Test-I: English Language

Direction (Q. 01-05): Read each sentence to find out whether there is any grammatical error in it. The error, if any, will be in one part of the sentence. The number of that part is the answer. If there is no error, the answer is '5'. (Ignore errors of punctunation, if any.)

01. With many of the leaders **1)** / neither sulking nor shirking work **2)** / the party has been forced to **3)** / bring Uma Bharti into the election campaign. **4)** / No Error **5)**

02. Your doubts would **1)** / kill your chances **2)** / and opportunity in life as they **3)** / goes hand in hand. **4)** / No Error **5)**

03. Those who want more and more **1)** / storing space for their **2)** / content can understand the importance of **3)** / portable storage solutions. **4)** / No Error **5)**

04. I think sustainability **1)** / agenda, energy efficiency **2)** / mobile banking and infrastructure **3)** / sharing are important issues. **4)** / No Error **5)**

05. I am always careful that I **1)** / should never be the cause of humiliation to **2)** / music especially while **3)** / travel and perform abroad. **4)** / No Error **5)**

Directions (Q 06-10): Rearrange the following six sentences (A), (B), (C), (D), (E) and (F) in the proper sequence to form a meaningful paragraph and then answer the questions given below.
(A) Who will be here with us when the Police (contingents) move out?
(B) We will go back to the same ways and if we speak out our lives will be in danger.
(C) What has happened has happened.
(D) In 2006, when the crime occured a Khairlanji resident told us : Our lives are here–land, cattle, familes.
(E) No one.
(F) That is the way it is for us.

06. Which of the following sentences will come **FIRST** after rearrangement?
    1) A   2) C   3) B   4) D   5) E

07. Which of the following sentences will come **SECOND** after rearrangement?
    1) A   2) B   3) C   4) D   5) E

08. Which of the following sentences will come **THIRD** after rearrangement?
    1) A   2) B   3) E   4) C   5) D

09. Which of the following sentences will come **FIFTH** after rearrangement?
    1) A   2) B   3) C   4) D   5) E

10. Which of the following sentences will come **LAST** after rearrangement ?
    1) A   2) F   3) C   4) D   5) B

Directions (Q. 11-15): In each of these questions, two sentences (I) & (II) are given. Each sentence has a blank in it. Five words 1), 2), 3), 4) & 5) are suggested. Out of these, only one fits at both the places in the context of each sentence. The number of that word is the answer.

11. I.   Prices have _____ by 21% since the beginning of the year.
    II. The plane took off for Los Angeles, lost an engine as it _____ and crashed off the runway.
    1) rose   2) increased   3) climbed   4) declined   5) reduced

12. I. Two of the losers deserve special _____.
    II. It was both delibrate and malicious, not to _____ clever.
    1) attention   2) thanks   3) appraisal   4) mention   5) sympathy

13. I. My _____ afffairs are no one's business but my own.
    II. Some of what we are talking about might better be discussed in _____.
    1) only   2) private   3) personal   4) business   5) love

14. I. Life became a _____ for survival.
    II. He died in a _____ with prison officers less than two months after coming to India.
    1) problem   2) gift   3) trouble   4) ecstasy   5) struggle

15. I. A narrow steep path leads down into a valley and up the _____ side.
    II. She followed the tracks as _____ as the road.
    1) far   2) good   3) long   4) well   5) near

Directions (Q. 16-22) : In the following passage, some of the words have been left out, each of which is indicated by a number. Find the suitable word from the options given against each number and fill up the blanks with appropriate words to make the paragraph meaningful.

Poker is a card game played by two or more people who (**16**) on the value of the hands (**17**) to them. A player wins either by having the highest (**18**) at the showdown or by forcing all opponents to (**19**) without a showing of the hand, sometimes by means of (**20**). Online poker is played over the internet or platforms known as cardrooms. Online gambling is an (**21**) in Maharashtra, but in other states there is no (**22**) ban.

16. 1) plays   2) bet   3) gamble   4) find   5) fix

17. 1) given   2) sent   3) dealt   4) mixed   5) sanctioned

18. 1) projection   2) remuneration   3) price
    4) combination   5) permutation

19. 1) concede   2) recede   3) succeed   4) proceed   5) cede

20. 1) tough   2) deceit   3) bluff   4) rough   5) trick

21. 1) award   2) offence   3) defence   4) activity   5) effort

22. 1) implicit   2) deficit   3) explicit   4) profit   5) conceit

Directions (Q. 23-30): Read the following passage carefully and answer the questions given below it. Certain words have been printed in bold to help you locate them while answering some of the questions.

The importance of communication skills cannot be underestimated, especially so, in the teaching – learning process. Teaching is generally considered as only fifty per cent knowledge and fifty per cent interpersonal or communication skills. For a teacher, it is not just important to give a lecture rich in content that provides abundant information about the subject or topic in question, but a successful teacher develops an **affinity** with, an understanding of, and a harmonious interrelationship with her pupils. Building rapport becomes her primary task in the classroom. But what exactly is rapport? Rapport is a sympathetic relationship or understanding that allows you to look at the world from someone else's perspective. Making other people feel that you understand them creates a strong bond. Building rapport is the first step to better communication – the primary goal of all true educators. Communication skills for teachers are thus as important as their in-depth knowledge of the particular subject which they teach. To a surprising **degree**, how one communicates determines one's effectiveness as a teacher. A study on communication styles suggests that 7% of communication takes place through words, 38% through voice intonation and 55% through body language.

Much of teaching is about sending and receiving messages. The process of communication is composed of three elements : the source (sender, speaker, transmitter or instructor), the symbols used in composing and transmitting of the message (words or signs), and the receiver (listener, reader or student). The three elements are dynamically interrelated since each element is dependent on the others for effective communication to take place. Effective communication is all about conveying your message to the other people clearly and unambiguously. It's also about receiving information the others are sending to you, with as little distortion as possible. Doing this involves effort from both the sender and the receiver. And it's a process that can be fraught with error, with messages **muddled** by the sender, or misinterpreted by the recipient. When this isn't detected it can cause tremendous confusion, wasted effort and missed opportunity.

Good communication skills are a prerequisite for those in the teaching profession. Carefully planned and skilfully delivered messages can issue invitations to students that school is a place to share ideas, investigate and collaborate with others. Effective communication is essential for a well-run classroom. A teacher who is able to communicate well with students can inspire them to learn and participate in class and encourage them to come forth with their views, thus creating a proper rapport. Although this **sounds** simple and obvious, it requires much more than a teacher saying something out loud to a student. They must also realise that all students have different levels of strengths and weaknesses.

Directions (Q. 23): Choose the word which is most OPPOSITE in meaning of the word printed in bold as used in the passage.

23. **Muddled**
     1) Skilfully organised   2) Strongly controlled   3) Clearly conveyed
     4) Isolated   5) Complicated

Directions (Q. 24-25): **Choose the word which is most SIMILAR in meaning to the word printed in bold as used in the passage.**

24. **Affinity**
    1) Partnership 2) Partiality 3) Weakness 4) Compatibility   5) Discord

25. **Degree**
    1) Extent   2) Goal   3) Affect   4) Situation   5) Direction

26. Which of the following is/are essential for effective communication?
    (A) Conveying the message clearly
    (B) Not to waste effort and opportunity
    (C) Receiving the information with as little distortion as possible
    1) Only (A) and (C)   2) Only (B)   3) Only (A)
    4) Only(C)   5) Only (B) and (C)

27. Which of the following is true about 'rapport' as per the passage?
    (A) It is a sympathetic relationship.
    (B) It is based on understanding of other people's frame of reference.
    (C) It helps in creating a strong bond.
    (D) It is important for teachers to build rapport with students.
    1) Only (A) and (B)   2) Only (B) and (D)   3) Only (A), (B) and (D)
    4) Only (A), (B) and (C)   5) All are true

28. Which of the following must the teachers keep in mind to facilitate learning in student as per the passage?
    1) To control the students such that they do not share ideas with others within the lecture hours
    2) To maintain rapport with students and compromise on the course content
    3) To realise that all students have different levels of strengths and weaknesses
    4) Only to keep the lecture rich in course content
    5) To ensure that students adhere to her views only

29. Which of the following are the three elements of communication as per the passage?
    1) Source, Signs and Students
    2) Source, Sender and Speaker
    3) Signs, Words and Students
    4) Instructor, Listener and Reader
    5) Transmitter, Student and Receiver

30. Which of the following is the finding of the study on communication styles?
    1) The body language and gestures account for 38% of communication and outweighs the voice intonation.
    2) Only 9% communication is about content whereas the rest is about our tone and body language.
    3) The tone of our voice accounts for 55% of what we communicate and outweighs the body language.
    4) More than 90% of our communication is not about content but about our tone and body language.
    5) Teaching is fifty per cent knowledge and fifty per cent interpersonal or communication

skills.

Test-II: Quantitative Aptitude

Directions (Q. 31-35): What approximate value should come in place of question mark (?) in the following equations?

31. 22% of 164.4 + 13.89 % of 65 = ?
    1) 40   2) 45   3) 49   4) 54   5) 58

32. $\dfrac{(1.29)^2 + (3.05)^2}{0.198} = ?$
    1) 25   2) 6   3) 66   4) 54   5) 42

33. $(48.84)^2 \times 7.079 = ?$
    1) 16200   2) 16400   3) 16600   4) 16800   5) 16990

34. $\sqrt{2020} + \sqrt{320} + \sqrt{1330} = ?$
    1) 80   2) 100   3) 120   4) 140   5) 160

35. $\left(\dfrac{8}{3} \times \dfrac{13}{5}\right) + \left(\dfrac{7}{2} \times \dfrac{5}{3}\right) + \left(\dfrac{18}{7} \times \dfrac{28}{16}\right) = ?$
    1) 11.5   2) 14.5   3) 17.5   4) 21.5   5) 27.5

Directions (Q. 36-40): What number should come in place of question mark in the following number series?

36. 5, 21, 57, 121, 221, 365, ?
    1) 536   2) 561   3) 584   4) 604   5) 628

37. 5, 49, 481, 3841, ?
    1) 23041   2) 22031   3) 21021   4) 20011   5) 19001

38. 8, 19, 52, 151, 448, ?
    1) 1120   2) 1148   3) 1236   4) 1284   5) 1339

39. 9801, 9604, 9409, 9216, 9025, ?
    1) 8836   2) 8792   3) 8688   4) 8542   5) 8466

40. 339, 733, 1327, 2201, 3371, ?
    1) 4677   2) 4757   3) 4837   4) 4917   5) 5007

Directions (Q. 41-45): In each of these questions two equations (I) and (II) are given. You have to solve both the equations and give answer
(1) if p > q   (2) if p ≥ q   (3) if p < q
(4) if p ≤ q
(5) if p = q or no relation can be established between p and q.

41. **I.** $2.3p - 20.01 = 0$ **II.** $2.9q - p = 0$
42. **I.** $p = \sqrt{1764}$ **II.** $q^2 = 1764$
43. **I.** $p^2 - 26p + 168 = 0$ **II.** $q^2 - 25q + 156 = 0$
44. **I.** $p^2 - 13p + 42 = 0$ **II.** $q^2 + q - 42 = 0$
45. **I.** $6p - 5q = -47$ **II.** $5p + 3q = 11$

46. A shopkeeper sold a TV at a profit of 35%. Had he sold it for ₹528 less, he would have gained 24%. For what price should he sell it in order to gain 40%?
    1) ₹6040   2) ₹6480   3) ₹6720   4) ₹7210   5) None of these

47. The average age of Rahul and Ajay is 51 years. The average age of Ajay and Vijay is 36 years and the average age of Rahul and Vijay is 43 years. What will be the ratio of the age of Ajay to the age of Vijay after 12 years?
    1) 4 : 5   2) 7: 5   3) 11: 7   4) 9 : 8   5) 10 : 7

48. What is the compound interest on ₹7 lakh for three years if the rate of interest is 5% for the first year, 8% for the second year and 12% for the third year?
    1) ₹163600   2) ₹189056   3) ₹194064   4) ₹201040   5) None of these

49. How many different arrangements can be made from the letters of the word "WEDNESDAY" such that all vowels come together?
    1) 7560   2) 15120   3) 2520   4) 5040   5) None of these

50. Seven persons are sitting around a round table. What is the probability that three particular persons are sitting together?

    1) $\frac{1}{7}$ 2) $\frac{2}{7}$ 3) $\frac{1}{5}$ 4) $\frac{2}{5}$ 5) $\frac{1}{6}$

51. If the length of a rectangle is increased by 230%, its area becomes 828 sq cm and perimeter 162 cm. What is the perimeter of the original rectangle?
    1) 76 cm   2) 84 cm   3) 114 cm   4) 120 cm   5) None of these

52. Two places A and B are 600 km apart. A train leaves 'A' for 'B' and at the same time another train leaves 'B' for 'A'. Both the trains meet after eight hours of starting their journey. If the train travelling from 'A' to 'B' travels 15 kmh^{-1} faster than the other train, what is the ratio of the speed of the slower train to the speed of the faster train?
    1) 1: 2   2) 2 : 3   3) 3 : 4   4) 4 : 5   5) 3 : 5

53. A, B and C can do a work in 30 days, 45 days and 60 days respectively. They started the work together but A left after 10 days. B left the work five days before the completion of the work. In how many days was the work completed?
    1) 30 days   2) 28 days   3) 25 days   4) 24 days   5) 20 days

Directions (Q. 54-58): Following pie–charts show the distribution of items of six different types produced by a company in two years 2008 and 2009. Total number of items produced by the company in the year 2008 and 2009 are 48600 and 62500 respectively.

2008

F 43.2°
A 61.2°
E 57.6°
B 64.8°
D 72°
C 61.2°

2009

F 86.4°
A 64.8°
B 54°
E 64.8°
D 61.2°
C 28.8°
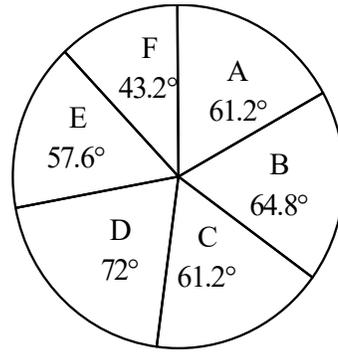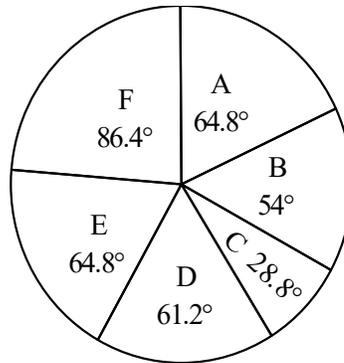
54. What is the total number of items of type C produced in the year 2008 and 2009 together?
   1) 12482   2) 13262   3) 14786   4) 15200   5) None of these

55. The number of type B items produced in 2008 is what percentage of the number of type B items produced in the year 2009? (approximate value)
   1) 78%   2) 84%   3) 87%   4) 90%   5) 93%

56. What is the ratio of the number of type D items produced in 2008 to the number of type F items produced in 2009?
   1) 13 : 17   2) 83: 116   3) 81 : 125   4) 103 : 147   5) None of these

57. What is the total number of type A, B and C items produced by the company in the year 2008 and 2009 together?
   1) 48542   2) 50897   3) 51164   4) 52324   5) 54160

58. The number of type E items produced in the year 2009 is what per cent more than the number of type C items produced in 2009?
   1) 84%   2) 72%   3) 75%   4) 60%   5) None of these

59. In a party, every member shakes hands with every other member. If the total number of handshakes is 561, how many members are there in the party?
   1) 36   2) 35   3) 34   4) 33   5) 32

60. In a throw of two dice, what is the probablity that the sum of numbers appeared is greater than or equal to eight?

1) $\frac{5}{36}$ 2) $\frac{5}{18}$ 3) $\frac{5}{12}$ 4) $\frac{1}{6}$ 5) None of these

Directions (Q. 61-63): Each of the questions below consists of a question and two statements (I) and (II) given below it. You have to decide whether the data provided in the statements are sufficient to answer the question. Read both the statements and give answer

1) If the data in statement (I) alone is sufficient to answer the question, while the data in statement (II) alone is not sufficient.
2) If the data in statement (II) alone is sufficient to answer the question while the data in statement (I) alone is not sufficient.
3) If the data either in statement (I) alone or in statement (II) alone is sufficient to answer the question.
4) If the data in both the statements (I) and (II) together are necessary to answer the question.
5) If the data even in both the statements (I) and (II) together are not sufficient to answer the question.

61. What will be the age of B?

    I. The age of A is $\frac{4}{7}$ that of B and the age of C is $\frac{10}{7}$ that of B. The total age of A, B and C is 105 years.
    II. The age of B is 175% that of A the age of C is 250% that of A and the age of B is 70% that of C.

62. What is the rate of simple interest on which a man took a loan from the bank?
    I. The man took a loan of ₹5000 for five years from the bank.
    II. The man returned ₹6700 to the bank at the end of two years and settled the loan.

63. A rectangular floor is to be carpeted. What will be the cost of carpeting the floor?
    I. The perimeter of the floor is 160 metres.
    II. The cost of carpeting per square metre is ₹16.

64. Three persons A, B and C together earn ₹3905 in 11 days. A and C together earn ₹3055 in 13 days. B and C together earn ₹4760 in 17 days. What is 60% of the earning of A in 15 days?
    1) ₹960   2) ₹840   3) ₹720   4) ₹675   5) None of these

65. A car travels from P to Q in 33 hours. If the speed is reduced by 10 kmh^{-1} it will cover the same distance in 55 hours. What is the distance between P and Q?
    1) 775 km   2) 800 km   3) 825 km   4) 850 km   5) 875 km

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Test-III: REASONING

Directions (Q. 66-70): Study the following information to answer the given questions.
In a certain code language, 'team India played poor in England' is written as 'fa do me ra su la'. 'England played very well' is written as 'cha ra fa ti', 'seniors played poor cricket' is written as 'mo la pho fa', 'India bowlers did well' is written as 'pic cha su dic', 'seniors in very did' is written as 'ti pho pic do'.

66. What is the code for 'bowlers'?
    1) su   2) dic   3) pic   4) cha   5) Either pic or dic

67. What does 'mo' stand for?
    1) played   2) poor   3) cricket   4) seniors   5) Can't be determined

68. Which of the following is the code for 'poor team did seniors'?
    1) cha me pho la   2) pho me la pic   3) su la fa pic
    4) la pic dic pa   5) None of these

69. 'mo su ti ra' could be a code for which of the following?
    1) cricket seniors very well
    2) England very in India
    3) India cricket very England
    4) did very team India
    5) None of these

70. Which of the following may represent 'seniors bowlers impressed well'?
    1) pho su me dic   2) ga pic cha dic
    3) cha ye pho fa   4) pho bi cha dic
    5) None of these

Directions (Q.71-75): In each of the questions below are given three statements followed by two conclusions numbered I and II. You have to take the given statements to be true even if they seem to be at variance with commonly known facts. Read all the conclusions and then decide which of the given conclusions logically follows from the given statements, disregarding commonly known facts. Give answer

1) if only conclusion I follows.
2) if only conclusion II follows.
3) if either conclusion I or conclusion II follows.
4) if neither conclusion I nor conclusion II follow.
5) if both conclusions I and II follow

71. **Statements:** Some apartments are huts.
                All apartments are buildings.
                All buildings are cottages.
    Conclusions: I. Some apartments are not cottages.
                      II. All buildings being huts is a possibility.

72. **Statements:** All staplers are printers.
                No printer is a computer.
                All computers are machines.
    Conclusions: I. All staplers being machines is a possiblity.
                      II. No stapler is a computer.

73. **Statements:** Some fans are moons.
                All planets are fans.
                No planet is a universe.
    Conclusions: I. Some moons, if they are planets, are also fans.

II. All universes being fans is a possibility.

74. **Statements:**   All professors are scientists.
Some professors are intelligent.
No intelligent is honest.
Conclusions: I. At least some professors being honest is a possibility.
II. All professors, if they are intelligent, are also honest.

75. **Statements:** No pin is a tin.
All tins are copper.
No copper is a metal.
Conclusions: I. All metals being tins is a possibility.
II. Some pins are not copper.

Directions (Q. 76-79): Each of the questions below consists of a question and three statements numbered I, II and III given below it. You have to decide whether the data provided in the statements are sufficient to answer the questions.

76. Among Peter, Tanu, Ravi, Sonu and David, David is the second tallest and Sonu is the second shortest in the group. Who among them is in the middle when they stand in decreasing order of their heights?
I. Tanu is not the shortest.
II.Ravi is taller tham Sonu but shorter than David.
III.Peter ranks third in height above Sonu when all are arranged according to height.
1) Only I and II
2) Either only II or only I and III
3) Only II
4) Only II and III
5) None of these

77. What is Sweta's rank from top in a class of 45 students?
I. Sweta is five ranks below Sanjay, who is 15th from the bottom.
II. Ravina is 30th from the top and Neha is 4th from the bottom.
III. Sweta is exactly in the middle of Ravina and Neha.
1) Only II   2) Only I and II   3) Either only I or only II and III
4) only III   5) None of these

78. P is in which direction with respect to Q?
I. M is to the north of R, who is to the west of Q.
II. P is to the east of M.
III. P is to the north-east of R.
1) Only I and II   2) Only I and III   3) Any two of the three
4) All I, II and III
5) Question can't be answered even with the information in all the three statements.

79. How many children are there in a class?
I.Saurabh is fifth from the top if arranged in descending order of marks.
II.Sulabha, who is ten ranks below Saurabh, is 25th from the bottom.
III.Jatin is four ranks above Sulabha.

1) Only I and III   2) Only II and III   3) Only I and II

4) Any two of the three   5) None of these

Directions (Q. 80-84): Study the following information carefully and answer the given questions:

F, G, H, K, L, M, N and O are eight students. Each of them has a different favourite subject – English, Mathematics, Physics, Chemistry, Biology, Sociology, Philosophy and History but not necessarily in the same order. All of them are sitting around a circular table and facing the centre.

Neither F nor H is an immediate neighbour of L. Neither F nor H has Biology as his favourite subject. L sits third to the left of the person whose favourite subject is Biology. Only two persons sit between F and H. The student whose favourite subject is History sits second to the right of O. O is not an immediate neighbour of L. O does not the have Biology as his favourite subject and History is not the favourite subject of L. The person whose favourite subject is English sits third to the left of K. The students with favourite subjects as English and Biology are not immediate neighbours. Only one person sits between O and the person whose favourite subject is Physics. Persons with favourite subjects as Chemistry and Mathematics are immediate neighbours. Mathematics is not the favourite subject of O. Only one person sits between M and the person whose favourite subject is Sociology. The person with Sociology as his favourite subject is an immediate neighbour of G. H and M are not immediate neighbours.

80. Who among the following has English as his favourite subject?

     1) L   2) K   3) H   4) F   5) M

81. How many people sit between F and the person whose favourite subject is Sociology, when counted in clockwise direction from F?

     1) None   2) One   3) Two   4) Four   5) Five

82. Which of the following would come in place of question mark based upon the given seating arrangement?

KO, GN, FK, NL ?

     1) OH   2) HG   3) MH   4) MG   5) KN

83. What is the position of the student whose favourite subject is Philosophy with respect to N?

     1) Immediate left   2) Second to the left

     3) Third to the right   4) Second to the right

     5) Third to the left

84. Which of the following is true with respect to the given seating arrangement?

     1) History is the favourite subject of N.

     2) H is an immediate neighbour of K.

     3) Students with favourite subjects as English and Sociology are immediate neighbours.

     4) G sits second to the left of O.

     5) None of these

Directions (Q. 85-86): In each of the questions given below, a statement is followed by two courses of action. A course of action is a step or administrative decision to be taken for improvement, follow-up or further action in regard to the problem, policy etc. On the basis of the information given in the statements, you have to assume everything in the

statement to be true and then decide which of the given courses of action logically follow(s) for pursuing.

85. **Statement:** India's pre-eminent position in world black pepper production and trade is in danger as some of the countries, which have recently started the production of the 'king of the spices' crop from Indian root stocks, are farming better by adopting modern cultivation practices.

    Courses of action:
    I. India should immediately stop supplying root stocks of black pepper to other countries.
    II. India should adopt modern technology for cultivating black pepper to compete in the international market.
    III. India should reduce the price of its black pepper drastically to remain competitive in the world market.

    1) All follow   2) Only II follows   3) Only I follows
    4) Only III follows   5) None of these

86. **Statement:** The institute has fixed for the investors a validity period of one year for the transfer form for some of its listed schemes.

    Courses of action:
    I. The institute should consult investors before fixing the duration of the validity period.
    II. The investors should be duly informed about the validity period.
    III. The list of schemes covered under this validity period should be communicated.

    1) All follow   2) Only I and II follow   3) Only I and II follow
    4) Only III follows   5) Only II and III follow

Direction (Q. 87): Read the following information and sentences A), B), C), D) and E) given below it carefully and answer the questions which follow:

The fifth conference of labour ministers of Non-Aligned and other developing countries, which concluded in New Delhi on December 23, was not just another conference held under the auspices of International Labour Organisation to discuss labour welfare and social clauses such as employment creation, poverty reduction and eradication, and social integration. Participating nations were represented by their labour ministers.
    (A) The fourth conference of labour ministers was not held at New Delhi.
    (B) International Labour Organisation took an active part in a conference of labour ministers.
    (C) Linking labour standards to international trade would benefit the industrial countries.
    (D) The last summit did not discuss questions on poverty.
    (E) The labour minister of India attended the conference.

87. Which of the statements (A), (B), (C), (D) and (E) can be inferred from the facts/information given in the passage?
    (An inference is something which is not directly stated but can be inferred from the given facts.)
    1) Only (A)   2) Only (B)   3) Only (C)   4) Only (B) and (E)   5) Only (D)

Directions (Q. 88-92): Read the following information and answer the questions that follow.

There are six boys – Amit, Bhushan, Dhruv, Manoj, Harsh and Arvind. They want to go out with six girls – Neha, Shruti, Kruti, Chanchal, Sujata and Radhika, not necessarily in the same order. The pairs went to a movie, beach, park, play and two of them went to circus. They like different cars, viz Esteem, Matiz, Santro and Tata. But Esteem and Matiz are preferred by two pairs.

Further information is as follows:
I. Amit and Manoj visit circus but do not like either Esteem or Tata.
II. Arvind can't go out with Sujata. Both of them do not like Santro.
III. Chanchal and Kruti want to go to movie and park respectively.
IV. Dhruv goes out with Radhika to beach but does not like either Matiz or Tata.
V. Bhushan goes for a movie and likes Esteem.
VI. Harsh can't go out either with Neha or with Shruti and he does not go to a park either in Santro or in Matiz.

88. If Amit goes out with Neha, who among the following likes Santro car?
    1) Neha   2) Chanchal   3) Arvind
    4) Can't be determined   5) None of these

89. Who among the following visits park?
    1) Can't be determined   2) Harsh   3) Bhushan
    4) Arvind   5) None of these

90. Who must go to watch a play?
    1) Neha   2) Shruti   3) Sujata
    4) Can't be determined   5) None of these

91. Which car does Dhruv like?
    1) Esteem   2) Can't be determined   3) Tata
    4) Matiz   5) None of these

92. Which car must Kruti like?
    1) Tata   2) Matiz   3) Santro
    4) Can't be determined   5) None of these

Directions (Q. 93-94): In these questions, relationship between different elements is shown in the statements. These statements are followed by four conclusions. You have to decide which conclusion definitely follows from the statement.

93. **Statements:** $J > K, N < O, L \geq M, K \geq L, M = N$
    Conclusions: I. $J > N$, **II.** $K \geq N$, **III.** $O > L$, **IV.** $L > J$
    1) Only I and IV   2) Only I and II   3) Only III and IV
    4) Only II and III   5) Only I

94. **Statements:** $Z \geq Y, V \geq T, W = V, Y \geq X, X \geq W$
    Conclusions: I. $T > W$, **II.** $V = X$, **III.** $Z \geq T$, **IV.** $Y \geq V$
    1) Only I and IV   2) Only I and II   3) Only III and IV
    4) Only II and III   5) Only I

95. In a certain code language, OMNIPRESENT is written as QJONPTSMDRD. How is CREDIBILITY written in that code?
    1) DSFEJDDXSHKH   2) JEFSDCXSHKH   3) JEFSDDXSHKH
    4) JEFSDDZUJMJ   5) None of these

Directions (Q. 96-100): Study the following information to answer the given questions.

Eight people are sitting in two parallel rows containing four people each in such a way that there is an equal distance between adjacent persons. In row 1, A, B, C and D are sitting (but not necessarily in the same order) and all of them are facing North. In row 2, P, Q, R and S are sitting (but not necessarily in the same order) and all of them are facing South. Therefore, in the given seating arrangement, each member sitting in a row faces another member of the other row.

S sits second to left of Q. A faces the immediate neighbour of S. Only one person sits between A and C. P does not face A. B is not an immediate neighbour of A.

96. Which of the following is true regarding D?
    1) D sits at one of the extreme ends of the line.
    2) A sits on the immediate left of D.
    3) Q faces D.
    4) C is an immediate neighbour of D.
    5) No immediate neighbour of D faces R.

97. Who among the following faces C?
    1) P   2) Q   3) R   4) S   5) Cannot be determined

98. Who among the following sits on the immediate right of the person who faces C?
    1) P   2) Q   3) R   4) S   5) Cannot be determined

99. Four of the following five are alike in a certain way based on the given seating arrangement and thus form a group. Which is the one that does not belong to that group?
    1) A   2) Q   3) R   4) B   5) S

100. Who among the following faces R?
    1) A   2) B   3) C   4) D   5) Cannot be determined

Answers with Explanations:

01. 2;Replace 'neither sulking nor' with 'either sulking or'.
02. 4;Replace 'goes' with 'go'.
03. 2;Replace 'storing' with 'storage'.
04. 5
05. 4;Replace 'travel and perform' with 'travelling and performing'.
(06-10): **DAEBCF**

06. 4	**07.** 1	**08.** 3	**09.** 3	**10.** 2
11. 3	**12.** 4	**13.** 2	**14.** 5	**15.** 1
16. 2	**17.** 3	**18.** 4		
19. 1	**20.** 3	**21.** 2	**22.** 3	
23. 3	**24.** 4	**25.** 1	**26.** 1	**27.** 5
28. 3	**29.** 1	**30.** 4		

31. 2; $? = \dfrac{22 \times 164.4}{100} + \dfrac{14 \times 65}{100}$
    $\approx 36 + 9 = 45$

32. 4; $? = \dfrac{(1.3)^2 + (3)^2}{0.2}$

$= \frac{1.69 + 9}{0.2} \approx \frac{10.7}{0.2} \approx 55$

33. 4

34. 2; $\sqrt{2020} \approx 45, \sqrt{320} \approx 18, \sqrt{1330} \approx 36.5$
$\therefore ? = 45 + 18 + 36.5 = 99.5 \approx 100$

35. 3; $\therefore ? = \frac{104}{15} + \frac{35}{6} + \frac{9}{2} \approx 7 + 6 + 4.5 = 17.5$

36. 2; $+4^2, +6^2, +8^2, +10^2, +12^2,$

37. 1; $\times 12 - 11, \times 10 - 9, \times 8 - 7, \times 6 - 5$

38. 5; $\times 3 - 5, \times 3 - 5, \times 3 - 5, \times 3 - 5$

39. 1; $99^2, 98^2, 97^2, 96^2, 95^2, 94^2$

40. 4; $7^3 - 4 = 339$
$9^3 + 4 = 733$
$11^3 - 4 = 1327$
$13^3 + 4 = 2201$
$15^3 - 4 = 3371$
$17^3 + 4 = 4917$

41. 1; **I.** $2.3p - 20.01 = 0$

$\therefore p = \frac{20.01}{2.3} = 8.7$
II. $2.9q - p = 0$

or, $p = 2.9q \qquad \therefore q = \frac{8.7}{2.9} = 3$
ie $p > q$

42. 2; **I.** $p = \sqrt{1764}$
$\therefore p = 42$
II. $q^2 = 1764$
$\therefore q = \pm 42$
ie $p \geq q$

43. 5; **I.** $p^2 - 26p + 168 = 0$
$\Rightarrow p^2 - 12p - 14p + 168 = 0$
$\Rightarrow p(p - 12) - 14(p - 12) = 0$
$\Rightarrow (p - 12)(p - 14) = 0$
$\therefore p = 12, 14$
II. $q^2 - 25q + 156 = 0$
$\Rightarrow q^2 - 13q - 12q + 156 = 0$
$\Rightarrow q(q - 13) - 12(q - 13) = 0$
$\Rightarrow (q - 12)(q - 13) = 0$
$\therefore q = 12, 13$

Hence, no relation can be established between p and q.

44. 2; **I.** $p^2 - 13q + 42 = 0$
$\Rightarrow p^2 - 6p - 7p + 42 = 0$
$\Rightarrow p(p - 6) - 7(p - 6) = 0$
$\Rightarrow (p - 6)(p - 7) = 0$
$\therefore p = 6, 7$
II. $q^2 + q - 42 = 0$
$\Rightarrow q^2 + 7q - 6p - 42 = 0$
$\Rightarrow q(q + 7) - 6(q + 7) = 0$
$\Rightarrow (q - 6)(q + 7) = 0$
$\therefore q = 6, -7$ ie $p \geq q$

45. 3; eqn(I) × 3 $18p - 15q = -141$
eqn(II) × 5 $25p + 15q = 55$
$\overline{ }$
$43p = -86$

$\therefore p = \frac{-86}{43} = -2$
$5p + 3q = 11$
$\Rightarrow 3q = 11 - 5p$
$\Rightarrow 3q = 11 + 10$
$\Rightarrow 3q = 21$
$\therefore q = 7$ ie $p < q$

46. 3; Let the initial cost price = x
$\therefore 1.35x - 1.24x = 528$

or; $0.11x = 528 \Rightarrow x = \frac{528}{0.11} = 4800$
For 40% gain, selling price should be
$4800 \times 1.4 = 6720$

47. 2; Let the age of Rahul, Ajay and Vijay be x, y and z respectively,

Here, $\frac{x+y}{2} = 51$
$\therefore x + y = 102$ ...(I)
Similarly, $y + z = 72$ ...(II)
and $x + z = 86$ ...(III)
Solving eqn I, II and III, we get x = 58, y = 44, z = 28
$\therefore$ After 12 years Ajay's age = 44+12=56 years and Vijay's age = 28 + 12 = 40 years
$\therefore$ ratio = 7 : 5

48. 2; Amount after three years = $7 \times \frac{105}{100} \times \frac{108}{100} \times \frac{112}{100} = 8.89056$
$\therefore$ C.I = 889056 - 700000 = 189056

49. 1; There are nine letters. Taking the three vowels (E, E, A) as a unit, total number of letters
becomes 7.
D is repeated twice, and E is repeated twice among vowels.

∴ Total number of arrangements = $\frac{7!}{2!} \times \frac{3!}{2!}$ = 2520 × 3 = 7560

50. 3; n(s) = No. of ways in which seven persons can sit around a round table = 6!
As three persons can be taken as a unit, total persons = 5 and number of ways in which five persons can sit around the table = 4! and three persons can sit in 3! ways among themselves.
∴ n(E) = 4! × 3!

∴ P(E) = $\frac{4! \times 3!}{6!} = \frac{1}{5}$

51. 2; Length of the new rectangle = $\sqrt{\frac{(162)^2}{16} - 828} + \frac{162}{4} = \frac{114}{4} + \frac{162}{4} = 69$

∴ Breadth = $\frac{162}{2}$ − 69 = 12 cm

∴ Length of the original rectangle = 69 × $\frac{100}{230}$ = 30 cm
Breadth is same, ie 12 cm
∴ Perimeter = 2(30 + 12) = 84 cm

52. 2; 2:3
Let their speeds be 'u' kmh⁻¹ and 'v' kmh⁻¹

∴ u+v = $\frac{600}{8}$ = 75 ...(I)

and u–v = 15kmh⁻¹   ...(II)
From eqn (I) and (II), u = 45 kmh⁻¹ and v=30kmh⁻¹
∴ Required ratio = 2 :3

53. 5; Let the work be completed in 'x' days.

A's one day's work = $\frac{1}{30}$

∴ A's 10 days, work = $\frac{10}{30} = \frac{1}{3}$

B's one day's work = $\frac{1}{45}$

(∴ B's (x–5) days) work = $\frac{x-5}{45}$

C's one days' work = $\frac{1}{60}$

∴ C's x days' work = $\frac{x}{60}$

∴ $\frac{1}{3} + \frac{x-5}{45} + \frac{x}{60} = 1$

or, $\frac{60 + 4x - 20 + 3x}{180} = 1$

or, $\frac{7x + 40}{180} = 1$ or, 7x 180 – 40 = 140 days

∴ x = $\frac{140}{7}$ = 20 days

54. 2; $\frac{61.2}{360}$ × 48600 + $\frac{28.8}{360}$ ×62500 = 8262 + 5000 = 13262

55. 5; $B_{2008} = \frac{64.8}{360} \times 48600 = 8748,$

$B_{2009} = \frac{54}{360} \times 62500 = 9375$

$\therefore \% = \frac{8748}{9375} \times 100 = 93.31\% \approx 93\%$

56. 3

57. 2; Sum $= 8262 + 8748 + 8262 + 11250 + 9375 + 5000 = 50897$

58. 5; $E_{2009} = \frac{64.8}{360} \times 62500 = 11250,$

$C_{2009} = \frac{28.8}{360} \times 62500 = 5000$

Percentage $= \frac{11250 - 5000}{5000} \times 100 = \frac{625000}{5000} = 125\%$

59. 3; Number of handshakes $= {}^nC_2 = 561$

$\therefore \frac{n(n-1)}{2} = 561$

$\therefore n(n-1) = 1122$

or $n \times (n-1) = 34 \times 33$

$\therefore n = 34$

60. 3; The sum can be 8, 9, 10, 11 and 12.

$\therefore n(E) = 5+4+3+2+1 = 15$

and, $n(s) = 36$

$\therefore P(E) = \frac{15}{36} = \frac{5}{12}$

61. 1; Let the age of B be x.

From statement (I), age of A $= \frac{4x}{7}$ and

age of C $= \frac{10x}{7}$

$\therefore x + \frac{4x}{7} + \frac{10x}{7} = 105 \approx \frac{21x}{7} = 105$

$\therefore x = \frac{105}{3} = 35$ years

From (II), let the age of A be x, that of B be y and that of C be Z.

$\therefore y = \frac{175}{100}x$

$\therefore 4y = 7x,$

$$z = \frac{250}{100}x$$

$\therefore\ 2z = 5x$

$$y = \frac{70}{100}z$$

$\therefore\ 7z = 10y$

From these eqns, we cannot find x, y and z.

62. 4; From (I), principal = 5000
From (II), SI = 6700 – 5000 = 1700 and
t = 2 years

$$\therefore\ r = \frac{1700 \times 100}{5000 \times 2} = 17\% \text{ pa}$$

63. 5; Data are not sufficient as we cannot find the area of the floor from its perimeter. Hence, the cost of carpeting cannot be determined.

64. 4; Daily earnings of A+B+C $= \frac{3905}{11} = 355$ ...(I)

Daily earnings of A + C $= \frac{3055}{13} = 235$ ...(II)

Daily earnings of B + C $= \frac{4760}{17} = 280$ ...(III)

From (I) and (III), Daily earnings of A = 355 – 280 = 75
$\therefore$ Earning of A in 15 days = 75 × 15 = 1125

$\therefore$ 60% of 1125 $= \frac{1125 \times 60}{100} = 675$

65. 3; Let the distance between 'p' and 'q' be x km and speed of train y kmh^{-1}

$\therefore\ \frac{x}{y} = 33$ ...(I)

$\frac{x}{y-10} = 55$ ...(II)

Solving equation (I) and (II),
x = 825 km, y
= 25 kmh^{-1}

66. 2   **67.** 3

68. 2; poor   team   did   seniors
      ↓   ↓   ↓   ↓
      la   me   pic   pho

69. 3; mo   su   ra
      ↓   ↓   ↓   ↓
   cricket India very England

70. 4; seniors   bowlers   impressed   well

      ↓   ↓   ↓   ↓

    pho   dic   bi   cha

                       ↓

            (new code for

              new word)

71. 2; All apartments are buildings + All buildings are cottages = A + A → A = All apartments are cottages. Hence, I does not follow.

Some apartments are huts (I) → conversion → Some huts are apartments (I) + All apartments are buildings (I + A → I) = Some huts are buildings. Hence the possibility of II exists.

72. 5; All staplers are printers + No printer is a computer = A + E = E No stapler is a computer + All computers are machines. = E + A → O⋆ = Some machines are not staplers. This does not rule out the possibility of I. All staplers are printers + No printer is a computer = A + E → E = No stapler is a computer. Hence, II also follows.

73. 5; I is true because All planets are fans. For II: All planets are fans → Conversion → Some fans are planets + No planet is a universe. → Some fans are not universe. This does not rule out the possibility of II.

74. 1; Some professors are intelligent (I) + No intelligent is honest = I +E → O = Some professors are not honest. This leaves us with the possibility of I. While II does not follow because 'No Intelligent is an honest.'

75. 4; All tins are copper + No copper is a metal = A + E → E = No tin is a metal. So the possibility of I is ruled out. No pin is a tin + All tins are copper = (E + A → O⋆ = Some coppers are not pins. So, II does not follow.

76. 2;

From Statement: __ David __ Sonu __

From I. Tanu is not shortest.

       __ David __ Sonu __

From II. __ David > Ravi > Sonu __

From III. Peter > David > __ > Sonu __

From I and II we get.

Peter > David > Tanu > Sonu > Ravi

Tanu is in the middle

From II Ravi is in the middle.

Hence, either only II or only I and III is sufficient.

77. 3;

From I. Sanjay is 15th from bottom.

So, the position of Sanjay from top = 46 – 15 = 31

So, Sweta's rank = (31 + 5) = 36

Hence, I is sufficient.

From II. Ravina is 30th from top.

Neha is 4th from bottom.

So, the position of Neha from top = 46 – 4 = 42.

From III. Sweta is exactly in the middle of Ravina and Neha.
So, II and III together are sufficient.

78. 5; From (I)   From (II)   From (III)

M   M — P   P
| ⁄
| R ⁄
R — Q

79. 3;
From I: Saurabh = 5th from top
From II. Sulabha = (Saurabh + 10)th from top = 25th from bottom
From III. Jatin   = (Sulabha - 4)th from top
From I and II. (5 + 10)th from top = 25th from bottom
on 15th from top = 25th from bottom
∴ No. of chidren = 15 + 25 –1 = 39

(80-84):

80. 1
81. 3
82. 2
83. 4
84. 3

85. 2; Only better quality can put India back in the competitive field of black pepper production. So, India should go for modern technology for cultivating black pepper to compete in international market.

86. 5; The investors should be informed about the validity period and the list of schemes covered under this validity period should be communicated so that investors could be benefited from this facility.

87. 4; Statement B and E can be inferred from the passage. Statement B can be inferred, because

it is given that international labour organisation held the conference. (E) can also be inferred because it is given that participating nations were represented by their respective ministers.

(88-92):

Boy	Girl	Place	Car
Amit	Shruti/Neha	Circus	Santro/ Matiz
Manoj	Shruti/Neha	Circus	Santro/ Matiz
Arvind	Kruti	Park	Matiz
Dhruv	Radhika	Beach	Esteem
Bhushan	Chanchal	Movie	Esteem
Harsh	Sujata	Play	Tata

88. 4

89. 4

90. 3

91. 1

92. 2

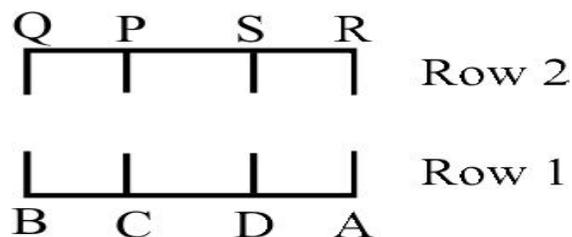**93.** 2; $J > K \geq L \geq M = N < O$

94. 3; $Z \geq Y \geq X \geq W = V \geq T$

95. 3; Keeping the middle letter as it is, the first five letters and last five letters of the word are written in reverse alphabetical order. In the group of letters so obtained, each of the first five letters is moved one step forward the middle letter is moved two step's forward and each of the last five letters moves one step backward to get the code.

Thus,

CREDI/B/ILITY → IDERC/B/YTILI → JEFSD/D/XSHKH

(96-100):

Q   P   S   R
                  Row 2

                  Row 1
B   C   D   A

96. 4
97. 1
98. 2
99. 5
100. 1