted for sports, what percentage of ECA students chose only music?
A. 10% B. 30%
C. 50% D. 25%

ANSWERS

1	2	3	4	5	6	7	8	9	10
A	C	B	C	C	C	A	B	B	B
11	12	13	14	15	16	17	18	19	20
C	B	B	C	D	A, C	B	C	A, B	B
21	22	23	24	25	26	27	28	29	30
C	B	A, D	B	C	A	B	D	A	B
31	32	33	34	35	36	37	38	39	40
D	A	B	D	C	B	B	D	B	A

41	42	43	44	45	46	47	48	49	50
C	A	C	C	A	A	B	C	B	C
51	52	53	54	55	56	57	58	59	60
C	B	B	B	D	C	A	D	A	D
61	62	63	64	65	66	67	68	69	70
C	B	C	A	B	A	C	C	B	B
71	72	73	74	75	76	77	78	79	80
C	D	B	A	A	B	C	D	D	C
81	82	83	84	85	86	87	88	89	90
B	B	B	C	D	A	D	A	B	C
91	92	93	94	95	96	97	98	99	100
C	D	A	A	D	B	D	B	A	C

EXPLANATORY ANSWER

1. **The complete sentence would be:** "The best advice that my parents gave me is don't put all your eggs in one basket and a penny saved is a penny earned." This combination of phrases conveys the wisdom of avoiding excessive risk and emphasizing the importance of saving money.

2. **The correction involves changing "COVID-19" to "COVID-19."** "COVID-19" is the correct term for the disease caused by the novel coronavirus. "COVID-19" is a typographical error, likely a misspelling or mistyping of the correct term. The correction ensures accuracy and adherence to the standard terminology for the pandemic.

3. **Thesarus:** This is missing the second "u" and is incorrect.

Thesaurus: This adds an unnecessary "s" at the end and is incorrect.

Thsaurus: This omits the "e" before the "s" and is incorrect.

Thesaurus: This is the correct spelling of the word, meaning "a book or database containing a collection of words and synonyms."

4. **The complete sentence would be:** "Before he climbed aboard the train, he bought a bottle of water for the journey."

Before: This indicates the timing of buying the water bottle, which should happen prior to boarding the train.

Aboard: This specifies the location of the action on the train itself, indicating where he climbed.

5. **The complete statement would be:** "The police realized that they had been barking up the wrong tree when it was proved that the man they had arrested was innocent." This idiom means to pursue a mistaken or misguided course of action or to have a false understanding of a situation.

6. This phrase means that visits to the grandparents occur occasionally or irregularly. It suggests that the person does visit their grandparents, but not on a fixed or regular schedule. The phrase conveys a sense of periodic visits, allowing for some flexibility in the frequency of the visits. It's a response that acknowledges occasional visits without committing to a specific regularity.

7. The error is in the word "amenable," which may not be the most appropriate word choice in this context. The correct term to use here is likely "accessible" or "adaptable."

The corrected sentence could be: "Online education is an accessible instructional..." or "Online education is an adaptable instructional..."

8. This idiom is used to convey that something is very expensive or comes at a high cost. When applied to the sentence "Studying in a private university costs an arm and a leg," it suggests that the tuition or expenses associated with studying in a private university are significantly high. The phrase uses a metaphorical expression to emphasize the financial burden or expense involved in pursuing education at a private institution.
9. This is the correct spelling of the word. "Execrable" means extremely bad or unpleasant. It is used to describe something of very poor quality or deserving strong condemnation.

The incorrect spellings are:

Excreable: This is a misspelling. The correct form is "execrable."

Excecreble: This is a misspelling. The correct form is "execrable."

Execrabbble: This is a misspelling. The correct form is "execrable."

10. (a) **Single thought or idea:** This introduces the concept of a simple sentence.
- (c) **A simple sentence contains a subject and a verb:** This states the essential elements of a simple sentence.
- (b) **A verb and an object and normally conveys a complete thought:** This expands on the elements, mentioning the object and the complete thought conveyed.
- (d) **Normally conveys a complete thought:** This reinforces the point about a simple sentence expressing a complete idea.

Therefore, the sequence (a), (c), (b), (d) logically builds upon each other, providing a clear definition and characteristics of a simple sentence.

11. **Teenager:** This refers to someone between 13 and 19 years old, but not all teenagers commit crimes.

Adolescent: Similar to teenager, this signifies someone in the age range of 10-19 years, but it specifically focuses on biological and psychological development, not necessarily linked to criminal behavior.

Student: This refers to someone enrolled in an educational institution and doesn't inherently imply involvement in crime.

Delinquent: This specifically refers to a young person who engages in illegal or antisocial behavior, making it the most accurate and direct substitute for the given phrase.

12. (c) every morning, no matter how late he had been up: This sets the stage by describing his routine habit.
- (a) my father rose at 5.30, went to his study: This specifies the action within the routine, starting with getting up and going to his study.
- (d) wrote for a couple of hours, made us all breakfast: This details his activities in the study, writing and preparing breakfast.
- (b) and then went back to work for the rest of the morning: This concludes the sequence by mentioning his departure after breakfast.

The complete sentence would be: "Every morning, no matter how late he had been up, my father rose at 5.30, went to his study, wrote for a couple of hours, made us all breakfast, and then went back to work for the rest of the morning."

13. **alma mater:** This Latin term literally translates to "nourishing mother" and is used figuratively to refer to one's old university or school.

deus ex machina: This phrase means “god from the machine” and refers to a literary device where an unexpected and improbable character or event appears to resolve a conflict.

genius loci: This Latin term means “spirit of the place” and refers to the unique character or atmosphere of a particular place.

quid pro quo: This Latin phrase means “something for something” and refers to a fair exchange in which each party receives something of equal value.

- 14. The grammatically correct sentence is:** A powerful voice inside me whispered that I was being foolish, that a sixty-year-old woman should have more sense than to undertake a journey like this one.

1. Correct Verb Tense: The verb tenses are used appropriately. “Whispered” and “was being” are in the past tense, which is suitable for the narrative.

2. Subject-Verb Agreement: The subject (“a sixty-year-old woman”) agrees with the verbs (“should have” and “undertake”). The singular subject requires singular verbs.

3. Punctuation: The punctuation is correct. The comma is appropriately used before “that” to introduce the second part of the sentence.

4. Clear and Concise: The sentence is clear and concise, conveying the intended meaning without unnecessary complexity.

- 15. The correct sequence of the four phrases to make a meaningful sentence is:** The complete sentence would be: “Once you reach your destination, make sure to plan your itinerary carefully since you only have a few days to see everything.”

- 16 Somnambulist:** This refers to someone who walks while asleep, which accurately describes the act of walking at night.

Somniloquist: This refers to someone who talks in their sleep, not specifically related to walking at night.

Noctambulist: This has the same meaning as somnambulist and can be used interchangeably.

Ventriloquist: This refers to someone who throws their voice to make it seem like it’s coming from somewhere else, unrelated to walking at night.

Therefore, based on the specific focus on nighttime walking, A. Somnambulist or C. Noctambulist would be the most appropriate single-word substitutes.

- 17. Various; many:** While these words convey quantity, they are not direct opposites. Many things can be various, but not necessarily the opposite of many.

Vile; evil: Both words have negative connotations, but they are not perfect opposites. “Vile” is more related to disgust and offensiveness, while “evil” refers to moral wrongness and wickedness.

Victory; award: These are not antonyms. An award can be given for a victory, and some victories may not warrant an award. While they might not often occur together, they are not opposites.

Vivid; dreary: These words have opposite meanings. Vivid is bright, clear, and full of life, while dreary is dull, gloomy, and depressing. They are perfect antonyms and accurately represent contrasting states of something.

- 18. Funny:** This word describes something that causes amusement or laughter, often due to humor or being comical.

Tragic: This word, on the other hand, refers to something that is extremely sad, unfortunate, or involving a disaster.

While “funny” and “tragic” may seem like opposites, they are often used in literature and storytelling to create a juxtaposition or contrast. In this context, both words are used to evoke emotional responses, but in different ways—funny for amusement and tragic for sadness. Therefore, they can be considered synonyms when used in the appropriate context of storytelling or characterization.

19. Read the riot act: This refers to giving someone a strong verbal reprimand or warning, emphasizing severe consequences for their actions. This perfectly fits the scenario of parents confronting their daughter about cheating.

20. Beat around the bush: This means to avoid the main point or speak indirectly. It wouldn't be appropriate for parents addressing such a serious issue directly.

Spill the beans: This means to reveal a secret. While it might be relevant to the situation, it doesn't capture the element of reprimanding the daughter.

Told her, “the proof is in the pudding”: This is a less common idiom suggesting that the evidence is clear. It wouldn't convey the strong emotional reaction of the parents.

Read her the riot act: This idiom perfectly fits the scenario. It means to give someone a stern and angry reprimand, often with clear consequences for their actions. This accurately reflects the likely response of the parents in this situation.

Therefore, considering the context of parental anger and reprimand for a serious wrongdoing, read her the riot act emerges as the most fitting idiom to complete the sentence.

21. The grammatically correct sentence is: He and she go to the market every Sunday to buy fresh vegetables.

Explanation:

- “He and she” is a compound subject, and the verb “go” agrees with this plural subject.
- “to buy” is the correct infinitive form to use after “go.”
- “fresh vegetables” is the correct plural form.

22. The phrase “look forward to” is a fixed expression that is followed by a gerund (the -ing form of a verb). When expressing anticipation or expectation, we use “look forward to” followed by the gerund to indicate the action we are anticipating.

In the sentence “I look forward to hearing from you soon,” the gerund “hearing” is used to indicate the action of receiving a response or communication. This construction is grammatically correct and idiomatic in English. The other options are incorrect because they either use the base form of the verb (“to hear”) or employ incorrect prepositions and verb forms.

23. In the active voice sentence “I saw the dog eating it,” the subject is “I,” the verb is “saw,” and the object is “the dog eating it.” To convert this sentence into passive voice, the object becomes the new subject, and the original subject becomes the agent introduced by the preposition “by.”

The passive voice form “I saw it being eaten by the dog” maintains the same meaning. Here, “it” is the new subject, “being eaten” is the passive verb construction, and “by the dog” indicates the agent performing the action.

In summary, the transformation from active to passive voice involves rearranging the sentence structure to emphasize the receiver of the action rather than the doer of the action.

24. “Condolence” is a word used to express sympathy, especially on the occasion of

someone's death or a tragic event. It signifies a formal expression of comfort and empathy toward someone who is grieving or experiencing a loss. When someone offers condolences, they are expressing their sorrow and offering support to those affected by the unfortunate event. The term is often used in the context of sending messages or gestures to convey sympathy and compassion during times of mourning.

25. Q: "how intermediate social institutions in America." – This sentence introduces the focus on intermediate social institutions in America.

P: "such as the legal, the political and welfare systems." – This sentence specifies the types of intermediate social institutions being discussed.

S: "contribute to the specific way in which disability is produced" – This sentence provides insight into how these institutions contribute to the production of disability.

R: "and their role in the transformation of rehabilitation into a commodity." – This sentence elaborates on the role of these institutions in transforming rehabilitation into a commodity.

26. The Grammy Awards are associated with recognizing achievements in the music industry, and similarly, the Booker Prize is associated with recognizing achievements in literature.

27. The word "quaint" refers to something attractively unusual, charmingly old-fashioned, or picturesque. In the context of the passage, when the author mentions "quaint little cafes," they are describing small, charming cafes that have a certain old-fashioned or traditional appeal. These cafes likely have a unique and nostalgic atmosphere, adding to the overall experience of exploring and discovering local flavors in Ladakh.

28. The passage describes Ladakh as a place where you would expect to find restaurants serving specific types of food. The relevant excerpt is: "Hunting out cafes is probably the last thing one would expect to do on a trip to the magical land of Ladakh, where one expects to find restaurants serving fresh dim sums, steaming tingmos, and cubes of yak cheese."

So, the correct option, Dimsums, tingmos, and cubes of yak cheese," accurately reflects the items that are expected to be found on the menu of a restaurant in Ladakh, according to the information in the passage.

29. The passage mentions, "Arriving in Ladakh, I was advised to take some rest to acclimatise myself to the cold weather and sparse oxygen." This indicates that the purpose of taking rest was to adjust to the environmental conditions of Ladakh, which includes the cold weather and the scarcity of oxygen due to the high altitude.

30. The term "deserted" refers to a place that is empty, abandoned, or lacking in activity. On the other hand, the word "bustling" means full of activity, lively, and crowded. In the given options, "Bustling" is the opposite of "deserted" because it conveys a sense of liveliness and activity, indicating a place that is vibrant and bustling with people or things. Therefore, in the context of the passage, the author is likely describing Ladakh's market as a lively and active place, which is the opposite of being deserted.

38. $ax^2 + x + b = 0$

∴ Roots are equal then $D = 0$

$$D = b^2 - 4ac$$

$$0 = 1 - 4ab$$

$$\Rightarrow 4ab = 1$$

$$\Rightarrow ab = \frac{1}{4}$$

39. ∴ $x - 6 = 0 \Rightarrow x = 6$

$$x^2 - kx - 6 = 0$$

$$36 - 6k - 6 = 0$$

$$6k = 30 \Rightarrow k = 5$$

Hence, the value of $k = 5$.

41. Let one part = x

and other part = y

$$\therefore x + y = 700$$

$$x - y = \frac{1}{5} \left(\frac{700}{2} \right)$$

$$x - y = 70 \quad \dots(i)$$

$$x + y = 700 \quad \dots(ii)$$

Solving (i) and (ii)

$$x + y = 700$$

$$x - y = 70$$

$$\hline 2x = 770$$

$$x = 385$$

$$y = 700 - 385 = 315$$

Hence, the area of smaller part = 315 hectares.

$$42. \quad 2a - b = a + 3b = 2a - 2b + 1$$

$$2a - b = a + 3b \Rightarrow a = 4b$$

$$\text{and } 2a - b = 2a - 2b + 1 \Rightarrow b = 1$$

$$\therefore a = 4 \times 1 = 4$$

Now, value of

$$a + 3b = 4 + 3(1) = 7 \text{ cm}$$

$$\therefore \text{Perimeter of the triangle} = 3 \times 7 = 21 \text{ cm.}$$

$$45. \quad \frac{x}{\sqrt{128}} = \frac{\sqrt{162}}{x}$$

$$\begin{aligned} \Rightarrow x^2 &= \sqrt{128} \times \sqrt{162} \\ &= \sqrt{128 \times 162} \\ &= 8\sqrt{2} \times 9\sqrt{2} \\ &= 72 \times 2 = 144 \end{aligned}$$

$$\text{Hence, } x^2 = 144 \Rightarrow x = 12.$$

$$46. \quad \frac{2}{3} = 0.66$$

$$\frac{3}{4} = 0.75$$

$$\frac{4}{5} = 0.8$$

$$\frac{5}{6} = 0.83$$

$$\frac{5}{6} - \frac{2}{3} = \frac{5-4}{6} = \frac{1}{6}$$

$$47. \quad \frac{(K-L)^2 - (K+L)^2}{4K} = \frac{a}{b}$$

$$\Rightarrow \frac{K^2 - L^2 - 2KL - K^2 - L^2 - 2KL}{4K} = \frac{a}{b}$$

$$\Rightarrow \frac{-4KL}{4K} = \frac{a}{b}$$

$$\Rightarrow bL = -a.$$

$$48. \quad \text{Cost price of a ball} = \frac{720}{12} = ₹ 60.$$

49. Fresh fruit contains 68% water and 32% fruit

Dry contains 20% water and 80% fruit

Let required amount of dry fruit be x kg

$$\text{then, } \frac{32}{100} \times 100 = \frac{80}{100} \times x$$

$$\therefore x = \frac{32 \times 5}{4} = 40 \text{ kg.}$$

50. Three pipes which diameters are

2 cm, 3 cm and 4 cm

Amount of water flowing in each pipe

4 : 9 : 16

\therefore Largest pipe can fill in 58 minutes

$$\begin{aligned} \therefore \text{Three pipes together fill in } & \frac{16 \times 58}{29} \text{ min} \\ & = 32 \text{ minutes.} \end{aligned}$$

51. Suppose the vessel initially contains 8 litres of liquid

Let x litres of this liquid be replaced with water

Quantity of water in new mixture

$$= \left(3 - \frac{3x}{8} + x \right) \text{ litres}$$

Quantity of syrup in new mixture

$$= \left(5 - \frac{5x}{8} \right) \text{ litres}$$

$$\therefore \left(3 - \frac{3x}{8} + x\right) = \left(5 - \frac{5x}{8}\right)$$

$$\Rightarrow 5x + 24 = 40 - 5x$$

$$\Rightarrow 10x = 16$$

$$\Rightarrow x = \frac{8}{5}$$

So, part of the mixture replaced

$$= \frac{8}{5} \times \frac{1}{8} = \frac{1}{5}$$

$$52. \text{ Total quantity of copper} = 4\left(\frac{1}{5}\right) + 5\left(\frac{1}{6}\right)$$

$$= \frac{4}{5} + \frac{5}{6} = \frac{24+25}{30} = \frac{49}{30}$$

Total quantity of zinc

$$= (4 + 5) - \frac{49}{30}$$

$$= 9 - \frac{49}{30}$$

$$= \frac{270-49}{30} = \frac{221}{30}$$

In the resultant mixture, ratio of copper : zinc

$$= \frac{49}{30} : \frac{221}{30}$$

$$= 49 : 221$$

$$53. \text{ The correct mean} = \frac{50 \times 36 + (48 - 23)}{50}$$

$$= \frac{1800 + 25}{50}$$

$$= \frac{1825}{50} = \frac{365}{10} = 36.5$$

Hence, the correct new mean = 36.5.

54. 'LOGARITHM' contains 10 different letters.

Required number of words = Number of arrangements of 10 letters taking 3 at a time

$$= {}^{10}P_3$$

$$= \frac{10 \times 9 \times 8 \times 7!}{7!} = 720.$$

55. We may have (1 boy and 3 girls)

or (2 boys and 2 girls)

or (3 boys and 1 girl) or (4 boys)

\therefore Required number of ways

$$= ({}^6C_1 \times {}^4C_3) + ({}^6C_2 \times {}^4C_2) + ({}^6C_3 \times {}^4C_1) + ({}^6C_4)$$

$$= ({}^6C_1 \times {}^4C_1) + ({}^6C_2 \times {}^4C_2) + ({}^6C_3 \times {}^4C_1) + ({}^6C_2)$$

$$= (6 \times 4) + \left(\frac{6 \times 5}{2 \times 1} \times \frac{4 \times 3}{2 \times 1}\right) + \left(\frac{6 \times 5 \times 4}{3 \times 2 \times 1} \times 4\right)$$

$$+ \left(\frac{6 \times 5}{2 \times 1}\right)$$

$$= (24 + 90 + 80 + 15) = 209.$$

$$56. 10 - \frac{2}{5} \times 10 = 10 - 4 = 6$$

$$\therefore \text{ Required probability} = \frac{5}{6}$$

57. Total number of bulbs = 3 + 4 + 5 = 12

$$\text{Required probability} = \frac{3}{12} + \frac{5}{12} = \frac{8}{12} = \frac{2}{3}$$

58. Let the annual interest rate last year = $r\%$

\therefore Annual interest this year

$$= r + \frac{r \times 10}{100} = \frac{11r}{10}\%$$

According to the question,

$$11 = \frac{11r}{10} \Rightarrow r = 10\%$$

Hence, the annual interest rate last year = 10%.

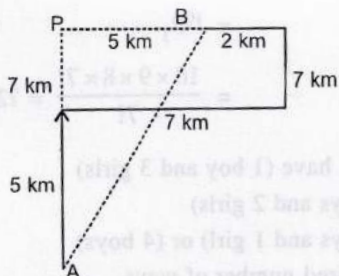
$$60. \frac{53}{5000} = 0.0106$$

Required digit of thousands place = 0.

$$63. \begin{array}{cccccc} \text{Monday} & \text{Tues} & \text{Wed} & \text{Thurs} & \text{Friday} \\ & A & D & B & E & C \end{array}$$

D is the second event to be organized.

64.

In $\triangle APB$,

$$(AB)^2 = (12)^2 + (5)^2$$

$$= 144 + 25 = 169$$

$$\therefore AB = 13 \text{ km}$$

Hence, distance between point A and B = 13 km

65. Hand Shakes together = $^{10}C_2$

$$= \frac{10!}{2! \times 8!} = \frac{10 \times 9 \times 8!}{2 \times 8!}$$

$$= 45$$

Hence, 45 will hands shake together.

$$66. N(A \cup B \cup C) = N(A) + n(B) + n(C)$$

$$- n(A \cup B) - n(B \cup C) - n(C \cup A)$$

$$+ n(A \cap B \cap C)$$

$$\Rightarrow 250 = 110 + 90 + 100 - 20 - 20$$

$$- 25 + n(A \cap B \cap C)$$

$$\Rightarrow 250 = 300 - 65 + n(A \cap B \cap C)$$

$$\Rightarrow 250 = 235 + n(A \cap B \cap C)$$

$$\therefore n(A \cap B \cap C) = 250 - 235 = 15.$$

69.

1	7	9
2	14	?
3	105	117

$$1 \times 2 + 1 = 3$$

$$7 \times 14 + 7 = 105$$

$$9 \times 12 + 9 = 117$$

Hence, the missing number in the place of question mark = 12.

70. 1. Some drivers are firefighters.

- This conclusion can be inferred from statement (A), which states that some firefighters are drivers.

2. All firefighters are cleaners.

- This conclusion cannot be logically inferred because statement (C) does not establish a direct relationship between firefighters and cleaners.

3. No cleanser is a driver.

- This conclusion can be inferred from statement (B), which states that no driver is a cleaner.

4. Some cleaners are drivers.

- This conclusion cannot be logically inferred because statement (C) states that all cleaners are firefighters, and statement (B) indicates that no driver is a cleaner.

Based on the analysis, the conclusions that could be logically inferred are:

- 1 only
- 3 only

71. Let's analyze the statements:

- All teachers are enthusiastic.
- Some teachers are enthusiastic.
- No teacher is enthusiastic.
- Some teachers are not enthusiastic.

Assuming there is at least one teacher in the college, statements (a) and (c) cannot be true simultaneously because they present contradictory views regarding the enthusiasm of teachers:

- If statement (a) is true (all teachers are enthusiastic), then statement (c) (no teacher is enthusiastic) cannot be true.
- Conversely, if statement (c) is true (no teacher is enthusiastic), then statement (a) (all teachers are enthusiastic) cannot be true.

So, the two statements that cannot be true simultaneously are (a) and (c).

72. The statement is comparing the nutritional status of children in India with that in other

developing countries. The assumptions provided do not directly relate to the comparison made in the statement.

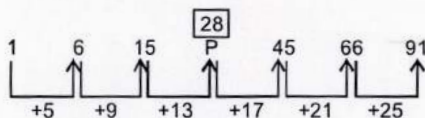
Assumption 1 talks about estimating the nutritional requirement of children in other countries, which is not necessary for the statement's comparison.

Assumption 2 talks about India becoming a developed country, which is not directly related to the nutritional status of children in India compared to other developing countries.

Therefore, The correct answer is: Neither 1 nor 2.

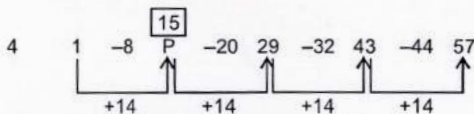
73. The argument 2 is strong. It highlights potential negative consequences for sports persons, such as frustration and limited international exposure, if the government stops spending on international sports. This argument emphasizes the importance of international sports for athletes' development and recognition.

75. Statement I:



the value of P is 28 (True)

Statement II:



the value of P is 15 (True)

Hence, both statement I and II are true.

80. Trigonometry is related to Triangles in the same way as Mensuration is related to Areas.
86. The square root of $0.09 = 0.3$.
87. 105, 150, 501, 510 which is divisible by 3.
Hence, there are 4 numbers are possible which are divisible by 3.
88. I. Rational numbers follow the associative rule for addition.

True. The associative property holds for addition of rational numbers.

- II. Rational numbers follow the commutative rule for subtraction.

False. The commutative property does not hold for subtraction. For example, $3 - 2$ is different from $2 - 3$.

- III. The difference of two rational numbers is a rational number.

True. Subtracting two rational numbers results in another rational number.

- IV. Rational numbers follow the associative rule for subtraction.

False. The associative property does not hold for subtraction. For example, $(3 - 2) - 1$ is not the same as $3 - (2 - 1)$.

Therefore, the correct answer is: I and III

89. People visited Tamil Nadu in 2019

$$= \frac{22}{100} \times 31408666 \\ = 6909907.$$

90. $(22 - 3)\%$ of 31408666

$$= \frac{19}{100} \times 31408666 = 5967647$$

Hence, the difference between the highest number of foreign tourists visiting any state out of the top ten states and the lowest number = 5967647.

91. Total expenditure of female = ₹ 76000

Total expand on travel = 13000

$$\text{Required \%} = \frac{13000 \times 100}{76000} = \frac{1300}{76} \\ = 17.10\% = 17\%$$

92. Sonia = $\frac{12000}{27000} \times 100 = 44.44\%$

$$\text{Komal} = \frac{12000}{27000} \times 100 = 44.44\%$$

$$\text{Arnav} = \frac{11000}{25000} \times 100 = 44\%$$

$$\text{Shruti} = \frac{10000}{22000} \times 100 = 45.45\%$$

Shruti spends the highest percentage of their monthly budget on food.

$$93. \text{ Sonia} = \frac{4000 \times 100}{27000} = 14.8\%$$

$$\text{Komal} = \frac{4500 \times 100}{27000} = 16.66\%$$

$$\text{Arnav} = \frac{5000 \times 100}{25000} = 20\%$$

$$\text{Shruti} = \frac{4500 \times 100}{22000} = 20.45\%$$

Sonia Spends the least percentage of their budget on Travel.

96. \therefore The abscissa of a point is negative

Hence it lies in second and third quadrant

-	+		+	+
-	-		+	-

$$97. (i) \quad 0.67 = \frac{67}{100} = (\text{rational number})$$

$$(ii) \quad \sqrt{144} = 12 = (\text{rational number})$$

$$(iii) \quad \sqrt{2} = \text{irrational number}$$

$$(iv) \quad \sqrt{3} = \text{irrational number}$$

Clearly, (i) and (ii) are rational number

Hence, option (D) is correct.

$$98. \quad 1^3 + 2^3 + 3^3 + \dots + n^3 = \left\{ \frac{n(n+1)}{2} \right\}^2$$

$$\therefore 1^3 + 2^3 + 3^3 + \dots + 12^3$$

$$= \left(\frac{12 \times 13}{2} \right)^2 = (78)^2 = 6084$$

$$99. \text{ LCM of } 45, 60, 30, 45 \text{ and } 90 = 180 \text{ minutes}$$

$$= 3 \text{ hrs.}$$

$$10 \text{ am} + 3 \text{ hrs} = 1 \text{ pm.}$$