Section – I

Direction for questions 1 to 15: Read the following passages and answer the questions that follow.

Passage – 1

How does the mind produce such prophetic dreams? During dreaming, sensory inputs are blocked and the ego-sense 'I' is absent. This allows free reign to random thought patterns, emanating from existing memories from different parts of the brain, which produce dreams. The dreaming process therefore follows the Maxwellian distribution (the bell curve), where a majority dream about a day's events or activities. Scientists claim that the day's learning process is consolidated in our memory during sleep. This dreaming process sometimes produces disjointed dreams and at other times, nightmares. Sometimes, however, the brain synchronizes random thoughts into a powerful single thought. Imagine 100 billion neurons of the brain synchronizing in a laser-like fashion to produce a higher dimensional thought signature. This thought connects us to a higher dimensional space-time continuum from which we get the knowledge and powers of clairvoyance. The probability of this type of synchronization is very small but it is there.

1. What must have been discussed before the commencement of this passage?
   a. How to sleep soundly. b. Innovative solutions in dreams.
   c. Religious significance d. Cannot say

2. What among the following is not present during dreaming?
   a. Mind b. Structure c. Ego d. Identification

3. In which part of the bell curve would the day's activities be concentrated on?
   a. The rim b. The left part c. The centre d. Cannot say

4. Which of the following is not mentioned as a dream output?
   a. Nightmares b. Disjointed dreams c. A single thought d. None of these

5. The passage ends on a note of
   a. pessimism. b. awe. c. chagrin. d. warning.

Passage – 2

The great sportswoman that she has proved herself to be, Anju Bobby George — who became the first Indian woman to win a medal at a prestigious world athletic meet — with great generosity of spirit dedicated her bronze to the 'one billion people of India'. A very quotable quote which should give our national pride a much needed boost. About just how accurate is it in reflecting reality? What exactly did billion-plus India really do to help Anju accomplish her feat? And the answer to that is : precious little. Her greatest strengths were her husband Bobby George — who sacrificed his own promising sports career to help coach his wife — and a few other family members and well-wishers. But no Indian sports organization came forward to

help Anju during her arduous career. Anju is not alone in being at the receiving end of such benign neglect. Time and again, individuals have triumphed in the sporting arena not thanks to but despite the fact that they were born Indians. Had they received the kind of training which they would have got in any other country without having to ask for it, Milkha Singh and P. T. Usha would certainly have been the world beaters that they deserved to be.

Like all other fields of endeavour, our sports are riddled with politics at the expense of performance. While nepotism rules the roost, genuine talent is left to fend for itself. As athletes like Shiny Abraham and Malleswari, among numerous others, have had to do. Even when our sports people do emerge triumphant against all odds, the state is often niggardly in its appreciation. The belated and grudgingly given Arjuna awards to sports achievers is but one case in point. Very sensibly, Anju has said that she is not interested in empty awards but in retaining and improving upon her cutting-edge performance which won her the bronze. Her next step is said to be the Athens Olympics and making the seven-metre long jump mark, by bettering her personal-best record so far of 6.7 metres. We wish her all success, as we are sure do millions of those who, till yesterday, had never heard of her. Her anonymity did not stifle Anju's spirit; one can only hope that the onerous weight of having to carry the burden of one billion who, overnight, have pinned their future hopes on her will not prove a hindrance to her further success. So by all means break out the champagne on her behalf. But let's not allow Anju's success to go to our heads.

6. The author views George's dedication with
   a. approval. b. disbelief. c. suspicion. d. doubt.

7. The word *precious* can be substituted with
   a. invaluably. b. very. c. not. d. morally.

8. The writer views the Indian-born athlete with
   a. empathy. b. sympathy. c. callousness. d. envy.

9. Which of the following statements is not true in light of the passage?
   a. Milkha Singh and P. T. Usha could have done even better.
   b. Shiny Abraham and Malleswari did not depend on the official system.
   c. Other countries do recognize their talented athletes.
   d. Females outnumber males in the athletic bastion.

10. *Cutting-edge* is used in the passage to describe
   a. superior technology. b. Anju's sarcastic remarks.
   c. high-calibre performance. d. the negative effects of nepotism.

Passage – 3

Those of us who feel tyrannized by the security phobia of our *netalog* can take heart. Life for the average Israeli has to be a lot harder, judging by the paranoic fussing around prime minister Ariel Sharon's trip. Even on a normal day, the Indian capital is a commuters' nightmare, its roads barricaded every few kilometers presumably in order that the ill-intentioned don't get close to our political bosses. The prized terrorist target

that Mr. Sharon is, he converted Delhi into a virtual fortress. Security around the city transited from 'tig to 'tighter' to 'tightest ever' with the visiting dignitary doing the usual rounds: From inspecting the guard of honour in the forecourt of Rashtrapati Bhawan to paying the customary visit to Rajghat to partaking of banquets hosted in his honour. But apparently we hadn't seen anything yet. An alert by Mossad about a possible terrorist attack on Mr. Sharon further pushed the security frontiers with the Israeli security service going as far as to check the weapons and firing pins of the contingent that was to present the guard of honour. And then, even as our own VVIP contingent watched this 'shock' and awe' display in disbelief, one among the posse of Israeli guards jumped the cordon to walk with Mr. Sharon as he inspected the guard of honour.

If Mr. Sharon wants to cocoon himself from danger, he can do it. If our government wants to roll out the red carpet for an extraordinary visitor, let that happen by all means. But when this elaborate *mehman-nawazi* starts interfering with the day-to-day life of the citizen, then, it is time to call a halt. In a democracy the real VVIPs are the ordinary men and women who make up its body politic. The political class exists at the pleasure of the voting class and not the other way round. Diplomatic visitors are not tourists with a must-see itinerary; they are here to conduct business which they must, without the citizenry feeling their overbearing presence. The only way to facilitate this is to demarcate an area within which the various state meetings, banquets etc., can take place. Ideally, we should be looking at a designated diplomatic zone located away from the city centre with its own helipad and so on. Atalji has already shown the way. Thanks to his judicious decision to take a helicopter ride to the airport, commuters en route to work have less frequently to suffer the prime ministerial convoy. The prime minister will do a further service, should he decide also to find another venue for his rendezvous with foreign visitors.

11. The word *paranoic* indicates that
    a. Ariel Sharon is on the terrorists' hit-list.
    b. Indians are less aware of VVIP security measures.
    c. the writer does not agree that the *security phobia* is justified.
    d. None of the above

12. The writer points out that
    a. 'tight' security would have been sufficient for the visiting Israeli minister.
    b. there is little difference between *tighter* and *tightest* security.
    c. *tightest* security fell short for the visiting Israeli minister.
    d. None of the above

13. We can infer from the passage that Mossad is
    a. an insurgency group. b. an intelligence agency.
    c. an Israeli minister d. Cannot say

14. Which class constitutes the existing VVIP class in India?
    a. The political class b. The ruling class c. The bourgeois d. The masses

15. The writer regards the PM's initiative with
    a. skepticism. b. joy. c. reservation. d. approval.

Section – II

Direction for questions 16 to 22: Each question is followed by two statements, I and II. Answer each question using the following instructions.

Mark the answer as

(a) if the question can be answered by one of the statements alone, but cannot be answered by using the other statement alone.
(b) if the question can be answered by using either statement alone.
(c) if the question can be answered by using both the statements together, but cannot be answered by using either statement alone.
(d) if the question cannot be answered even by using both the statements together.

16. How many eggs did Mr. Henley lay everyday?
I. Mr. Henley lays a one-digit odd number of eggs.
II. Mr. Henley lays in the multiples of 3.

17. What is the value of angle A in ΔABC?
I. $\angle B = 60^{o}$, $AC = 10$ cm
II. BC = 5 cm

18. Is $x > \frac{1}{2}$?
I. $x^2 > \frac{1}{4}$
II. $x^3 > 0$

19. Who stole the necklace if only one of them speaks the truth?
I. "Raju stole the necklace. I always speak the truth," says Ravi.
II. "Ravi always speaks the lie," says Raju.

20. Who won the race?
I. Raju's speed is 20% faster than Ravi.
II. Raju starts 15 min after Ravi started.

21. What is the distance of the point (x, y) from the origin?
I. $x^2 + y^2 = 16$
II. $x = 4, y = 0$

22. What is length of the side of an equilateral triangle formed by a wire?
I. The total length of the wire is divisible by 3.
II. The area of the rectangle formed by the same wire is twice the area of the square formed by the wire.

Direction for questions 23 to 27: Answer the questions based on the following instructions.
A, B, C, D, E, F, G and H are people who are related as below:

I. A is the father of two children C (male) and D (female).
II. H is the mother of two children E (male) and F (female).
III. B is E's mother-in-law.
IV. D is a daughter-in-law of G.
V. E's wife is F's sister-in-law.
VI. E's son will also be A's grandson and C's daughter will also be H's granddaughter.

23. Who is A's wife?
a. H b. F c. B d. E

24. Who is D's mother-in-law?
a. B b. H c. F d. E

25. A's daughter will also be
A. B's daughter-in-law
B. E's wife
C. H's daughter
a. A only b. B only c. C only d. A and B only

26. If X is C's son and Y is E's daughter, then X and Y must be
a. brother and sister b. husband and wife
c. D's children d. H's grandchildren

27. Out of the eight people, how many must be male?
a. 4 b. 3 c. 5 d. 2

Direction for questions 28 to 32: Answer the questions based on the following information.
When they hold a meeting, seven company executives — T, U, V, W, X, Y and Z sit around a rectangular table.

Three executives sit along one side of the table, and three sit along the other side, each directly opposite one of the other three. The seventh sits at the head of the table; there is no seat at the foot of the table.
U always sits in one of the two seats farthest from the head of the table.
Y and V always sit next to each other.
V never sits next to Z.
If Z does not sit at the head of the table, W sits there.

28. Which of the following is an acceptable seating arrangement of the executives, starting with U, moving toward the head of the table, and continuing around the table?
a. U, X, T, Z, V, Y, W b. U, T, X, Z, Y, V, W
c. U, X, Z, Y, V, W, T d. U, Z, S, X, V, Y, T

29. If W sits directly opposite to T, X must sit next to which of the following executives?
a. T b. U c. V d. Y

30. If T sits directly opposite to Z and next to V, which executive must sit directly opposite to U?
a. Y b. W c. V d. Y or V

31. If W sits directly opposite to U and next to T, the two executives immediately on either side of X must be
a. Y and V b. Y and W c. T and Z d. T and V

32. If Z sits at the head of the table, Y directly opposite to U, and V immediately on X's left, what is the total number of possible seating arrangements of the executives?
a. 1 b. 2 c. 3 d. 4

Direction for questions 33 to 36: Answer the questions based on the following information.

Farokh, Ganesh, Hariprasad, Ismail and Jon are the five jockeys who participated in a race. They were riding the horses, namely, Lucky, Magic, Naughty, Old Boy and Power — not necessarily in the same order. The jockeys were given the numbers 401, 402, 403, 404 and 405, where the order is not clear. Further the following things were observed.

I. Ganesh completed the race before 403, who in turn crossed the final line before Magic.
II. Power stood third in the race, while Jon was the second to complete it.
III. Hariprasad was numbered 404 and was not riding Old Boy.
IV. Exactly one horse touched the final line between Magic and Lucky.
VI. Ismail, although finished the race after Farokh and was numbered 405, was not the last to finish the race.

33. Hariprasad was riding
a. Lucky b. Magic c. Naughty d. Power

34. Farokh was certainly not given the number
a. 401 b. 402 c. 403 d. None of these

35. Old Boy was ridden by
a. Farokh b. Ganesh c. Ismail d. Jon

36. Which of the following cannot be the accepted sequence for completing the race (the order is: 1st, 2nd, 3rd, 4th and 5th)?
I. 401, 402, 403, 404 and 405
II. 402, 401, 403, 405 and 404
III. 403, 402, 401, 405 and 404
a. I and III b. II and III c. II only d. I only

Direction for question 37: Answer the question based on the following information.
Rajan has 30 toys in three different colours — green, pink and yellow. Each toy is of a single colour. He has not more than 13 green toys and not more than 7 pink toys.

37. Which of the following is necessarily false?
    I. More than half his toys are yellow.
    II. He has three pink toys more than green toys.
    a. I alone b. II alone c. Both I and II d. Neither I nor II

Direction for questions 38 to 41: In each of the following questions, a related pair of words is followed by four pairs of words. Select the pair that best expresses a relationship similar to that expressed in the original pair.

38. Cohorts : Supporters
    a. Prosecution : Vague
    b. Retinue : Attendants
    c. Trivial : Motive
    d. Objective : Merit

39. Incendiary : Fire
    a. Kleptomania : Theft
    b. Acquisition : Passion
    c. Predicament : Strategy
    d. Type : Advancement

40. Zealot : Extreme
    a. Provoke : Confrontation
    b. Publicity : Infinite
    c. Mediator : Peaceful
    d. Compile : Text

41. Accolade : Resounding
    a. Broadcast : Conversation
    b. Breathe : Confidence
    c. Corpus : Effective
    d. Wail : Mournful

Direction for question 42 and 43: Sentences given in each question, when properly sequenced, form a coherent paragraph. The first and the last sentences are 1 and 6, and the four in between are labelled A, B, C and D. Choose the most logical order of these four sentences from among the four given choices to construct a coherent paragraph from sentences 1 to 6.

42. 1. Most experts believe the panic at Nauset Beach was caused by a 'run out'.
    A. Millions of tonnes of water flowed over it towards the shore.
    B. A weak spot in the bar then gave way, creating a funnel effect.
    C. Eventually, the water level inside the bar slightly exceeded the level outside and, naturally, the water had to flow seaward.
    D. Somewhere offshore, a sandbar had built up.
    6. Water rushed towards the opening, sweeping people with it who panicked and tried to fight it, exhausting themselves.
    a. BDCA b. ABDC c. DACB d. CABD

43. 1. Medical X-rays are packed with tremendous energy.
A. The beams rip like lightning bolts through the delicate walls of cells, altering their metabolism, changing their character, often destroying them.
B. If enough cells of a particular type are damaged, the results can be disastrous.
C. The threat to our reproductive cells is also causing concern.
D. If, for example, they are blood-making cells in the bone marrow and enough of them are damaged, leukaemia could result.
6. If these cells, housed in the male and female genitals, are damaged by X-rays, susceptibility to certain chronic diseases, such as high blood pressure to a host of lethal mutations, are greatly increased.

a. ABDC b. ABCD c. BACD d. DACB

Direction for questions 44 to 46: Given below is a set of six statements, followed by four choices. You have to mark the choice where the third statement can be logically deduced from the previous two sentences.

44. A. All Bs are Ds.
B. All Ds are Ys.
C. Some As are Zs.
D. All Ys are Bs.
E. Some Zs are Ss.
F. All Bs are Ys.

a. BDE b. CDF c. ABD d. ABF

45. A. No dogs are cats.
B. All cats are mews.
C. No dogs are mews.
D. All mews are tails.
E. All rats are tails.
F. Some mews may be dogs.

a. CDE b. DBF c. ACE d. ABF

46. A. All tims are dongs.
B. Some mimes are tongs.
C. Some dongs are bits.
D. All tims are bits.
E. All bits are dongs.
F. Some dongs are bits.

a. ACD b. BDE c. ABF d. ADF

Direction for questions 47 to 55: Read the following arguments and answer the questions that follow

47. The best movie showing in India right now is *Khiladi No. 45* — it has been in the No. 1 slot for six weeks.

Which of the following statements can weaken the argument?
a. Popularity ratings are a good indicator of the quality of a movie.
b. No movie has held the No. 1 slot for more than three weeks.
c. A popular movie is not necessarily a good movie.
d. None of the above

48. With reference to question 47, which of the following statements can strengthen the argument?
a. *Khiladi No. 45* was an adult-rated movie.
b. The audience for movies mostly comprise of upper-class citizens.
c. Critics believe that a popular movie is generally considered as a good movie.
d. None of the above

49. Bill Gates has recently suggested that all people should attend college and acquire a degree. However, this argument is clearly wrong since Bill Gates dropped out of Harvard.

Which of the following statements can weaken the argument?
a. Melinda Gates holds a post-graduate degree from Radcliffe.
b. Bill Gates reads a lot at home.
c. Bill Gates is not encouraging his children to become spendthrifts.
d. It would be unfair to rubbish a person's suggestions by making personal observations.

50. With reference to question 49, how can the argument be strengthened?
a. Bill Gates may not be aware of the implications of his statement as he has no practical experience to support his statement.
b. Bill Gates had topped in elementary school.
c. Bill Gates makes sundry statements now and then that have no real value.
d. None of the above

51. All boys are hyper. Therefore, Siddharth is hyper.

What is the missing assumption to support the above argument?
a. Girls are not hyper.
b. Boys and girls are not hyper.
c. Siddharth can be a girl.
d. Siddharth is a boy.

52. The Municipal Commissioner has recently suggested adding chlorine to all public water sources. This is obviously a bad idea since many of the totalitarian regimes also added chlorine to all their public water sources.

What is the assumption on which this argument is based?
a. The Municipal Commissioner is ill-informed.
b. The totalitarian regimes could not provide better service to the public with the said measure.
c. The Municipal Commissioner has leftist tendencies.
d. None of the above

53. Which of the following statements can weaken the argument in question 60?
a. The Municipal Commissioner is implementing the plan under very different circumstances.
b. The totalitarian regimes did not have healthy intentions.
c. The Municipal Commissioner is not aware of the totalitarian measure.
d. None of the above

54. Which of the following statements can strengthen the argument given in question 60?
a. The presence of chlorine acts as a disinfectant.
b. Chlorine is introduced in the water sources in conditions close to that in the totalitarian countries.
c. The background in the two situations has no bearing on the consequences.
d. None of the above

55. In an attempt to boost tourism, Thailand has enrolled the modelling service of Anna Kournikova in its internationally aired ads. Within a year, the number of tourists has risen by 20 per cent. The new ad was therefore a success.

Which of the following statements can weaken this argument?
a. Domestic strife has reduced by a significant level in the past year owing to stringent security measures.
b. Anna Kournikova played in an exhibition tournament in Thailand.
c. Anna Kournikova is an opinion leader.
d. None of the above

Section – III

Direction for questions 56 to 70: Answers each of the following questions independently.

56. The ratio of ages of Anna and Beena is 2 : 3. After 4 years, their ages are in ratio 3 : 4. Find their present ages.
a. 6 and 9 b. 12 and 18 c. 8 and 12 d. 4 and 6

57. The length of a rectangle is increased by 10% and its breadth is decreased by 10%. What is the percentage change in its area?
a. 21% increase b. 1% increase c. 1% decrease d. No change

58. A starts from a place at 11.00 a.m. and travels at a speed of 4 km/hr, B starts from same place at 1.00 p.m. and travels with speeds 1 km/hr for 1 hr, 2 km/hr for the next 1 hr, 3 km/hr for the next 1 hr and so on. At what time will B catch up with A?
a. 9.24 p.m. b. 9.32 p.m. c. 9.48 p.m. d. None of these

59. The radius of a circle is increased by 100%. The area of the circle will increases by
a. 100% b. 200% c. 300% d. 400%

60. The diameter of a wheel is 63 cm. Distance travelled by the wheel in 100 revolutions is
a. 99 m b. 198 m c. 63 m d. 136 m

61. Your horses are tethered at four corners of a square-plot of side 63 m so that they just cannot reach one another. The area left ungrazed is
a. 675.5 m^2 b. 780.6 m^2 c. 785.8 m^2 d. 850.5 m^2

62. If $2x + 3y + 4z = 27$ and $3x + 2y + z = 33$, then what is the average of x, y and z?
a. 3 b. 4 c. 6 d. 12

63. If $1 + \frac{x}{12} = \sqrt{1+\frac{5^2}{12^2}}$, find the value of x.
a. 5 b. 1 c. 4 d. 2

64. If $f(x, y) = xy$ and $g(x) = x^3 + 2$, then what is the value of $f[3, g(2)]$?
a. 30 b. 20 c. 15 d. 18

65. If $2^{x-1} + 2^{x+1} = 1280$, then the value of x is
a. 8 b. 9 c. 5 d. None of these

66. Find the value of x, in the expression $-25x^2 + 50\sqrt{2}x - 50 \geq 0 \ \forall \ x \in R$.
a. $-\sqrt{2}$ b. $\sqrt{2}$ c. 1 d. None of these

67. Find out the total number of positive integral solution of $4x + 3y = 63$.
a. 4 b. 5 c. 6 d. None of these

68. If $a^2 = b + c$, $b^2 = c + a$ and $c^2 = a + b$, then find the value of $(a + 1)^{-1} + (b + 1)^{-1} + (c + 1)^{-1} = ?$
a. 3 b. 1 c. 0 d. Cannot be determined

69. $\frac{K}{2}$ is even but $\frac{K}{4}$ is not. Which of the following is necessarily an integer?
a. $\frac{K}{8}$ b. $\frac{K}{8}+\frac{1}{8}$ c. $\frac{K}{8}+\frac{1}{2}$ d. $\frac{3K}{8}$

70. The smallest positive value of $x+\frac{8}{x}$ assuming real values of x only is
a. 2 b. $2\sqrt{2}$ c. 4 d. $4\sqrt{2}$

Direction for questions 71 and 72: Answer the questions based on the following information.
A survey of 500 TV viewers generated the following information: 285 watch football, 195 watch hockey, 115 watch basketball, 45 football and basketball, 70 football and hockey, 50 hockey and basketball and 50 none of the games.

71. How many of them watch all the three games?
a. 20 b. 53 c. 47 d. None of these

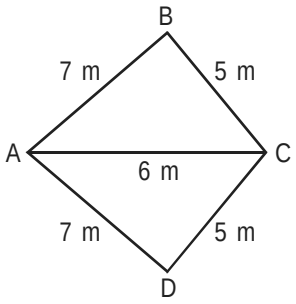
72. How many of them watch only football?
a. 137 b. 145 c. 190 d. None of these

73. A book was sold for a certain sum and there was a loss of 20%. Had it been sold for Rs. 3 more, then there would have been a profit of 30%. If it was sold for Rs. 6.60, then the profit/loss percentage would have been
a. profit 10% b. profit 8.33% c. loss 8.33% d. Data insufficient

74. It costs Rs. 10,000 to make the first thousand copies of a book and x rupees to make each subsequent copy. If it costs a total of Rs. 72,300 to make the first 8,000 copies of the book, what is the value x?
a. Rs. 8.90 b. Rs. 8.75 c. Rs. 89 d. None of these

75. Find a and b such that $(x + 1)$ and $(x + 2)$ are factors of the polynomial $x^3 + ax^2 - bx + 10$.
a. 8 and –17 b. 17 and –8 c. –9 and –1 d. None of these

76. Given are the lengths of the sides and a diagonal of quadrilateral ABCD as shown below. Find area and length of the other diagonal.



a. $6\sqrt{5}, 5\sqrt{6}$ b. $6\sqrt{6}, 4\sqrt{6}$ c. $12\sqrt{6}, 4\sqrt{6}$ d. $12\sqrt{6}, 5\sqrt{6}$

77. The wages received by A, B and C together amount to Rs. 144. If A works for 10 days, B for 12 days and C for 15 days, then the amount received by A, when the proportion of their daily wages is $\frac{1}{2} : \frac{1}{3} : \frac{1}{5}$, is

a. Rs. 60 b. Rs. 48 c. Rs. 90 d. None of these

78. Rashmi started a business with Rs. 4,500 and Pratima joined afterwards investing Rs. 3,000. If the profits at the end of one year were divided in the ratio 2 : 1 respectively, how many months later did Pratima join the business after the start?

a. 1.5 b. 2 c. 3 d. 4.5

79. Kunjumol's bag contains 800 coins of 25-paisa denomination and 1,200 coins of 50-paisa denomination. If 5% of 25-paisa coins and 25% of 50-paisa coins are taken out, the percentage of money taken out from the bag is

a. 30% b. 20% c. 17.8% d. None of these

80. A company manufactures two products X and Y. One unit of X requires 3 units of material A and 2 units of material B while one unit of Y requires 2 units of material A and 5 units of material B. If 25 units of each product were to be produced, calculate the requirement of material B.

a. 175 b. 125 c. 150 d. None of these

81. On a certain day, Rohit started with p newspapers. From morning to noon, he sold 40% of the papers, and between noon and evening he sold 60% of the remaining. Then he realised that had he sold double the number of newspapers than he sold in the afternoon, he would have had to borrow 12 papers from another vendor. Find p.

a. 108 b. 100 c. 96 d. 72

82. If a% of b is c, b% of c is a and c% of a is 1, then which of the following is not true?

a. a = 10 b. b = 100 c. a = c d. a = b

83. If $x^a = y$, $y^b = z$ and $z^c = x$, what is $\frac{1}{abc}$?

a. xyz b. $(xyz)^{abc}$ c. 1 d. None of these

84. Two bullock carts move in the same direction from the same place at the rate of 4 km/hr and 4.5 km/hr respectively. What time will they take to be 8.5 km apart?

a. 1 hr b. 3 hr 50 min c. 17 hr d. 13 hr 15 min

85. A train leaves from Meerut at 7 a.m. and reaches Delhi at 11 a.m. Another train leaves from Delhi at 9 a.m. and reaches Meerut at 12.30 p.m. At what time do the two trains cross each other?

a. 9.56 a.m. b. 10.36 a.m. c. 10.56 a.m. d. 11 a.m.

86. If x men working x hours a day can do x units of a work in x days, then y men working y hours per day in y days would be able to complete how many units of work?

a. $\frac{x^2}{y^3}$ b. $\frac{x^3}{y^2}$ c. $\frac{y^2}{x^3}$ d. $\frac{y^3}{x^2}$

87. If $f(x) = 1 + x + \frac{1}{x}$, what is $f\left(\frac{1}{x}\right) + f(x)$?

a. $f(x) - f\left(\frac{1}{x}\right)$ b. $f\left(\frac{1}{x}\right) - f(x)$ c. $2f\left(\frac{1}{x}\right)$ d. $[f(x)]^2$

88. $\int 4^x \cdot 3^x \cdot e^x dx = ?$

a. $\frac{4^x \cdot 3^x \cdot e^x}{\log_e 12} + C$ b. $\frac{(7e)^x}{\log_e (7e)} + C$

c. $\frac{4^x \cdot 3^x \cdot e^x}{2\log_e 2 + \log_e 3 + 1} + C$ d. None of these

89. Integrate $\int \frac{(x^2 + x^5)}{1 + x^6} dx$.

a. $\frac{1}{3}\left[\frac{1}{2}\sqrt{(1+x^3)} + \frac{1}{2}\sin^{-1} t\right] + C$ b. $\frac{1}{3}\left[\left(\frac{1}{2}\log_e |t^6 + 1|\right) + \tan^{-1} x^3\right] + C$

c. $\frac{1}{3}\log_e |t^6 + 1| + \tan^{-1} x^3 + C$ d. None of these

90. The average salary of female employees in a company is Rs. 5,000 and that of male is Rs. 6,000. The mean salary of all the employees is Rs. 5,700. Find the percentage of male and female employees respectively.

a. 30% and 70% b. 70% and 30% c. 55% and 45% d. None of these

91. The mean of 10 numbers 2, x + 5, x + 6, x + 8, x + 9, x + 11, x + 12, x + 14, x + 15 and 24 is 15. Then find the value of x.
a. 7 b. 9 c. 8 d. None of these

92. If one root of quadratic equation $px^2 + qx + r = 0$ is equal to the 4th power of the other, then
a. $p^{\frac{4}{5}}r^{\frac{1}{5}} + p^{\frac{1}{5}}r^{\frac{4}{5}} + q = 0$ b. $(pr)^{\frac{1}{5}} + (pr)^{\frac{4}{5}} + q = 0$
c. $p^{\frac{4}{5}} + r^{\frac{4}{5}} = q^{\frac{4}{5}}$ d. None of these

93. How many different words can be formed with the letters of 'PUNJAB', when both P and N are together?
a. 120 b. 240 c. 144 d. None of these

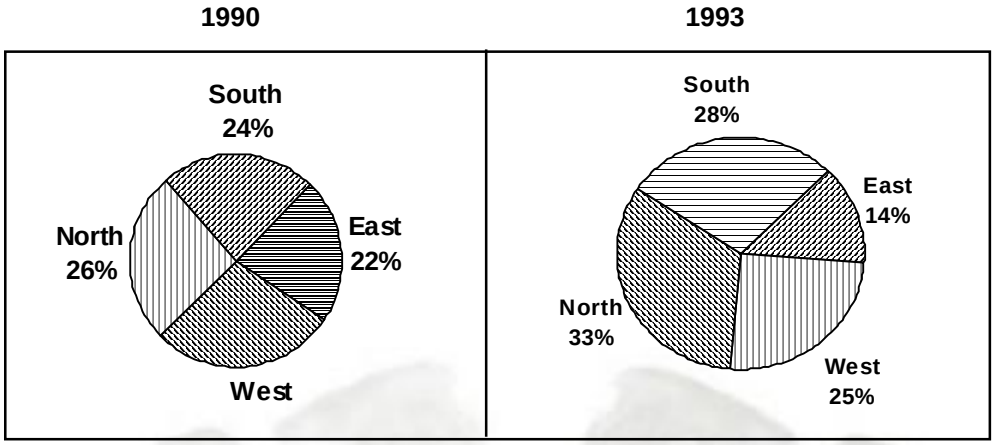
94. The area within the curve |x| + |y| = 8 is
a. 32 sq. units b. 64 sq. units c. 128 sq. units d. None of these

95. There are 19 identical red balls and one black ball. In a green jar 10 balls are put and the remaining 10 balls are put in a yellow jar. What is the probability of the black ball being in the yellow jar?
a. $\frac{9}{19}$ b. $\frac{1}{20}$ c. $\frac{1}{19}$ d. $\frac{1}{2}$

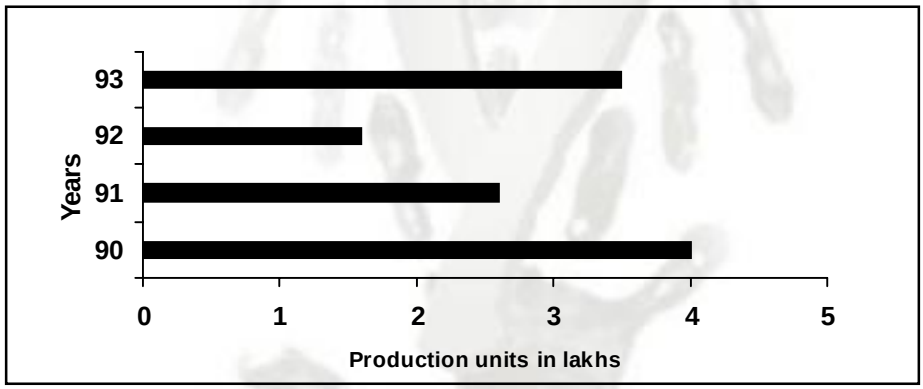
Section – IV

Direction for questions 96 to 100: Answer the questions based on the information presented in the figure below.

The pie charts below give data on units produced in four different zones for country X for 1990 and 1993 respectively.



Total units produced in country X for all four zones continued for the period 1990-93 is given by the bar chart below.



96. What is the average total production per year during the four years?
a. 2.95 lakh b. 3.250 lakh c. 2.5 lakh d. 2.725 lakh

97. How many units were produced in north zone in 1990?
a. 0.96 lakh b. 1 lakh c. 1.04 lakh d. 1.08 lakh

98. How many units were produced in south zone in 1993?
a. 6,400 b. 980 c. 64,000 d. 98,000

99. Percentage decrease in total production in 1992 as compared to 1991 is
a. 38% b. 50% c. 60% d. 45%

100. Which zone registered the greatest percentage change in production units from 1990 to 1993?
a. North b. South c. East d. West

Direction for questions 101 to 105: Answer the questions based on the following information.

Unclaimed redemption and dividend amounts for TMF India Ltd.

The amount of dividends declared and redemptions made, which were remaining unclaimed as on the balance sheet data are given below.

Scheme name	Dividend		Redemptions	
	Number of unclaimed warrants	Amount (Rs. in lakhs)	Number of unclaimed warrants	Amount (Rs. in lakhs)
TIGF	170	3.26	7	0.83
TIIF	1601	42.18	48	2.30
TGSF	212	17.76	4	0.15
TMIP	526	5.39	3	0.26
FIIF	—	—	0	0.00
FIBF	—	—	1	0.13
FIGF	—	—	3	0.50
Total	**2509**	**68.59**	**69**	**4.17**

101. What is the average dividend amount per unclaimed warrants across all schemes for TMF India Ltd.?
a. Rs. 1,964 b. Rs. 2,734 c. Rs. 3,822 d. None of these

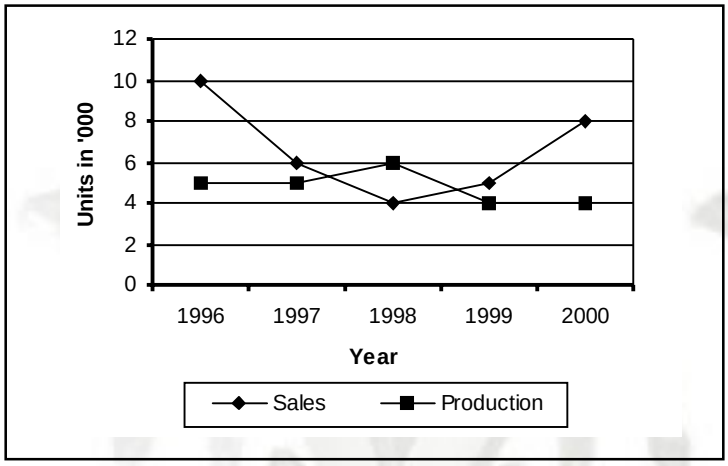
102. What is the approximate ratio of the average redemption amount per warrant in TIGF scheme to that in FIBF scheme?
a. 10 : 9 b. 9 : 10 c. 11 : 13 d. 9 : 13

103. Which of the following statement(s) is(are) not true?
I. The total amount of unclaimed warrants for TIGF and TIIF schemes is Rs. 48.57 lakh.
II. TIIF scheme accounts for more than 60% of the total number of unclaimed warrants.
a. Only I b. Only II c. Both I and II d. Both are true

104. What is the percentage of unclaimed dividend amount in TMIP scheme?
a. 7.8% b. 5.2% c. 10.5% d. Cannot be determined

105. A scheme is given the 'star' status when it has minimum number of unclaimed warrants for that scheme, among all others. Among the given schemes, which scheme is to be awarded 'star' status?
a. FIIF b. FIBF c. TIIF d. Cannot be determined

Direction for questions 106 to 110: Answer the questions based on the data presented in the graph below.
The following graph shows the sales and production of sugar (in quantity) of mill X from 1996 to 2000.



106. Percentage fall in sales between 1996 and 2000 was
a. 20% b. 30% c. 25% d. 10%

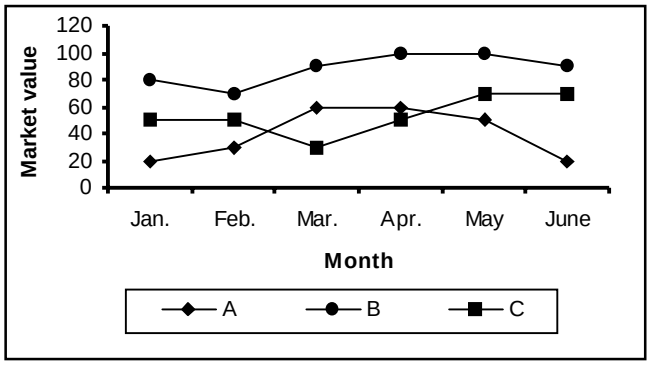
107. In 2000, sales was what percentage of production?
a. 150% b. 160% c. 300% d. 200%

108. In which year the ratio of sale to production was the maximum?
a. 1996 b. 1998 c. 2000 d. Both (a) and (c)

109. The production in 1996 is how many times the production of 2000?
a. 0.9 b. 1.1 c. 1.25 d. 1.5

110. The total production of sugar in 1997 and 1999 is less than its sales by how many units?
a. 1,000 b. 2,000 c. 1,500 d. 3,000

Direction for questions 111 to 115: Answer the questions based on the data presented in the gr below.
The following graph shows the market value (in terms of preference) of products A, B and C in the first six months of a year.



111. The market value of product C in May is what percentage of its value in February?
a. 120% b. 140% c. 160% d. 105%

112. Which product has shown the maximum increase in its market value in a month over the previous month during the given period?
a. A b. B c. C d. Cannot be determined

113. The market value of product B in May increases from its value in February by
a. 30% b. 20% c. 43% d. 50%

114. How many months have shown the market value of product C above its average market value?
a. 1 b. 2 c. 3 d. 4

115. The combined market value of products B and C in March is how many times of the market value of A in March?
a. 1 b. 1.5 c. 3 d. 2

Direction for questions 116 to 120: Answer the questions based on the following information.
The performance of the country's leading petroleum company MRPL is given in the table below.

All figures in million tonne						
		Quarter ended September 30, 2002	Corresponding quarter in the previous year	Half year ended September 30, 2002	Corresponding six months in the previous year	Previous accounting year ended March 31, 2002
1	Crude through put (million tonnes)	2.30	2.33	4.18	4.50	8.77
2	Market sales (million tonnes)	4.69	4.46	9.58	9.44	19.15
3	Export sales (million tonnes)	0.2	—	0.3	—	0.1

116. What is the approximate growth rate in market sales of MRPL for the quarter ending Septem 30, 2002 as compared to the quarter ending September 30, 2001?
a. 4.9% b. 5.2% c. 6.2% d. 4.5%

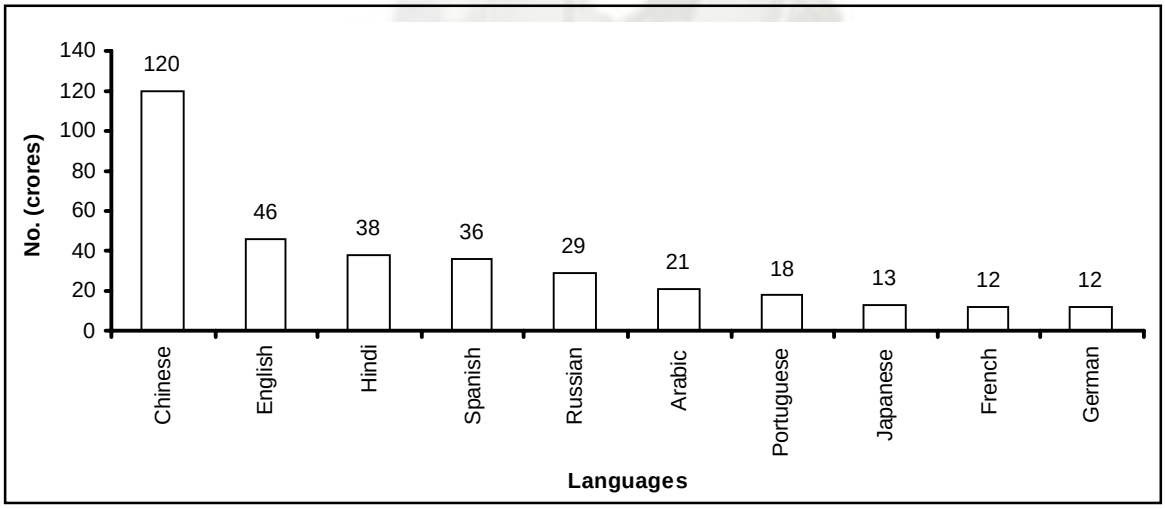
117. How much was the export sales of MRPL for the quarter ending June 30, 2002?
a. 1,00,000 tonnes b. 2,00,000 tonnes c. 3,00,000 tonnes d. None of these

118. What percentage of crude throughput was done by MRPL in the last six months of 2001-02 out of the total annual crude throughput in 2001-02?
a. 51.3% b. 55.6% c. 48.7% d. 40.2%

119. What is the percentage change in crude throughput of MRPL for the first six months in 2002-03 as compared to 2001-02?
a. Decrease by 7.6% b. Increase by 7.6% c. Increase by 7.1% d. Decrease by 7.1%

120. What is the approximate ratio of crude throughput and market sales for MRPL for 2001-02?
a. 2 : 1 b. 5 : 11 c. 1 : 2 d. 2 : 3

Direction for questions 121 to 125: The following bar diagram represents the population, classified as per languages spoken over the world. Study the diagram carefully and answer the questions that follow.



121. If the world population is 543 crore, Chinese languages is spoken by approximately what percentage of the total?
a. 14% b. 18% c. 22% d. 26%

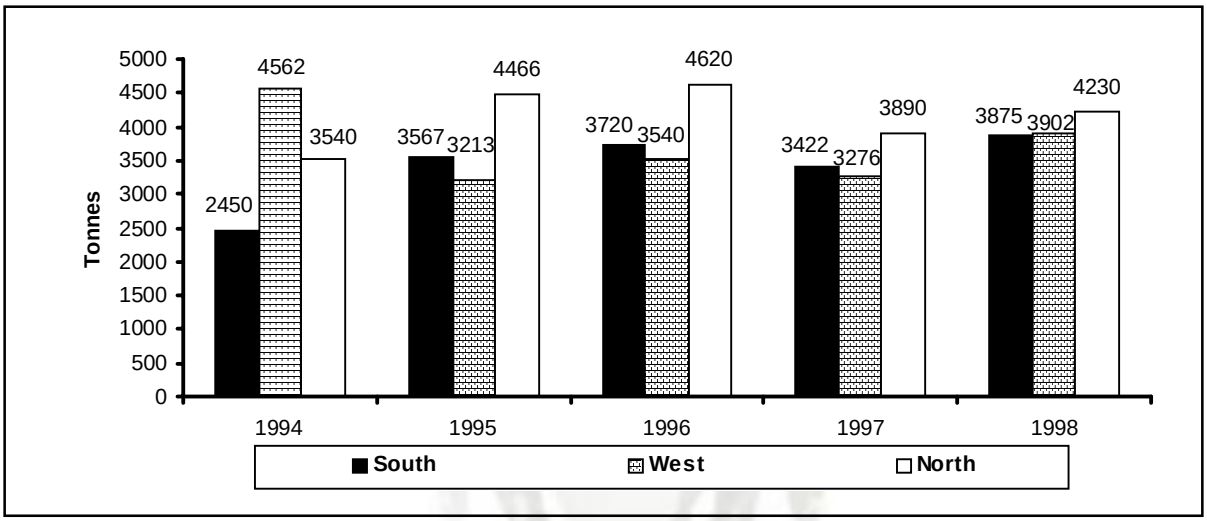
122. Which of the following pairs of languages are spoken by an equal number of people?
a. Japanese and French b. French and German
c. Hindi and Spanish d. German and French

123. The ratio of the population speaking Spanish to that of Arabic is
a. 2 : 1 b. 3 : 1 c. 1 : 1 d. 12 : 7

124. By what percentage do the number of English speaking people exceed those speaking Hindi?
a. 21% b. 17% c. 16% d. 8%

125. The ratio of total population speaking Japanese and German put together to that of Russian and Arabic put together is
a. 1 : 3 b.1 : 2 c. 1 : 4 d. 2 : 3

Direction for questions 126 to 130: Answer the questions based on the information given below.
The production of food grains in the three grain-producing regions of Maharashtra state are as shown below. These three regions are the only grain-producing regions in the state.



126. What is the percentage contribution of the south region to the state in 1995?
a. 25% b. 31% c. 35% d. Cannot be determined

127. Which region shows the maximum percentage increase in production as compared to the last year?
a. West, 1996 b. South, 1995 c. West, 1998 d. None of these

128. What is the ratio of the total south production to the total north production in the period given?
a. 1 : 1.1 b. 1 : 1.2 c. 1 : 1.5 d. 1 : 1.6

129. What is the average production of food grains in the state during the given period?
a. 11,272 tonnes b. 12,400 tonnes c. 13,541 tonnes d. Cannot be determined

130. What is the maximum percentage change witnessed in any region during the entire period?
a. West, 1995 b. North, 1997 c. South, 1995 d. None of these

Direction for questions 131 to 135: Answer the questions based on the data presented in the ta below.

The following table gives the actual and estimated performance of Shikha India Limited in a report dated March 1999.

Year ended	Rs. in crores			
	March 1997	**March 1998**	**March 1999**	**March 2000***
Sales	63.91	116.78	237.49	468.24
Other income	1.7	5.32	2.00	2.50
Operating profit	24.51	34.20	67.68	135.79
Net profit	15.15	24.92	39.64	90.99
Equity	20.25	20.25	20.25	20.25

***** Estimated performance

131. What percentage of the total income does 'other income' represent in the year ending March 1998?
a. 4.2 b. 3.9 c. 4.4 d. 0.43

132. What is the 'operating profit' margin $\left(\frac{\text{Operating Profit} \times 100}{\text{Income}}\right)$ in the year ending March 1999?
a. 18% b. 28% c. 38% d. 48%

133. What is the 'earnings per share' $\left(\frac{\text{Net profit} \times 10}{\text{Equity}}\right)$ in the year ending March 1997?
a. 0.75 b. 15 c. 7.5 d. 75

134. In which year has the 'earnings per share' $\left(\frac{\text{Net profit} \times 10}{\text{Equity}}\right)$ actually grown by the maximum percentage?
a. March 1998 b. March 2000 c. March 1999 d. March 1997

135. What is the approximate percentage growth in the estimated 'net profit' in the year ending March 2000 over March 1997?
a. 350% b. 400% c. 450% d. 500%

Section – V

Direction for questions 136 to 150: Answer the question given below.

136. Which of the following is NOT true about the Cancun summit?
a. Cancun is a place in Mexico.
b. This was the fifth ministerial meet of World Trade Organization(WTO).
c. The Minister of Disinvestments, Arun Shourie, represented India.
d. Supachai Panitchpakadi is the Director-General of WTO

137. Kelkar Committee on Tax reforms does not approve which of the following statements?
a. Corporate tax rate to be reduced to 35% for foreign companies.
b. Minimum Alternate Tax(MAT) to be eliminated.
c. All excise duties are to be reviewed and to be replaced by CENVAT.
d. Excise duty to be reduce to 5% on life saving drugs, products of agriculture and items of security.

138. According to the Central Budget 2003-2004, which of the following represents the disinvestments target?
a. Rs. 10,000 crore b. Rs. 11,700 crore c. Rs. 12,900 crore d. Rs. 13,200 crore

139. The Vice-Chairman of the Planning Commission of India is
a. S. P. Gupta b. N. K. Singh c. Jaswant Singh d. K. C. Pant

140. Telecom Regulatory Authority of India (TRAI) is chaired by which of the following personalities?
a. K. V. Kamath b. R. V. Shahi c. Pradip Baijal d. Vinod Vaish

141. Which of the following is NOT true about the Oil and Natural Gas Corporation (ONGC)?
a. ONGC became the first Indian corporate to clock over Rs.10, 000 crore profits.
b. Subir Raha is the chairman and the managing director of ONGC.
c. Independent financial analysts today value ONGC at more than $15.35 billion
d. ONGC plans to invest Rs.146 billion in its upstream business for the 2003-2004 financial year.

142. Which of the following is NOT true about the Export and Import Bank of India?
a. It was established to promote foreign trade and its financing and facilitation.
b. It was established on January 1, 1982.
c. During the year ended on March 31, 2002 the bank disbursed loans worth Rs. 3,453 crore
d. The net profit of the bank for the period 2001-2002 on account of General Fund amounted to Rs. 211 crore.

143. Why was Raghuram Rajan in the news recently?
a. He is the newly appointed Chief Economic Advisor to the Ministry of Finance
b. He is the first independent evaluator of the International Monetary Fund.
c. He is the youngest Chief Economist at the International Monetary Fund.
d. He is the newly appointed Chairman of the Competition Commission of India.

144. Which of the following is TRUE according to the Central Budget 2003-2004?
a. Service tax to remain at 5%.
b. Special pension policy of 8% income in LIC.
c. VAT to be introduced in all states and Union Territories since April 1, 2003.
d. Rs. 500 crore to be provided additionally for Sarva Shiksha Abhiyan.

145. Which of the following represents the venue of the first round of GATT talks that took place in 1947?
a. Anesi b. Torquay c. Geneva d. Punta Del Este

146. According to the latest UNDP report on the Human Development Index, which of the following represents the rank achieved by India?
a. 112 b. 119 c. 124 d. 127

147. The growth rate of the agriculture sector in 2002-2003 stood at
a. –4.6 b. –3.1% c. –2.1% d. –1.5%

148. This person created news as he became the largest shareholder in the Star News with 30% stake in it amidst lot of speculation. Can you identify him/her from the given options?
a. Raveena Raj Kohli b. Peter Mukharjea c. Suhel Seth d. Kumar Mangalam Birla

149. This personality has been appointed as the brand ambassador of the Goodlass Nerolac paints, recently. Can you identify him from the given options?
a. Shahrukh Khan b. Amir Khan c. Amitabh Bachchan d. Hrithik Roshan

150. This bank topped the list of the nationalized banks in the recovery of the amount of non-performing assets in 2002-2003 through the Securitization Law by recovering Rs. 638.41 crore. Can you identify this bank from the give options?
a. Punjab National Bank b. Canara Bank
c. Bank of Baroda d. State Bank of India