Karnataka PO 2016

Reasoning

Directions (Q. 1–5): In each of the following questions, two conclusions I and II are given after a statement. The conclusions show the relationship between some of the elements of the statement. Select the appropriate answer after studying the relationship between the given elements. Mark your answer as:

(1) if only conclusion II is true

(2) if only conclusion I is true

(3) if both the conclusions I and II are true

(4) if either conclusion I or II is true

(5) if neither conclusion I nor II is true

1. Statement:
$A \leq B \leq C = D \geq E > F, B > G$

Conclusions:
I. $D \geq A$
II. $C > F$

2. Statement:
$P > Q \geq R = S \leq T \leq U, V \leq S \leq W$

Conclusions:
I. $T \geq V$
II. $Q > U$

3. Statement:
$A \leq B < C \geq D \geq E > F$

Conclusions:
I. $A \leq E$
II. $C > F$

4. Statement:
$S \geq L \geq I = P \leq E < R, L < Q$

Conclusions:
I. $L > R$
II. $E \leq Q$

5. Statement:
$A \geq B \geq C = D \leq E \leq F, G \leq D \geq H$

Conclusions:
I. $H < A$
II. $H = A$

Directions (Q. 6–10): Study the information carefully to answer the following questions.

A group of eight friends P, Q, R, S, W, X, Y and Z from eight different places Odisha, Delhi, Lakshadweep, Chandigarh, Surat, Mahadewa, Rampur and Kabul (not necessary in the same order) go for a trip. They arrange for a round table and sit facing the centre.

Y is sitting third to the right of W. The person from Delhi is sitting to the immediate right of W, who is not from Odisha. Q is sitting fourth to the right of Z. W is not sitting with either Q or Z. X belongs to Chandigarh and is sitting third to the right of the friend who belongs to Delhi. The person from Mahadewa is sitting second to the left of the person who belongs to Chandigarh. W is sitting second to the right of the friend from Rampur. P belongs to Lakshadweep and is sitting between X and Z. The one who belongs to Surat is sitting second to the right to the person from Lakshadweep. R is sitting third to the left of X.

6. Who among the following belongs to Odisha?
(1) P (2) X
(3) Q (4) Y
(5) R

7. Which of the following is the correct representation of the position of P with respect to Q?
(1) Third to the right (2) Third to the left
(3) Fifth to the right (4) Second to the left
(5) Second to the right

8. When counted in anti-clockwise direction from X, what is the total number of friends sitting between X and Y?
(1) 2 (2) 0
(3) 5 (4) 6
(5) 1

9. Which of the following combinations is not correct?
(1) P – Lakshadweep (2) Z – Odisha
(3) W – Kabul (4) X – Chandigarh
(5) Q – Mahadewa

10. Which of the following statements is true?
(1) P is sitting second to the right of the friend from Surat.
(2) W is sitting second to the left of the friend from Mahadewa.
(3) S is sitting facing the friend from Odisha.
(4) Friend from Surat is sitting to the immediate left of the friend from Rampur.
(5) There are two friends sitting between the friends from Kabul and Delhi.

Directions (Q. 11–15): In each of the following questions, a few statements are followed by two conclusions, I and II. You have to consider that the statements given are true irrespective of the fact that they are related to each other in the real world and also judge whether the conclusions logically follow or not. Mark answer:

(1) if only conclusion I follows.

(2) if only conclusion II follows.

(3) if either conclusion I or II follows.

(4) if neither conclusion I nor II follows.

(5) if both conclusions I and II follow.

11. Statements:
All books are pencils.
Some pencils are pens.
All pens are tables.

Conclusions:
I. All pens being pencils is a possibility.
II. All books being tables is a possibility.

12. Statements:
Some pentagons are hexagons.
Some quadrilaterals are hexagons.
No square is a quadrilateral.

Conclusions:
I. All pentagons being squares is a possibility.
II. Some hexagons not being quadrilaterals is a possibility.

13. Statements:
All bags are trolleys.
Some trolleys are briefcases.
All briefcases are luggage.

Conclusions:
I. Some trolleys are not briefcases.
II. Some luggage are bags.

14. Statements:
All chains are tables.
Some chains are furniture.

Conclusions:
I. All furniture being tables is a possibility.
II. No furniture is table.

15. Statements:
Some glasses are bottles.
Some jugs are bottles.
No cup is jug.

Conclusions:
I. Some bottles are not cups.
II. All bottles being cups is a possibility.

Directions (Q. 16–18): Study the information given below very carefully to answer these questions.
R is at 10 m to the east of P. P is 20 m to the north of Q. S is at 30 m to the west of R. T is at 7 m to the east of S. V is at 7 m to the west of U, which is at 10 m to the south of T.

16. What is the distance between T and P?
(1) 23 m (2) 13 m
(3) 10 m (4) 7 m
(5) None of the above

17. In which direction is U with respect to Q located?
(1) North-West (2) South-West
(3) North-East (4) South-East
(5) West

18. What is the distance between P and S?
(1) 13 m (2) 7 m
(3) 20 m (4) 30 m
(5) 23 m

Directions (Q. 19–23): Read the information given below very carefully to answer the following questions:
Eight girls A, B, C, D, P, Q, R and S are standing in such a way that four of them are facing north and rest are facing south. P and R are facing north and P is standing third to the right of R. S is at one of the corners and facing south. C is third to the left of S and facing in the same direction as S. Q and D are sitting together and facing in the same direction. B is sitting between R and C and facing to the south. A is sitting to the immediate left of Q, who is not at any corner.

19. Who among the following are facing north?
(1) R (2) P
(3) Q (4) D
(5) All of them

20. Which of the following is correct on the basis of the given arrangement?
(1) A is standing to the immediate left of P.
(2) Q is standing third to the right of C.
(3) There are two girls standing at the right of A.
(4) A and S are facing in the same direction.
(5) None of the above

21. What is the position of P with respect to B?
(1) Second to the right (2) Third to the right
(3) Second to the left (4) Third to the left
(5) At immediate left

22. Who among the following is standing between P and Q?
(1) R (2) A
(3) S (4) C
(5) D

23. Who is standing third to the right of A?
(1) C (2) P
(3) R (4) B
(5) P

Directions (Q. 24–26): Read the following information to answer the questions given below.
B is the father of A and husband of C. A and D are sisters. D is the wife of E. F is the mother of C and G is the only son of E.

24. How is A related to G?
(1) Uncle (2) Aunt
(3) Mother (4) Sister
(5) Brother

25. How is F related to B?
(1) Mother (2) Father
(3) Sister (4) Mother-in-law
(5) Father-in-law

26. How many daughters does A have?
(1) 1 (2) 2
(3) 0 (4) None of these
(5) Cannot be determined

Directions (Q. 27–29): Answer the following questions on the basis of the information given below.
In a group of 6 people, A, B, P, Q, R and S, no two persons have the same weight. A is lighter than only one person in the group. R is heavier than two persons and lighter than three of the group. B is not the lightest and none weighs between B and S. A is heavier than Q. The weight of A is 70 kg and that of B is 50 kg.

27. What may be the weight of P?
(1) 70 kg (2) 65 kg
(3) 60 kg (4) 72 kg
(5) 55 kg

28. Which of the following combinations may be true for the person having the least weight?
(1) S – 55 kg
(2) R – 45 kg
(3) S – 45 kg
(4) R – 60 kg
(5) S – 50 kg

29. If the sum of weights of Q and R is 125 kg, then what will be the weights of Q and R, respectively?
(1) 80 kg and 45 kg
(2) 45 kg and 80 kg
(3) 60 kg and 65 kg
(4) 65 kg and 60 kg
(5) 75 kg and 50 kg

Directions (Q. 30–35): Read the information given below very carefully to answer the following questions.
In an apartment, seven people A, B, C, P, Q, R and S live on seven floors, with each having a car of different colour – Red, Green, Blue, Brown, Golden, Pink and Yellow, but not necessarily in the same order. The ground floor is numbered as 1, first floor as 2, and so on till the sixth floor, which is numbered as 7.

P lives below the person having a brown car. S lives on an even-numbered floor, but not on floor number 2. The one with pink-coloured car lives on the ground floor. There are four floors between the floors on which the people having pink- and red-coloured cars live. P has red-coloured car. A lives on an odd-numbered floor, but not on floor number 3 or 7. B lives between the floors on which R and Q live. R has a yellow-coloured car. The person having green-coloured car lives between the floors of persons having blue- and yellow-coloured cars.

30. What is the colour of the car that R has?
(1) Yellow (2) Golden
(3) Green (4) Pink
(5) Blue

31. Which of the following combinations is true?
(1) P – Pink (2) C – Red
(3) B – Golden (4) A – Green
(5) Q – Yellow

32. Which of the following pairs shows something related to floor numbers 1 and 7?
(1) C and B (2) Brown and Pink
(3) P and Q (4) Red and Golden
(5) Red and Pink

33. Which of the following statements is true with respect to the given combinations?
(1) C is on floor number 1 and has a pink-coloured car.
(2) B has a golden-coloured car and lives on floor number 3.
(3) Q lives on the ground floor and has a pink-coloured car.
(4) R has a yellow-coloured car and lives on floor number 3.
(5) Both (3) and (4)

34. Who of the following has a red-coloured car?
(1) A (2) B
(3) P (4) Q
(5) C

35. Who lives on floor number 5?
(1) A (2) B
(3) P (4) Q
(5) R

Quantitative Aptitude

Directions (Q. 36–40): Study the information given below to answer the following questions.
In a village, three farmers A, B and C planted carrots in their respective fields in three consecutive years 2014, 2015 and 2016. The table given below shows the total quantity of potatoes as well as that of good-quality potatoes in quintals.

Village	A		B		C	
Year	Total Potatoes	Good Quality Potatoes	Total Potatoes	Good Quality Potatoes	Total Potatoes	Good Quality Potatoes
2014	250	225	800	760	440	425
2015	380	325	625	580	500	460
2016	340	300	590	540	672	675

36. How many potatoes (in quintals) were of low quality for A in all the three years?
(1) 50 (2) 55
(3) 40 (4) 120
(5) 100

37. Poor-quality potatoes of farmer B are what percentage of good-quality potatoes of farmer C?
(1) 8.65% (2) 6.85%
(3) 12.5% (4) 15%
(5) 7.5%

38. What was the average of good-quality potatoes (in quintals) obtained in 2015?
(1) 450 (2) 325
(3) 455 (4) 480
(5) 460

39. Total potatoes obtained by farmer A is approximately what percentage of total potatoes obtained by B and C in all the three years?
(1) 20% (2) 25%
(3) 10% (4) 50%
(5) 75%

40. Total potatoes obtained in 2014 are what percentage of the total potatoes obtained in 2015 and 2016?
(1) 50% (2) 45%
(3) 55% (4) 48%
(5) 50%

41. A number is selected randomly from 1 to 100. What will be the probability that the number is divisible by 9?
(1) $\frac{9}{10}$ (2) $\frac{11}{100}$
(3) $\frac{1}{3}$ (4) $\frac{1}{9}$
(5) None of the above

42. **20 men can complete a piece of work in 25 days. 40 women can complete the same piece of work in 25 days. In how many days, can 10 men and 20 women complete the same piece of work?**
(1) 15 days (2) 35 days
(3) 30 days (4) 20 days
(5) 25 days

43. **The length and breadth of a rectangle are in the ratio of 8 : 5. The perimeter of the rectangle is 10 units more than the perimeter of a square. The ratio of the side length of the square to the length of the rectangle is 4 : 3. What is the breadth of the rectangle?**
(1) 10 units (2) 12 units
(3) 25 units (4) 20 units
(5) 15 units

44. **P and Q invested some money on simple interest of 2% and 5%, respectively, for 2 years. The sum of money both invested was ₹ 14,000. If both of them earned the same profit, then how much money did P invest?**
(1) ₹ 6000 (2) ₹ 8000
(3) ₹ 10000 (4) ₹ 4000
(5) None of the above

45. **Two trains of equal length pass each other in 10 seconds when travelling in opposite directions and in 1 minute 10 seconds when travelling in the same direction. What is the ratio of the speed of the faster train to the slower train?**
(1) 8 : 5
(2) 5 : 8
(3) 6 : 8
(4) 8 : 6
(5) None of the above

Directions (Q. 46–50): Find the most appropriate option from the given alternatives that can replace '?'.

46. **2, 9, 26, 53, ?**
(1) 106 (2) 96
(3) 86 (4) 95
(5) 90

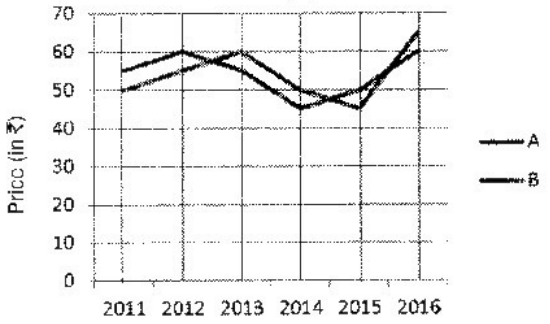
47. **9, 27, 54, 162, ?, 972**
(1) 324 (2) 325
(3) 450 (4) 550
(5) 750

48. **4,10,32,130, ?, 3914**
(1) 750 (2) 1000
(3) 1500 (4) 652
(5) 2420

49. **2,6,15,64,315, ?**
(1) 1582
(2) 1896
(3) 630
(4) 1260
(5) None of the above

50. **1, 2, 6, 15, ?, 56**
(1) 30 (2) 35
(3) 31 (4) 40
(5) 45

Directions (Q. 51–55): Read the following graph very carefully to answer the following questions.



Here, the vertical axis shows the amount (in ₹) per kilogram of rice A and B. The horizontal axis shows the years in which prices were noted, i.e. in 2011, 2012, 2013, 2014, 2015 and 2016.

51. **The price of rice of type B per kilogram is what percentage more than that of type A in 2011?**
(1) 10% (2) 15%
(3) 110% (4) 115%
(5) 25%

52. **If a shopkeeper buys both types of rice in equal amount in 2014 and sells both at the rate of the costlier one, then what will be the approximate profit percentage for the shopkeeper?**
(1) 10% (2) 3%
(3) 5% (4) 4%
(5) 7.5%

53. **What is the ratio of the sum of the prices of type A rice in 2011 and 2015 to that in 2014 and 2016?**
(1) 19 : 23 (2) 23 : 19
(3) 4 : 19 (4) 4 : 23
(5) None of the above

54. **In how many years was the price of type A per kilogram of rice more than that of type B per kilogram?**
(1) 1 (2) 2
(3) 0 (4) 3
(5) 4

55. **What is the difference between the average rate of type A and type B in all the six years?**
(1) ₹ 20
(2) ₹ 50
(3) ₹ 45
(4) ₹ 0
(5) Cannot be determined

Directions (Q. 56–60): In each of the following questions, two equations I and II are given. Solve the equations and mark the answers:
(1) if $x > y$
(2) if $x \geq y$
(3) if $x < y$
(4) if $x \leq y$
(5) if either $x = y$ or when relationship between x and y cannot be established.

56.
I. $3x^2 - 11x + 6 = 0$
II. $y^2 - 9y + 20 = 0$

57.
I. $x^2 - 25 = 0$
II. $y^2 - 11y + 30 = 0$

58.
I. $25x^2 + 5x - 2 = 0$
II. $35y^2 + 9y - 2 = 0$

59.
I. $x^2 - 5x = 0$
II. $y(5 - y) = 0$

60.
I. $25x^2 - 25x + 6 = 0$
II. $49y^2 - 4 = 0$

61. In an examination, a student who gets 20% of the maximum marks fails by 5 marks. Another student who scores 30% of the maximum marks gets 20 marks more than the passing marks. The necessary percentage required for passing is:
(1) 32% (2) 23%
(3) 22% (4) 20%
(5) 25%

62. A shopkeeper marks the price of a product by 30% and allows a discount of 20% on it. If he cheats by weighing 900 grams for 1 kilogram, then what is his net profit percentage?
(1) 17.56% (2) 15.56%
(3) 22.56% (4) 25%
(5) 20%

63. In a container filled with 72 litres of milk, one-third of the milk is replaced with water. One-third of the new mixture is again replaced with water. What is the ratio of water to milk in the new mixture?
(1) 2 : 3 (2) 1 : 4
(3) 1 : 3 (4) 4 : 3
(5) 3 : 4

64. Three friends P, Q and R invested in a scheme in the ratio of 2 : 3 : 4. After six months, P added half of the money he invested and Q added one-third of money. R removed one-fourth of money after six months. What is the profit ratio earned by P, Q and R after a year?
(1) 21 : 15 : 21
(2) 15 : 21 : 21
(3) 15 : 21 : 23
(4) 15 : 21 : 43
(5) None of the above

65. The average weight of a class of 30 students is 50 kg. In this process, 55 kg was misread as 65 kg and 45 kg was misread as 35 kg. What is the actual average weight of the class?
(1) 60 kg (2) 52 kg
(3) 50 kg (4) 48 kg
(5) None of the above

Directions (Q. 66–70): In the following questions, choose an appropriate option from the given alternatives that can replace '?'.

66. 56.5% of 240 + 75.25% of 450 = ?% of 280 + 337.725
(1) 50.25 (2) 48.75
(3) 45.75 (4) 40.25
(5) 75.75

67. $\sqrt{0.64 \times 0.81}$ **of** $\frac{21}{72} = ?$
(1) 7.2 (2) 210
(3) 21 (4) 0.21
(5) 2.1

68. $\frac{289}{?} = \frac{?}{175.56}$
(1) 225.25 (2) 235.25
(3) 325.25 (4) 425.25
(5) 220

69. (325% of 580) ÷ 1245 = ?
(1) 1.5 (2) 15
(3) 5.8 (4) 8.5
(5) 1.25

70. 12.25% of 123 + 22.5% of 321 = ?
(1) 100 (2) 12.2225
(3) 32.2548 (4) 80.2952
(5) 87.2925

English Language

Directions (Q. 71–77): Read the following passage carefully and answer the questions given below it.

The GST is a Value Added Tax (VAT) proposed to be a comprehensive indirect tax levied on manufacture, sale and consumption of goods as well as services at the national level. It will replace all the indirect taxes levied on goods and services by the Indian central and state governments. It is aimed at being comprehensive for most of the goods and services.

An empowered committee was set up by the Atal Bihari Vajpayee administration in 2000 to streamline the GST model to be adopted and to develop the required back-end infrastructure that would be needed for its implementation. In his budget speech on 28 February, 2006, P. Chidambaram, the then Finance Minister, announced the target date for the implementation of GST to be 1 April, 2010 and formed another empowered committee of State Finance Ministers to design the road map. The committee submitted its report to the government in April 2008 and released its First Discussion Paper on GST in India in 2009. Since the proposal involved reform/restructuring of not only indirect taxes levied by the Centre but also the States, the responsibility of preparing a Design and Road Map for the implementation of GST was assigned to the Empowered Committee of State Finance Ministers (EC). In April 2008, the EC submitted a report titled "A Model and Road Map for Goods and Services Tax (GST) in India", containing broad recommendations about the structure and design of GST. In response to the report, the Department of Revenue made some suggestions to be incorporated in the design and structure of the proposed GST

bill. Based on the inputs from the GoI and States, the EC released its First Discussion Paper on Goods and Services Tax in India on 10 November, 2009 with the objective of generating a debate and obtaining inputs from all the stakeholders.

A dual GST module for the country has been proposed by the EC. This dual GST model has been accepted by the centre. Under this model, GST has two components, viz. the Central GST to be levied and collected by the Centre and the State GST to be levied and collected by the respective States. Central excise duty, additional excise duty, Service Tax, additional duty of customs (equivalent to excise), State VAT, entertainment tax, taxes on lotteries, betting and gambling and entry tax (not levied by local bodies) would be subsumed within GST. Other taxes which will be subsumed with GST are Octroi, entry tax and luxury tax, thus making it a single indirect tax in India.

In order to take the GST-related work further, a Joint Working Group consisting of officers from central as well as state governments was constituted. This was further trifurcated into three sub-working groups to work separately on draft legislation required for GST, process/forms to be followed in GST regime and IT infrastructure development needed for the smooth functioning of the proposed GST. In addition, an Empowered Group for the development of IT systems required for the Goods and Services Tax regime has been set up under the chairmanship of Dr. Nandan Nilekani.

71. Why was the task of preparing the design and road map for the implementation of GST assigned to the committee of state finance ministers?
(1) It felt convenient to share the workload.
(2) The committee had powerful people who insisted to be given this task.
(3) The restructuring had to be done of indirect tax levied by the state and the centre.
(4) Atal Bihari Vajpayee administration had proposed it in the year 2000.
(5) None of these

72. What was the objective of releasing the first discussion paper?
(A) To generate a debate
(B) To obtain inputs
(C) To encourage the involvement of general public
(1) Only A (2) Only B
(3) Only C (4) Only B and C
(5) Only A and B

73. What was the first discussion paper about?
(1) State VAT
(2) Goods and Services Tax
(3) Design and Road Map
(4) Reforming the Indirect Tax
(5) Smooth functioning of GST

74. Which of the following taxes will not be subsumed in GST?
(1) Entry tax
(2) Service tax
(3) Luxury tax
(4) Medical tax
(5) Tax on lottery

75. Which are the components of GST?
(1) IT infrastructure development
(2) Central GST and State GST
(3) Three joint working groups
(4) Discussion panels for different taxes
(5) Design and road map of GST

76. What was the purpose of making the Joint Working Group?
(A) To take the GST-related work further
(B) To help people follow GST
(C) To bring out the shortcomings of the plan
(1) Only A (2) Only B
(3) Only C (4) Only A and C
(5) All A, B and C

77. Which of the following words can best describe GST?
(1) In-depth (2) Detailed
(3) Infinite (4) Comprehensive
(5) Encircling

Directions (Q. 78–82): Rearrange the following six sentences (1), (2), (3), (4), (5) and (6) in a proper sequence to form a meaningful paragraph and then answer the questions given below.
(1) But then he would leave it there a few hours and then, more often than not, spit it out again.
(2) However, he had soon got used to the mess.
(3) All the things that were to be discarded found their way to his room.
(4) Gregor had almost entirely stopped eating.
(5) At first he thought it was distress at the state of his room that stopped him eating.
(6) Only if he happened to find himself next to the food that had been prepared for him, he might take some of it into his mouth.

78. Which of the following should be the FIRST sentence of the given paragraph?
(1) 3 (2) 5
(3) 2 (4) 1
(5) 4

79. Which of the following should be the FOURTH sentence of the given paragraph?
(1) 1 (2) 5
(3) 6 (4) 2
(5) 3

80. Which of the following should be the SECOND sentence of the given paragraph?
(1) 3 (2) 2
(3) 6 (4) 1
(5) 4

81. Which of the following should be the FIFTH sentence of the given paragraph?
(1) 3 (2) 2
(3) 1 (4) 5
(5) 6

82. Which of the following should be the LAST sentence of the given paragraph?
(1) 1 (2) 2
(3) 3 (4) 4
(5) 5

Directions (Q. 83–90): In the following passage, some of the words have been left out. First read the passage over and try to understand what it is about. Then fill in the blanks with the help of the alternatives given.

Psychological disorders, also __(83)__ to as mental disorders, are abnormalities of the mind that __(84)__ in persistent behaviour patterns that can seriously affect your day-to-day functioning and life. Many different psychological disorders have been identified and classified, including eating disorders, such as anorexia nervosa; mood disorders, such as depression; personality disorders, such as antisocial personality disorder; psychotic disorders, such as schizophrenia; sexual disorders, such as sexual dysfunction; and others. Multiple psychological disorders may __(85)__ in one person.

The specific causes of psychological disorders are not known, but contributing factors may include chemical imbalances in the brain, childhood experiences, heredity, illnesses, prenatal exposures, and stress. Some disorders, such as borderline personality and depression occur __(86)__ frequently in women. Others, such as intermittent explosive disorder and substance abuse are more common in men. Still other disorders, such as bipolar disorder and schizophrenia affect men and women in roughly __(87)__ proportions.

When a person experiences mood or cognitive __(88)__ or behavioural issues for a long time, a psychological evaluation may be beneficial, and a diagnosis of a psychological disorder may follow. Treatment frequently involves psychotherapy to work on behaviours, skill development, and thought process. A person may be hospitalized for the coexisting medical problems, serious complications, severe disorders, or __(89)__ abuse. Medications can be quite helpful for some psychological disorders.

Properly treated people who have psychological disorders often improve; however, __(90)__ are possible. Left untreated, some psychological problems can lead to academic, legal, social and work problems. Alcohol poisoning, drug overdose, suicide, and violent behaviour are other potential complications.

83.
(1) known (2) referred
(3) asked (4) called
(5) mentioned

84.
(1) result (2) remark
(3) conclude (4) outcome
(5) execute

85.
(1) exit (2) exits
(3) exists (4) exist
(5) exile

86.
(1) more (2) much
(3) lot (4) many
(5) a lot of

87.
(1) look-alike (2) duplicate
(3) adequate (4) equal
(5) different

88.
(1) advantage (2) problems
(3) assistance (4) solution
(5) help

89.
(1) content (2) atom
(3) substance (4) body
(5) matter

90.
(1) reforms (2) achievements
(3) progresses (4) relapses
(5) healing

Directions (Q. 91–100): Identify the error in the sentences given below. If there is no error, choose option (5).

91. Though the manager (1)/was rude, he (2)/gave us all (3)/the informations we needed. (4)/No error (5)

92. He is not (1)/able to see (2)/properly as his (3)/glasses have been misplaced. (4)/No error (5)

93. Reflecting on the (1)/unfruitful life she (2)/had lived, she wished (3)/she was well educated. (4)/No error (5)

94. The inspector collected (1)/the papers, glasses and (2)/cups as the evidence (3)/of the murder. (4)/No error (5)

95. She invited the (1)/children, their mothers (2)/and bought (3)/wafers for them. (4)/No error (5)

96. Me and Tony (1)/had gone to (2)/buy new clothes (3)/for the party. (4)/No error (5)

97. The chief guest will (1)/not be able to cut (2)/the ribbon as this pair of (3)/scissors need sharpening. (4)/No error (5)

98. The speaker is (1)/in the habit of (2)/using cliché phrases, (3)/which irritates everyone. (4)/No error (5)

99. He was told that (1)/he could get admission (2)/in the college on one (3)/criteria, which was good marks. (4)/No error (5)

100. The hamper comprised of (1)/books, packets coffee beans, (2)/expensive perfumes and other (3)/such interesting items. (4)/No error (5)

Reasoning

1. (3) Here A ≤ B ≤ D and, hence, D ≥ A and C ≥ E > F and, hence, C > F.

So, both the conclusions follow.

2. (2) Here S ≤ T and V ≤ S, and so, V ≤ S ≤ T, and V ≤ T. Now, Q ≥ S ≥ V, so Q ≥ V.

Hence, only conclusion I follows.

3. (1) Here A < C ≥ E, and so no direct relation can be made between A and E, and since C ≥ D ≥ E > F and, hence, C > F. So, only conclusion II follows.

4. (5) Here L ≥ P < R. So, no relation can be obtained between L and R. Also, Q > L > P < E, so Q > P ≤ E, and so no relation can be obtained between E and Q

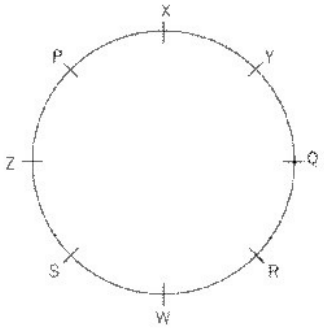
Hence, neither conclusion I nor II is true.

5. (4) Here A ≥ B ≥ D and D ≥ H, so A ≥ H

Hence, either H is less than or equal to A.

For (Q. 6–10):

Name	Place
P	Lakshadweep
Q	Manadewa
R	Delhi
S	Surat
W	Kabul
X	Chandigarh
Y	Odisha
Z	Rampur



6. (4) According to the above arrangement, Y belongs to Odisha.

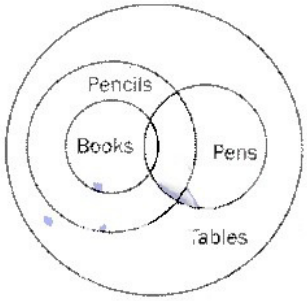
7. (1) According to the above arrangement, P's position is third to the right of Q.

8. (4) When counted in the anti-clockwise direction from X, there are 6 friends sitting between X and Y.

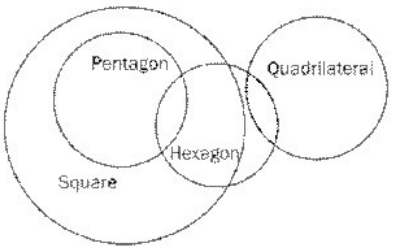
9. (2) Z belongs to Rampur. Therefore, option (2) is wrong.

10. (3) According to the above arrangement, S is sitting facing the friend from Odisha.

11. (2) Since some pencils are pens, it means some pencils are not pens. So, only conclusion II follows as shown below in the Venn diagram.

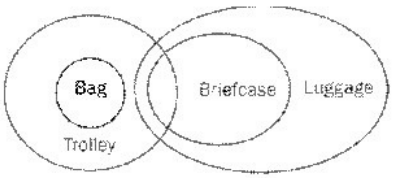


12. (5)



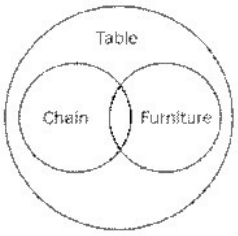
In the above Venn diagram, the possibility of all the pentagons being squares and some hexagons not being quadrilaterals is shown.

13. (4)



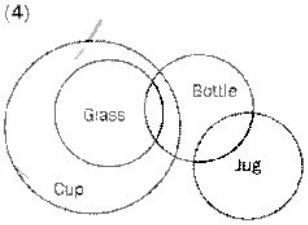
As shown above, neither conclusion I nor II follows.

14. (1)



As shown above in the Venn diagram, conclusion I follows.

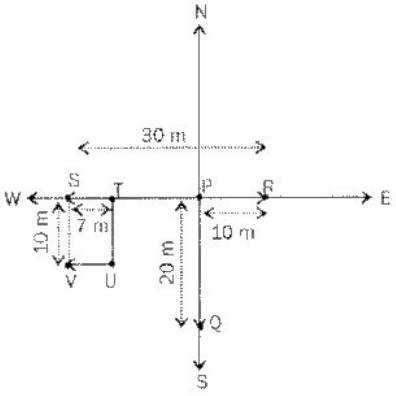
15. (4)



As shown above in the Venn diagram, none of conclusions follows.

For (Q. 16–18):

The positions are shown below in the diagram:

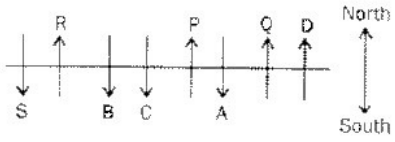


16. (2) Distance between P and T as shown above is, (30 – 10 – 7) m = 13 m

17. (1) As shown in the above diagram, U is in the North-West direction with respect to Q.

18. (3) As shown in above diagram, distance between P and S is, (30 – 10) m = 20 m

For (Q. 19–23):



19. (5) As shown in the standing arrangement, P, Q, R and D are standing facing towards north.

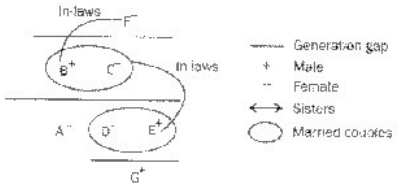
20. (4) As shown in arrangement, A and S are facing in the same direction, that is south.

21. (3) P is standing second to the left of P.

22. (2) A is standing between P and Q.

23. (4) B is standing third to the right of A.

For (Q. 24–26):



24. (2) According to the arrangement, A is the aunt of G.

25. (4) According to the arrangement, F is the mother-in-law of B.

26. (5) More information is needed to answer this question. So, it cannot be determined.

For (Q. 27–29):

People	Rank (in decreasing order)	Weight, x (in kg)
P	1	x > 70
A	2	x = 70
Q	3	50 > x > 70
R	4	50 > x > 70
B	5	x = 50
S	6	x < 50

27. (4) According to the arrangement, weight of P must be greater than 70 kg.

28. (3) S is the lightest among all and he must have weight less than 50 kg.

29. (4) Range of weights of Q and R is 50 kg > x > 70 kg and weight of Q must be greater than that of R. So, Q may be 65 kg and R may be 60 kg.

For (Q. 30–35):

The combination is as shown below.

Name	Floor	Colour of car
C	7	Brown
P	6	Red
A	5	Blue
S	4	Green
R	3	Yellow
B	2	Golden
Q	1	Pink

30. (1) R has a yellow-coloured car.

31. (3) B has a golden-coloured car.

32. (2) Colours of cars of floor numbers 7 and 1 are brown and pink respectively.

33. (5) According to the combination, Q lives on the ground floor and has a pink-coloured car and R has a yellow-coloured car and lives on floor number 3.

34. (3) P has a red-coloured car.

35. (1) A lives on floor number 5.

Quantitative Aptitude

36. (4) Total quantity of low-quality potatoes is:

(250 – 225) + (380 – 325) + (340 – 300)

= 25 + 55 + 40

= 120

37. (1) Total quantity of poor-quality potatoes of farmer B is (800 – 760) + (625 – 580) + (590 – 540) = 135

So, the required percentage is:

$$\frac{135}{425+460+675}\times 100$$

$$=\frac{135}{1560}\times 100 = 8.65\%$$

38. (3) Average number of good-quality potatoes obtained in 2015 was:

$$\frac{325+580+460}{3}=455$$

39. (2) Total quantity of potatoes obtained by farmer A is 250 + 380 + 340 = 970

Total quantity of potatoes obtained by B and C (800 + 625 + 590) + (440 + 500 + 672) = 3627

So, the required percentage is:

$$\frac{970}{3627}\times 100 = 26.75\% \approx 25\%$$

40. (4) Total quantity of potatoes obtained in 2014 is 250 + 800 + 440 = 1490

Total quantity of potatoes obtained in 2015 and 2016 (380 + 625 + 500) + (340 + 590 + 672) = 3107

So, the required percentage is:

$$\frac{1490}{3107}\times 100 - 47.96\% \approx 48\%$$

41. (2) The numbers between 1 and 100 that are divisible by 9 are 9, 18, 27, 36, 45, 54, 63, 72, 81, 90 and 99. So, the required probability is: $\frac{11}{100}$

42. (5) Here (20 × 25) men = (40 × 25) women

1 man = 2 women

So, 10 men + 20 women = 40 women

So, 10 men and 20 women can complete the work in 25 days.

43. (3) Let length and breadth of the rectangle be 8x and 5x, respectively. So, the side-length of the square is 6x. Now,

$$4\times 6x + 10 = 2(8x+5x) = 26x$$

x = 5

So, breadth of the rectangle is 5 × 5 = 25 units

44. (3) Let amounts invested by P and Q be ₹ x and ₹ (14000 – x), respectively. Now,

$$\frac{x\times2\times2}{100}=\frac{(14000-x)\times5\times2}{100}$$

$$4x=10(14000-x)$$

x = ₹ 10000

45. (4) Let v_1 and v_2 be the speeds of faster and slower trains, respectively and d be the length of both the trains. Now, when travelling in the opposite directions:

$$\frac{2d}{v_1+v_2}=10\Rightarrow 2d=10(v_1+v_2)$$

When travelling in the same direction,

$$\frac{2d}{v_1-v_2}=70\Rightarrow\frac{10(v_1+v_2)}{v_1-v_2}=70$$

$(v_1 + v_2) = 7 (v_1 - v_2)$

$6v_1 = 8v_2$

$v_1 : v_2 = 8 : 6$

46. (5)

2 (+7) 9 (+17) 26 (+27) 53 (+37) 90

47. (1)

9 (×3) 27 (×2) 54 (×3) 162 (×2) 324 (×3) 972

48. (4)

4 (×2+2) 10 (×3–2) 32 (×4+2) 130 (×5–2) 652 (×6+2) 3914

49. (2)

2 (×2+2) 6 (×3–3) 15 (×4+4) 64 (×5–5) 315 (×6+6) 1896

50. (3)

1 ($+1^2$) 2 ($+2^2$) 6 (-3^2) 15 ($+4^2$) 31 ($+5^2$) 56

51. (1) Required percent is:

$$\frac{55-50}{50}\times100=\frac{5}{50}\times100=10\%$$

52. (3) Let the shop keeper bought 1 kg of each of the types. Cost price for the shop keeper was 45 + 50 = ₹ 95. Selling price will be 2 × 50 = ₹ 100. So, the profit percentage will be:

$$\frac{100-95}{95}\times100=\frac{500}{95}\approx5\%$$

53. (1) Ratio of sum of rate of prices of type A rice in 2011 and 2015 to that in 2014 and 2016 is,

$$\frac{50+45}{50+65}=\frac{95}{115}=\frac{19}{23}$$

54. (4) As shown in the line chart, blue line remains above the red line in 2013, 2014 and 2016.

55. (4) Average price for type A is $\frac{50+55+60+50+45+65}{6}=\frac{325}{6}$

Average price for type B is $\frac{55+60+55+45+50+60}{6}=\frac{325}{6}$

Therefore, there is no difference between the average rate of type A and type B in all the six years.

56. (3) Here $3x^2 - 11x + 6 = (3x - 2)$ $(x - 3) = 0$ and, hence, $x=\frac{2}{3}$ or 3

Now, $y^2 - 9y + 20 = (y - 4)(y - 5) = 0$, y = 4 or 5

So, y > x

57. (4) Here $x^2 - 25 = (x - 5)(x + 5) = 0$, x = 5 or – 5

Now, $y^2 - 11y + 30 = (y - 5)(y - 6) = 0$, x = 5 or 6

Hence, $x \le y$

58. (2) Here $25x^2 + 5x - 2 = (5x - 1)(5x + 2) = 0$, and, hence, $x=-\frac{2}{5}$ or $\frac{1}{5}$

Also, $35y^2 + 9y - 2 = (7y - 1)(5y + 2) = 0$, and, hence, $y=-\frac{2}{5}$ or $\frac{1}{7}$

Hence, $x \ge y$

59. (5) Here $x^2 - 5x = x(x - 5) = 0$, so x = 0 or 5

Also, y (5 – y) = 0, so y = 0 or 5

Hence, x = y

60. (1) Here $25x^2 - 25x + 6 = (5x - 2)$ $(5x - 3) = 0$, so $x=\frac{2}{3}$ or $\frac{3}{5}$

Also, $49y^2 - 4 = (7y + 2)(7y - 2)$ $= 0$, so $y=-\frac{2}{7}$ or $\frac{2}{7}$

Hence, x > y

61. (3) Let the maximum marks be x

According to the question:

0.2x + 5 = 0.3x – 20

x = 250

Marks required for passing = 0.2 × 250 + 5

= 55

Percentage of passing marks

$$=\frac{55}{250}\times100=22\%$$

62. (2) Let cost price of 1 kg of the product be ₹ 100. Marked price is ₹ 130. Price after discount is (₹ 130 – ₹ 26) = ₹ 104

Cost price of 900 grams is ₹ 90. So, the net profit percentage is:

$$\frac{104-90}{90}\times100=15.56\%$$

63. (5) Water in first mixture is $\frac{72}{3}$ = 24 litres and milk is $72-\frac{72}{3}=48$ litres. In the last mixture, quantity of water is $24-\frac{24}{3}$ = 16 litres and that of milk is $48-\frac{48}{3}$ = 32 litres.

So, the required ratio of water to milk is:

$$\frac{24}{32}=\frac{3}{4}$$

64. (2) Let the initial investments of P, Q and R be ₹ 2x, ₹ 3x and ₹ 4x, respectively. Investment of P in 12 months is (12 × 2x + 6 × x = 30x), investment of Q is (12 × 3x + 6 × x = 42x) and investment of R is (6 × 4x + 6 × 3x = 42x). So, the ratio of profits of P, Q and R is 30 : 42 : 42, that is 15 : 21 : 21.

65. (3) Sum of total weights of the class of 30 students is 1500 kg. Actual total weight is:

1500 – 55 + 65 – 45 + 35 = 1500 kg

So, the average weight remains the same, i.e., 50 kg.

66. (2) 56.5% of 240 + 75.25% of 450 = 135.6 + 338.625 = 474.225

?% of 280 + 337.725 = 474.225

?% of 280 = 136.5

? = 48.75

67. (4) $\sqrt{0.64\times0.81}$ of $\frac{21}{72}$

$=0.8\times0.9\times\frac{21}{72}$

$=\frac{21}{100}=0.21$

68. (1) $\frac{289}{?}=\frac{?}{175.56}$

$\Rightarrow ?^2=50736.84$

? = 225.25

69. (1) $\frac{\frac{325}{100}\times580}{1245}=1.5$

70. (5) $\frac{12.25}{100}\times123+\frac{22.5}{100}\times321$

$=15.0675+72.225=87.2925$

English Language

71. (3) Refer to the line: "Since the proposal involved reform/ restructuring of not only indirect taxes levied by the Central but also the States, the responsibility of preparing a Design and Road Map for the implementation of GST was assigned to the Empowered Committee of State Finance Ministers (EC)."

72. (5) Refer to the line: "Based on inputs from GoI and States, The EC released its First Discussion Paper on Goods and Services Tax in India on 10 November, 2009 with the objective of generating a debate and obtaining inputs from all stakeholders."

73. (2) The EC released its first discussion paper on Goods and Services Tax in India on 10 November, 2009.

74. (4) No medical tax has been mentioned in the passage.

75. (2) Refer to the line: "Under this model, GST has two components, viz. the Central GST to be levied and collected by the Centre and the State GST to be levied and collected by the respective States."

76. (1) Refer to the line: "In order to take the GST-related work further, a Joint Working Group consisting of officers from Central as well as State Governments was constituted."

77. (4) Refer to the line: "The GST is a Value Added Tax (VAT) proposed to be a comprehensive indirect tax levied on manufacture, sale and consumption of goods as well as services at the national level."

Explanation (Q. 78–82):

The person being referred to in this paragraph is Gregor, who is introduced in sentence 4. Thus, 4 will be the first sentence of the sequence. This will be followed by sentence 6, which explains the only time when Gregor ate. Now, the pronoun 'it' in sentence 1 refers to the bite Gregor takes and 'there' refers to his mouth. Thus, sentence 1 will follow sentence 3. The probable reason for his eating disorder is mentioned in sentence 5. Sentence 3 explains what is meant by 'state of his room' as mentioned in sentence 5. Thus, sentence 3 will follow sentence 5 and sentence 2 will be the last sentence of the sequence. Thus, the correct sequence is 461532

78. (5) After rearrangement, the first sentence of the sequence is found to be 4.

79. (5) After rearrangement, the fourth sentence of the sequence is found to be 5.

80. (3) After rearrangement, the second sentence of the sequence is found to be 6.

81. (1) After rearrangement, the fifth sentence of the sequence is found to be 3.

82. (2) After rearrangement, the last sentence of the sequence is found to be 2.

83. (2) 'To' is used after the verb 'referred'.

84. (1) Here the consequence of psychological disorders is being given. Thus, 'result' will fit the blank appropriately.

85. (4) Here 'exist', which means to prevail, will fill the blank. Also, since the plural subject requires a plural verb, 'exists' cannot be used.

86. (1) Here a comparison is given. Some disorders are more in women than in men. Thus, 'more' will fit the blank.

87. (4) The previous sentences mention problems affecting women and men in different proportions. Thus, since both men and women have been mentioned in this sentence, probably the 'equality' of proportions is being talked about.

88. (2) Since the next phrase mentions an issue, out of the given options, only 'problems' will give a similar idea.

89. (3) 'Substance abuse' refers to drug abuse.

90. (4) 'However' introduces a contradictory clause. In the present case, 'relapses' will contradict 'improves'.

91. (4) Information is an uncountable noun. It does not have a plural form.

92. (5) There is no error in this sentence.

93. (4) Subjunctive is used when the verb follows 'wish' or 'if' while taking about situations that are not true. Thus, 'were' should be used here instead of 'was'.

94. (5) There is no error in this sentence.