

DT

QUESTION BOOKLET

REN

Paper I

QUESTION BOOKLET NO. : **5280**

Name :

Hall Ticket No. :

Centre :

Time : Two hours

Total Marks : 150

INSTRUCTIONS TO CANDIDATES

BEFORE ANSWERING, PLEASE READ THE INSTRUCTIONS CAREFULLY.

1. Write your Name, Hall Ticket No., Centre Name in the space provided on this booklet above.
2. Please darken the correct choice on the answer sheet with the help of the HB pencil. **DO NOT USE PEN or INK** to darken the appropriate box.
3. Please write the particulars, like Name and Hall Ticket No. etc., as asked on the Answer Sheet **USING INK or BALL POINT PEN.**
4. Answer Sheet along with Question Booklet must be submitted to the invigilator as soon as the time is over.
5. Each question carries one (1) mark.
6. Use of calculators, cell phones, slides and logarithmic tables is strictly prohibited.
7. For any rough work, use the rough page given at the end of this booklet.
8. Please select only one alternative (A, B, C, D) for each question.
9. Please avoid overwriting or markings on question paper.

SEAL

1. If $y = \sqrt{\sin x + \sqrt{\sin x + \sqrt{\sin x + \dots \infty}}}$, then $\frac{dy}{dx} = ?$
- (A) $\frac{\sqrt{\cos x}}{(2y-1)}$ (B) $\frac{2\sqrt{\cos x}}{(1-y)}$
 (C) $\frac{\cos x}{(2y-1)}$ (D) None of these
2. Incentre of ΔABC with vertices $A(1, 2)$, $B(3, 4)$ and $C(2, 3)$ is
- (A) $(2, 3)$ (B) $(-2, 3)$ (C) $(2, -3)$ (D) $(-2, -3)$
3. The radius of the circle $\sqrt{1+a^2}(x^2+y^2) - 2bx - 2aby = 0$ is
- (A) b (B) a (C) ab (D) $\sqrt{1+a^2}$
4. A set is
- (A) a group of objects (B) a collection of objects
 (C) a collection of similar objects (D) a well-defined collection of objects
5. If α, β are the roots of the equation $x^2 - 2x - 1 = 0$, then the value of $(\alpha^2 + \beta^2)$ is
- (A) 8 (B) 12 (C) 6 (D) 2
6. If a fair coin is tossed twice, what is the probability of getting heads in both the trials?
- (A) $\frac{1}{4}$ (B) $\frac{1}{2}$ (C) $\frac{3}{4}$ (D) 1
7. If a man running at the rate of 15 km per hour crosses a bridge in 5 minutes, the length of the bridge in metres is
- (A) 7500 (B) 1250 (C) 1000 (D) $1333\frac{1}{3}$
8. $\lim_{x \rightarrow 0} \frac{1}{x} = ?$
- (A) 0 (B) ∞ (C) 1 (D) None
9. The population of a town increases 5% annually. If its present population is 74970, what it was 2 years ago?
- (A) 64200 (B) 68000 (C) 63155 (D) 72000

10. The value of 'X' that satisfies the equation :

$$(X-a)^3 + (X-b)^3 + (X-c)^3 = 3(X-a)(X-b)(X-c)$$

is

- (A) a (B) b (C) c (D) $\frac{a+b+c}{3}$
11. A large field of 1400 acres is divided into two parts. The difference of the areas, of the two parts is one fifth the average of the two areas. Thus, the area of the smaller part is
- (A) 770 acres (B) 630 acres (C) 600 acres (D) 540 acres
12. A man bought 18 erasers for Rs. 10. He paid 10 paise more for each white eraser than for each brown eraser. What is the price of a white eraser and how many white erasers did he buy?
- (A) 60 paise; 8 (B) 60 paise; 10 (C) 50 paise; 8 (D) 50 paise; 18
13. The number of real points determined by $X^2 + Y^2 = 18$ and $X + Y = 6$
- (A) 0 (B) 1 (C) 2 (D) 3
14. The two arms of a clock are coincident once in every minutes (approx.)
- (A) 59 (B) 60 (C) 61 (D) 65
15. After plucking a certain number of fruits in a garden, a visitor has to walk back through three gates. At each gate he has to offer half the number of fruits in his possession to the guard and with a sense of gratitude the guard at each gate will return one fruit to him. When the visitor came out of the garden he possessed the same number of fruits as he had gathered from the tree. What was the number of fruits plucked by him?
- (A) 1000 (B) An infinite number
(C) 18 (D) 2
16. If $XY = r$, $XZ = r^2$ and $YZ = r^3$. Also $X + Y + Z = 13$ and $X^2 + Y^2 + Z^2 = 92$. Then Z/Y is equal to
- (A) 3 (B) $7/3$ (C) 13 (D) $13/3$
17. If a and b are natural numbers and $a - b$ is divisible by 3, then $a^3 - b^3$ is divisible by
- (A) 3 but not by 9 (B) 6
(C) 9 (D) 27

Directions for (Qs. 18 and 19) : These questions are based on the following information :

In a one-day match Sachin Tendulkar decides that for every single he takes he will hit either a four or a six and after he has hit three fours he will change his bat. As soon as he changed his bat for the third time he got out at 87. If he scores only in singles, four and sixes, then :

18. How many sixes did he hit?
(A) 5 (B) 6 (C) 7 (D) 4
19. How many singles did he take?
(A) 9 (B) 15 (C) 6 (D) 18
20. The point P whose co-ordinates are $(-m, n)$ is in the first quadrant. In which quadrant is (m, n)
(A) First (B) Second (C) Third (D) Fourth
21. Find out the number which when written in reverse order is greater than the original number by 75933
(A) 19086 (B) 96801 (C) 10869 (D) 10968
22. How many prime numbers P are there such that $P + 10$ and $P + 14$ are also prime?
(A) 1 (B) 2 (C) 3 (D) None of these
23. Find out the value of $\frac{3}{3 + \frac{0.3 - 3.03}{3 \times 0.91}}$
(A) 1.25 (B) 1.5 (C) 2.5 (D) 1.75
24. An army battalion has 6,000 men with provisions for 50 days. If the battalion is joined by another 3,000 men after 5 days, how many days will the provisions last more?
(A) 30 days (B) 20 days (C) 27.5 days (D) 10 days
25. Four horses are tethered at four corners of a square plot of side 14 m so that the adjacent horses can just reach one another. There is a small circular pond of area 20 m^2 at the centre. Find the ungrazed area
(A) 22 m^2 (B) 42 m^2 (C) 84 m^2 (D) 168 m^2
26. Number S is obtained by squaring the sum of digits of a two-digit number D . If difference between S and D is 27, then the two-digit number D is
(A) 24 (B) 54 (C) 34 (D) 45

27. If X, Y and Z are real numbers such that $X + Y + Z = 5$ and $XY + YZ + ZX = 3$, what is the largest value that X can have?

- (A) $5/3$ (B) $\sqrt{19}$ (C) $13/3$ (D) None of these

Directions for (Qs. 28 to 30) : Answer the questions based on the following information :

There are 48 balls amongst A, B and C . A divides half his balls equally among B and C . Then B divides half his balls equally among A and C . Now all of them have equal number of balls.

28. How many balls had A given to C ?

- (A) 2 (B) 4 (C) 6 (D) 8

29. How many balls had B started with?

- (A) 24 (B) 28 (C) 30 (D) 18

30. How many balls had C started with?

- (A) 8 (B) 6 (C) 4 (D) 2

31. Programs developed to be sold to one or more customer is known as

- (A) Custom Software (B) Product Software
(C) System Software (D) Real-time Software

32. Linear sequential model is also called _____ model

- (A) Sequential (B) Classic life cycle
(C) Waterfall (D) Both (A) and (C)

33. The process of scanning the program text and separating distinct symbols is known as

- (A) Symbolic analysis (B) Logical analysis
(C) Lexical analysis (D) None of the above

34. Law of conservation of energy states that, at any point in space, the total energy i.e., Sum of potential energy μ and the kinetic energy is

- (A) a constant (B) not a constant
(C) varies with time (D) none of the above

35. From which mineral is radium obtained?

- (A) Limestone (B) Haematite (C) Pitchblende (D) Rutile

36. Which of the following is not correctly matched?

- (A) Galena : Lead sulphide (B) Green Vitriol : Copper sulphate
(C) Plaster of Paris : Calcium sulphate (D) Calomel : Mercurous chloride

37. Consider the following statements regarding graphite
- (1) It is an allotrope of carbon
 - (2) It is a good conductor of heat and electricity
 - (3) It can be artificially produced.
- Of these statements :
- (A) (1), (2) and (3) are correct (B) (1) and (2) are correct
 (C) (1) and (3) are correct (D) (2) and (3) are correct
38. Which of the following shows the masses of the three elementary particles in decreasing order?
- (A) Mesons, Baryons, Leptons (B) Leptons, Baryons, Mesons
 (C) Baryons, Mesons, Leptons (D) Leptons, Mesons, Baryons
39. Gypsum is added to cement clinker to
- (A) increase the tensile strength of cement
 - (B) bind the particles of calcium silicate
 - (C) decrease the rate of setting of cement
 - (D) facilitate the formation of colloidal gel
40. Which of the following combinations of aperture and shutter speed of a camera will allow the maximum exposure?
- (A) F-5.6, 1/1000 (B) F-8, 1/250 (C) F-16, 1/125 (D) F-22, 1/60
41. The tooth with three roots is
- (A) Molar (B) Pre-molar (C) Incisor (D) Canine
42. Which of the following pairs is/are correctly matched?
- | Gland | | Hormones |
|-----------------|---|------------------------------|
| (1) Pituitary | — | Follicle stimulating hormone |
| (2) Thyroid | — | Somatotropic hormone |
| (3) Parathyroid | — | Thyroxine |
- (A) (1) only (B) (1) and (2)
 (C) (3) only (D) (1), (2) and (3)

43. The normal temperature of human body on the Kelvin scale is
(A) 280 (B) 290 (C) 300 (D) 310
44. The most important function of perspiration is to
(A) lubricate the skin (B) get rid of the body wastes
(C) regulate body temperature (D) regulate body wastes
45. Three important micronutrients essential for humans are
(A) copper, zinc and iodine (B) zinc, copper and potassium
(C) nitrogen, zinc and iodine (D) sulphur, copper and iron
46. Which of the following is in the correct sequential order in which these appeared under stimulated primitive earth condition?
(A) Methane, hydrogen cyanide, nitriles, amino acids
(B) Amino acids, nitriles, hydrogen cyanide, methane
(C) Nitriles, amino acids, methane, hydrogen cyanide
(D) Hydrogen cyanide, methane, nitriles, amino acids
47. Gene was first isolated by
(A) C.V. Raman (B) J.C. Bose
(C) Hargobind Khurana (D) S. Chandrashekar
48. When a vehicle passes, TV reception gets distorted. This is because
(A) metal reflects radiowaves
(B) spark plug creates electromagnetic disturbances
(C) passing vehicle affects the sophisticated TV components
(D) modern vehicles use electronic ignition system
49. Most of the desert plants bloom during night time because
(A) the desert insects are active during night time
(B) they are sensitive to the phases of moon
(C) the desert insects eat away flowers during daytime
(D) their blooming is controlled by low temperature

50. Match the following :

Indicator	Colour in Media
(a) Phenolphthalein	(i) Pink in acid and yellow in alkali
(b) Methyl Orange	(ii) Red in acid and blue in base
(c) Phenol red	(iii) Colourless in acid and pink in alkali
(d) Litmus	(iv) Yellow in acid and red in alkali

(a) (b) (c) (d)

(A) (i) (iv) (iii) (ii)

(B) (ii) (iii) (i) (iv)

(C) (iv) (iii) (ii) (i)

(D) (iii) (i) (iv) (ii)

51. Match the following :

Property	Metal
(a) Best conductor of heat and electricity	(i) Gold
(b) Most abundant metal	(ii) Lead
(c) Most malleable metal	(iii) Aluminium
(d) Poorest conductor of heat	(iv) Silver

(a) (b) (c) (d)

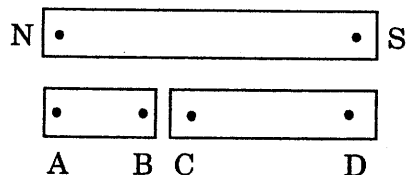
(A) (i) (iii) (ii) (iv)

(B) (ii) (iii) (iv) (i)

(C) (iii) (ii) (iv) (i)

(D) (iv) (iii) (i) (ii)

52. If a bar magnet accidentally breaks up into two parts as shown in the figure, the polarity of ends A, B, C, D, will be



- (A) A, B North Poles; C, D South Poles
- (B) A, C North Poles; B, D South Poles
- (C) A, B, C North Poles; D South Pole
- (D) A North Pole, D South Pole, Polarity of B and C cannot be determined

53. Match the following :

Disease	Cause
(a) Diabetes	(i) Decrease in the diameter of small arteries
(b) High Blood Pressure	(ii) Improper functioning of the pancreas
(c) Goitre	(iii) Deficiency of vitamin A
(d) Night Blindness	(iv) Iodine deficiency

(a) (b) (c) (d)
(A) (ii) (iv) (i) (iii)
(B) (ii) (i) (iv) (iii)
(C) (iii) (ii) (iv) (i)
(D) (iv) (i) (iii) (ii)

54. When a man circles round the earth in a satellite, then

- (A) His mass becomes zero but weight remains constant
- (B) Mass remains constant but weight becomes zero
- (C) Both mass and weight remain zero
- (D) Both mass and weight remain constant

55. Gobar gas contains mainly

- (A) Carbon monoxide
- (B) Methane
- (C) Carbon dioxide
- (D) Ethylene

56. The term 'Test Tube Baby' implies

- (A) Fertilisation of ovum takes place in the test-tube but it develops in uterus
- (B) Fertilisation of the ovum takes place in the uterus but develops in the test-tube
- (C) Fertilisation takes place in uterus and embryo develops in uterus
- (D) Fertilisation of ovum takes place in the test-tube and develops in the test-tube itself

57. Recent discovery of method of reducing salination of soil is

- (A) spreading of husk on the soil
- (B) intensive use of fertilisers
- (C) extensive use of fertilisers
- (D) none of the above

58. Demineralised water can be obtained using

- (A) permutit
- (B) ion-exchange resins
- (C) calgon
- (D) zeolites

59. An example of physical change is
(A) electrolysis of water (B) melting of ice
(C) photosynthesis (D) combustion of petrol
60. What happens when the temperature of water falls from 30°C to 0°C?
(A) Water will not freeze at 0°C
(B) The volume of ice formed will be more than the volume of water
(C) The volume of ice formed will be less than the volume of water
(D) None of the above
61. Which of the following crops has the highest photosynthetic activity?
(A) Rice (B) Sugarcane
(C) Cotton (D) Wheat
62. Earthquakes are caused due to
(A) Cyclones
(B) Volcanic eruptions
(C) Land slides
(D) Movement of a part of earth's surface on account of the faulting of rocks
63. There are two places P and Q. The longitudes of P and Q are 45°E and 60°W respectively. What will be the difference in their local times
(A) 7 hours
(B) 1 hour
(C) 6 hours
(D) Both places will have the same local time
64. Who invented "Logarithms"?
(A) Amundson (B) John Napier
(C) Mendeleef (D) John Brown
65. Carburettor is an arrangement in internal combustion engines for
(A) Mixing water with petrol (B) Mixing air with petrol vapour
(C) Mixing oil with petrol (D) None of the above

66. Steam produces burns more easily than water at equal temperature because
(A) it is a gas
(B) it contains more calories of heat per gram at the same temperature
(C) it contains less water
(D) it contains, high temperature ions which produce burns
67. 'Astigmatism' is a disease which affects
(A) Ears (B) Legs
(C) Eyes (D) Hands
68. The first Indian satellite 'Aryabhatta' was launched from
(A) Cape Kennedy (U.S.A.) (B) Bears Lake (U.S.S.R.)
(C) Palamor (U.K.) (D) Srihari Kota (India)
69. 'Sea of Tranquility' and 'Ocean of storms' are in
(A) Jupiter (B) Moon
(C) Mars (D) Pacific ocean
70. In a 'thermos flask' vacuum between two walls prevents the heat lost by
(A) conduction (B) convection
(C) radiation (D) evaporation

Directions for (Qs. 71 to 75) : Answer these questions based on the following information :

J, K, L, M and N collected stamps. They collected a total of 100. None of them collected less than 10. No two among them collected the same number.

- I. J collected the same number as K and L put together
II. L collected 3 more than the cube of an integer
III. The number collected by J was the square of an integer
IV. The number collected by K was either the square or the cube of an integer
V. The number collected by M and N are in the ratio 4 : 3
71. The number collected by J was
(A) 27 (B) 49 (C) 36 (D) 64
72. The number collected by K was
(A) 16 (B) 27 (C) 25 (D) 36

73. The difference in the numbers collected by L and M was
 (A) 3 (B) 2 (C) 5 (D) 9
74. The number/numbers collected by how many in the group was/were prime numbers?
 (A) 0 (B) 1 (C) 2 (D) 3
75. The numbers collected by which pair among the following together add up to the cube of an integer?
 (A) K and L (B) J and N (C) M and N (D) M and L
76. Ashoka said to Upagupta, "when I add six times my age 6 years from now to seven times my age 7 years from now, I get 14 times my age 3 years from now. I will be a Samrat in 3 years from now." At what age did Ashoka become a Samrat?
 (A) 46 years (B) 33 years (C) 55 years (D) 40 years

Directions for (Qs. 77 to 81) :

The following table shows the domestic sales of scooters by the five manufacturer from 1988 to 1993.

Manufacturer	1988	1989	1990	1991	1992	1993
A	440	480	470	500	520	510
B	400	410	415	415	420	430
C	380	390	390	400	420	495
D	360	380	400	415	440	500
E	480	440	440	420	425	435

77. Considering the period given, the domestic sales of which manufacturer is the highest?
 (A) A (B) B (C) C (D) D
78. What is the approximate share of domestic sale of scooters of the manufacturer B during 1989?
 (A) 10.5% (B) 25.5% (C) 15.5% (D) 19.5%
79. During 1993, the sale of which manufacturer has shown the maximum percentage increase over the previous year?
 (A) A (B) B (C) C (D) D
80. What is the ratio of the minimum sale to the maximum sale of scooters during 1991?
 (A) 0.9 (B) 0.8 (C) 0.6 (D) 0.5
81. In respect of which of the following combinations, the sale of scooters is the highest over the period shown?
 (A) D – 1993 (B) A – 1991 (C) A – 1993 (D) A – 1992

Directions for (Qs. 82 – 87) : Answer the questions based on the information given below.

Raksha is younger than Saksha and older than Sita. Anju is younger than Manju and older than Sanju. Manju is younger than Sita and older than Jugal. Jugal is younger than Sanju and older than Mughal. Saksha is younger than Beena and older than Heena. Heena is older than Raksha.

82. Who is the youngest?
(A) Anju (B) Sanju (C) Jugal (D) Mughal
83. Who precedes Sanju, Jugal and Mughal in age?
(A) Manju (B) Sita (C) Anju (D) Raksha
84. Who is the oldest?
(A) Anju (B) Sanju (C) Beena (D) Sita
85. Who is next in age to Beena, Saksha, Raksha and Heena and Sita?
(A) Manju (B) Sanju (C) Mughal (D) Anju
86. Who is the second oldest?
(A) Sanju (B) Saksha (C) Heena (D) Jugal
87. Who is the second youngest?
(A) Heena (B) Jugal (C) Anju (D) Manju

Directions for (Qs. 88 – 97) : Mark the answer as

- (A) If the question can be answered with the help of one statement alone.
(B) If the question can be answered with the help of each statement independently.
(C) If the question can be answered with the help of both the statements together.
(D) If the question cannot be answered even using both the statements.
88. How many of A , B , C and D passed the exam?
I. The following is a true statement : A and B passed the exam.
II. The following is a false statement : At least one among C and D has passed the exam.
89. What is the value of ' a '?
I. $(x - a)$ is a factor of $x^3 - 9x^2 + 20x - 24$.
II. $x^2 = 4$.

90. What is price of tea?
- I. Price of coffee is Rs. 5 more than the price of tea.
 - II. Price of coffee is Rs. 5 less than that of a soft drink which is three times the price of tea.
91. Find the sum of the cubes of two numbers
- I. The difference of the two numbers is 8.
 - II. The product of the two numbers is 20.
92. How many minutes does a clock gain in a day?
- I. When the actual time is 8:00 a.m., the clock shows 8:12 a.m.
 - II. The clock get 35 seconds faster each quarter of an hour.
93. What is the area of a regular hexagon?
- I. The length of the boundary line of the hexagon is 36 cm.
 - II. The area of the hexagon is 6 times the area of an equilateral triangle formed on one of the sides.
94. What are values of the real numbers x and y ?
- I. The arithmetic mean of x and y is equal to ' a ' and the geometric mean of x and y is also equal to ' a '.
 - II. $(x/y) = R$ and $(x - y) = D$.
95. What is the length of the line SQ which is the diagonal of a square as well as the diameter of a circle?
- I. All four vertices of the square lie on the circumference of the circle.
 - II. The numerical value of the area of the circle is twice the length of SQ.
96. Two birds are flying in opposite directions along the edge of a circle-shaped forest of radius 4 km. Both have to go to the same nest. Who reaches the nest first?
- I. Speed of bird A is 60 Kmph and speed of bird B is 50 Kmph.
 - II. The nest is diametrically opposite to the starting point of the flight of the two birds, on the circumference of the forest.
97. Which product A or B if sold gives more profit amount per item?
- I. A gives a profit of 20 per cent and B gives a profit of 30 per cent.
 - II. Both A and B have the same selling price but profit percentage in the ratio 1 : 2.

98. Suppose you are in charge of a military command guarding a bridge and you receive a message from the bridge that the enemy forces have almost reached the other side of the bridge. What telephone message would you send?

- (A) Order air-shelling (B) Break the bridge
(C) Send more troops (D) Surrender to them

99. A shepherd had 17 sheep. All but nine died. How many did he have left?

- (A) 9 (B) 8 (C) 7 (D) 12

100. A duck in front of two ducks; a duck behind two ducks; and one duck in the middle. How many ducks are there?

- (A) 5 (B) 3 (C) 7 (D) 4

101. Insert the missing number

8 5 3 10
7 6 6 7
14 8 9 ?

- (A) 17 (B) 72 (C) 16 (D) 13

102. I am sixth in the queue from either end. How many people are there in the queue?

- (A) 13 (B) 12 (C) 11 (D) 10

103. Gazelle is to swift as swan is to

- (A) Slow (B) Water (C) Egg (D) Graceful

104. Today is Saturday. What day of the week will be after 27 days?

- (A) Monday (B) Friday (C) Wednesday (D) Saturday

105. ECLLOEG

Write the middle (alphabet) of the rearranged word

- (A) L (B) O (C) C (D) K

Directions for (Qs. 106 - 110) : In each of the questions from 106 to 110, three words have been given which have some common quality for them. This common quality is given as one of the four alternatives under it. Find out the correct alternative and mark it in the answer.

106. Cheese, Curd, Butter

- (A) Ghee (B) White (C) Milk (D) Cow

107. January, June, July
 (A) Rainy season (B) Summer (C) Month (D) March
108. Chennai, Mumbai, Kochi
 (A) Port (B) Sea (C) Calcutta (D) City
109. Cap, Coat, Trousers
 (A) Hair (B) Dress (C) Turban (D) Umbrella
110. Sun, Earth, Mars
 (A) Stars (B) Moon (C) Solar system (D) Sky

Directions for (Qs. 111 – 114) : In each of the questions below, four different ways of writing a sentence are indicated. Choose the best way of writing the sentence.

111. (1) The main problem with the notion of price discrimination is that it is not always a bad thing, but that it is the monopolist who has the power to decide who is charged what price.
 (2) The main problem with the notion of price discrimination is not that it is always a bad thing, it is the monopolist who has the power to decide who is charged what price.
 (3) The main problem with the notion of price discrimination is not that it is always a bad thing, but that is the monopolist who has the power to decide who is charged what price.
 (4) The main problem with the notion of price discrimination is not it is always a bad thing, but that it is the monopolist who has the power to decide who is charged what price.
 (A) (1) (B) (2) (C) (3) (D) (4)
112. (1) A symbiotic relationship develops among the contractors, bureaucracy and the politicians, and by a large number of devices costs are artificially escalated and black money is generated by underhand deals.
 (2) A symbiotic relationship develops among contractors, bureaucracy and politicians, and costs are artificially escalated with a large number of devices and black money is generated through underhand deals.
 (3) A symbiotic relationship develops among contractors, bureaucracy and the politicians, and by a large number of devices costs are artificially escalated and black money is generated on underhand deals.
 (4) A symbiotic relationship develops among the contractors, bureaucracy and politicians, and by large number of devices costs are artificially escalated and black money is generated by underhand deals.
 (A) (1) (B) (2) (C) (3) (D) (4)

113. (1) The distinctive feature of tariffs and export subsidies is that they create difference of prices at which goods are traded on the world market and their price within a local market.
- (2) The distinctive feature of tariffs and export subsidies is that they create a difference of prices at which goods are traded with the world market and their prices in the local market.
- (3) The distinctive feature of tariffs and export subsidies is that they create a difference between prices at which goods are traded on the world market and their prices within a local market.
- (4) The distinctive feature of tariffs and export subsidies is that they create a difference across prices at which goods are traded with the world market and their prices within a local market.
- (A) (1) (B) (2) (C) (3) (D) (4)

114. (1) Any action of government to reduce the systemic risk inherent in financial markets will also reduce the risks that private operators perceive and thereby encourage excessive hedging.
- (2) Any action by government to reduce the systemic risk inherent in financial markets will also reduce the risks that private operators perceive and thereby encourage excessive gambling.
- (3) Any action by government to reduce the systemic risk inherent in financial markets will also reduce the risks that private operators perceive and thereby encourages excessive gambling.
- (4) Any action of government to reduce the systemic risk inherent in financial markets will also reduce the risks that private operators perceive and thereby encourages excessive gambling.
- (A) (1) (B) (2) (C) (3) (D) (4)

Directions for (Qs. 115 – 119) : For each of the words below a context is provided. From the alternatives given pick the word or phrase that is closest in meaning in the given context.

115. Opprobrium : The police officer appears oblivious to the opprobrium generated by his blatantly partisan conduct.
- (A) Harsh criticism (B) Acute distrust
(C) Bitter enmity (D) Stark oppressiveness
116. Portend : It appears to many that the US 'war on terrorism' portends trouble in the Gulf.
- (A) Introduces (B) Evokes (C) Spells (D) Bodes

117. Prevaricate : When a videotape of her meeting was played back to her and she was asked to explain her presence there, she started prevaricating.
- (A) Speaking evasively (B) Speaking violently
(C) Lying furiously (D) Throwing a tantrum
118. Restive : The crowd became restive when the minister failed to appear even by 10 pm.
- (A) Violent (B) Angry (C) Restless (D) Distressed
119. Ostensible : Manohar's ostensible job was to guard the building at night.
- (A) Apparent (B) Blatant (C) Ostentatious (D) Insidious

Directions for (Qs. 120 – 125) : Read the following passage and answer the questions

Passage

With the latest advancements in technologies, more and more people are becoming dependent on the Internet for information and communication. The information that is gathered using the Internet could be utilized for commercial gain and it is here that secrecy or privacy of the information becomes significant and important. Most websites collect information from users in some way or the other. Whether the user has to buy something, or subscribe to a service, or even send an e-greeting, he is made to divulge at least some information about himself.

When a user registers for a service, the website requests him to supply a number of items of personal information such as his name, address, telephone number and e-mail address. While a database of personal information has always been valuable, with the Internet and computers, all this information is stored in a digital form that is easy to access, sort and search. Consequently, its value is significantly enhanced in comparison to its analog counterpart. Now, vast amounts of information can be sorted based on a number of predefined fields and at the click of a mouse it is possible to obtain comprehensive details about the intimate personal preferences of a number of people. It has thus become easy for anyone to have access to this information and to even use it in an illegal manner. But this is not the only threat to personal information. As the world gets more wired, the volume of personal information that a single person can generate can only increase, that too more often than not, exponentially. New technologies that are being applied to diverse fields such as medical care, telecommunications, transportation and international financial transactions have resulted in the creation and maintenance of huge warehouses of data relating to all the users of these new technologies. To be connected to any of these service sectors, one has to submit information about himself, at least some of which then finds its way to the Internet. Computers which are networked with high-speed data processing capabilities could well create detailed dossiers of individual data with relative ease, without any need to have that information stored on a single computer system. Thus, the individual is not left with much of privacy.

Many countries of the world have begun to recognise the need to protect the privacy of personal information and have enacted legislations geared at regulating the use of personal information. These laws derive their basis from fundamental rights enshrined in the national constitutions of these countries as well as the right to privacy enunciated in numerous international treaties such as the Universal Declaration of Human Rights and the International Covenant on Civil and Political Rights. Data protection statutes around the world stress a few basic principles. Most of them require that personal information be obtained fairly and lawfully, that such information be used only for the purpose that was originally specified to the individual, that the use be adequate, relevant and not excessive to the stated purpose, that the information be used accurately and in an up-to-date fashion, that the information be accessible to the subject, that the information be kept secure and, once its purpose is completed, that such information be destroyed. Europe is clearly the front-runner in data protection legislation. In 1995, the European Union passed a Europe-wide Data Protection Directive aimed at granting individuals greater protection from abuses of their personal information. It also passed the Telecommunications Directive that prescribes special protection in relation to telephones, digital televisions, mobile communication, etc. Just enacting laws does not imply that they would be enforced, so, in addition, elaborate methods have been adopted to ensure the enforceability of these laws. Every EU country is to have a privacy commissioner to enforce the regulations as they apply within the European Union as well as to ensure that data which is exported out of the European Union is guaranteed the same level of protection as is available under the directive.

However, just as proponents of the right to privacy have been applauding the efforts of the EU in coming up with a workable legal framework for dealing with personal data, detractors have been pointing out the grave consequences that such a legislation would have on other fundamental rights such as the freedom of speech and expression, particularly in the context of the internet. In the United States of America, concern is being expressed about the extra-territorial applicability of the EU legislation which could seriously hinder the trans-boundary flow of data to and from the EU. Countries that have less stringent data protection regimes may find that they will not be able to participate in data exchanges with the members of the EU, particularly when such data relates to sensitive information.

Unfortunately, the law in India is ambiguous about the status of data and is silent as to whether it can be protected at all. There is no statute in the country that protects personal data from abuse or which grants an individual the right to proceed against any third party who deals in such information. While the right to privacy has been recognised by the Supreme Court as being implicit in the fundamental rights of the citizens of the country, no principles have yet been evolved, either by the courts or the legislature, as to how this right to privacy should be safeguarded in relation to personal data on the Internet. Most Indian companies are unaware of the passage of the data protection legislations elsewhere in the world. Most do not even know the impact of such laws on their business. More importantly, however, Indian users of the Internet remain remarkably naive about the amount of personal information they leak into the Internet each time they log on. Until such time as the government enacts a comprehensive legislation on personal data protection, India's Internet user community would best fend for itself over the Internet.

While there is a lot that can be achieved by simply taking care to adopt extreme caution in volunteering information over the Internet, a number of software programmes are available which offer greater levels of protection to users. But again most of the Indians are unaware of the presence of such software. Even if they are aware, they do not pay much importance to the need to protect the information they might unknowingly leak on the Internet. In India, the digital collection and storage of data is only just gaining ground and, to be honest, the risk that the abuse of personal information poses to individual users is relatively minimal. However, if we can learn lessons from the western experience, the sooner we enact appropriate laws to protect individuals from abuse, the greater security we can offer to our citizens.

120. According to the author the risk of abuse of personal information is still not too high in India because
- (A) Indians are relatively more honest
 - (B) Indians are not technologically smart enough to find ways to abuse digital information
 - (C) We have many easily available software to protect our data
 - (D) Collection of digital data is still in a very nascent stage in India, as compared to the western countries
121. What is one of the reasons for dissatisfaction of some groups with regards to the European Data Protection Directive?
- (A) It can hinder the trans-boundary flow of data, to and from the EU
 - (B) It is not a practical or workable solution
 - (C) It would come in the way of the optimum use of Internet throughout the world
 - (D) None of the above
122. What is the purpose of having a privacy commissioner in every EU nation?
- (A) To deal with cases arising out of illegal use of digital data
 - (B) To ensure proper enforcement of Data Protection Directive
 - (C) To ensure that no data flows in from across the boundaries of the EU
 - (D) Both (A) and (B)

123. What is the advantage of the digital databases over the traditional kinds of databases used till now?
- (A) They can store vast amounts of information, which was impossible till now
 (B) They can be more easily protected against illegal access
 (C) They are easier to access
 (D) The digital data is automatically updated, which was difficult with the traditional databases
124. What can be said about the tone of the author?
- (A) Informative (B) Complaining
 (C) Critical (D) Argumentative
125. Based on the passage, which of the following statements can be said to be true?
- (A) Enacting laws is as good as enforcing them
 (B) Europe pioneered the data protection legislation
 (C) No nation has a fundamental right to privacy in its constitution
 (D) Indian constitution does not grant an individual the right to file suit against a third party

Directions for (Qs. 126 – 130) : In each of the following questions the sentence can be made meaningful and correct by replacing the italicised part with one of the given alternatives.

126. Speculations and *hypothesising* are the most essential and well-known aspects of innovations.
- (A) hypothesis has been (B) hypothesising needs
 (C) hypothesis makes (D) hypothesising confronts
127. He has received no other message than the urgent telegram *asking him to rush his village* immediately.
- (A) asked him to rush his village (B) asking him to have rush his village
 (C) asking him to rush to his village (D) asking him rushing at his village

128. The earnest appeal by the staff members that the salaries be subjected to *upward revision* were rejected by the industrialist.

- (A) upwardly revision was rejected (B) upward revision was rejected
(C) upward revising were rejectable (D) upwardly revision was rejectable

129. Taking our seats, *the game started*.

- (A) We waited for the game to start (B) The game was starting
(C) The game began to start (D) No improvement

130. My cousin *hindered me to perform* the work.

- (A) hindered me to performing (B) hindered me from performing
(C) hindered me perform (D) no improvement

Directions for (Qs. 131 – 135): Choose the word which is closest to the opposite in meaning of the italicised word or phrase in each of the following sentences.

131. I can not bear with that *niggard* fellow any more

- (A) miserly (B) generous (C) extravagant (D) avaricious

132. It was a very *dreary* day

- (A) drab (B) dangerous (C) beautiful (D) bright

133. The new officer is a *brash* youngman

- (A) polite (B) arrogant (C) kind (D) handsome

134. She handled the machine with *deft* fingers

- (A) clumsy (B) sturdy (C) delicate (D) quick

135. I think this would be a *quixotic* project for me

- (A) wasteful (B) profitable (C) fantastic (D) practical

Directions for (Qs. 136 – 145) : In the following passage there are blanks each of which has been numbered. These numbers are printed below the passage and against each, four words are suggested one of which fits the blanks appropriately. Find out the appropriate word in each case.

Success consists in doing and accomplishing things. It is not something that can be measured in relation to the _____(136) of the other. Success of _____(137) is caused more by mental attitude than by mental capacities. The first success factor is the _____(138) of a goal. To attain the goal, one must pursue a single minded goal with passion and _____(139). Emerson said nothing great was ever achieved with enthusiasm. To pursue a goal _____(140) is the best possible assurance of success. If there is a way to success quite often one finds it _____(141) by few difficulties or obstacles. It requires the whole-hearted devotion of man to achieve _____(142) objectives. Anyone therefore can be _____(143) if he is prepared to work hard for it. Another essential success factor is courage. Courage is the recognition that _____(144) is a genuine possibility and absolute certainty of succession is an _____(145).

- | | | | |
|------------------------|-------------------|--------------------|---------------------|
| 136. (A) possessions | (B) obsession | (C) property | (D) accomplishments |
| 137. (A) operation | (B) enterprise | (C) case | (D) moment |
| 138. (A) attainment | (B) location | (C) accomplishment | (D) absence |
| 139. (A) energy | (B) enthusiasm | (C) morbidity | (D) non-chalance |
| 140. (A) inquisitively | (B) competitively | (C) happily | (D) passionately |
| 141. (A) faced | (B) cowed | (C) trample | (D) relieved |
| 142. (A) aims | (B) simple | (C) coveted | (D) dream |
| 143. (A) happy | (B) successful | (C) valourised | (D) chastised |
| 144. (A) success | (B) trouble | (C) failure | (D) enemies |
| 145. (A) allusion | (B) illusion | (C) necessity | (D) ability |

Directions for (Qs. 146 – 150) : Sentences given in each question, when properly sequenced, form a coherent paragraph. The first and 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'.

146. 1. Security inks exploit the same principle that causes the vivid and constantly changing colours of a film of oil on water.
- A. When two rays of light meet each other after being reflected from these different surfaces, they have each travelled slightly different distances.
 - B. The key is that the light is bouncing off two surfaces, that of the oil and that of the water layer below it.
 - C. The distance the two rays travel determines which wavelengths, and hence colours, interfere constructively and look bright.
 - D. Because light is an electromagnetic wave, the peaks and troughs of each ray than interfere either constructively, to appear bright, or destructively, to appear dim.
6. Since the distance the rays travel changes with the angle as you look at the surface, different colours look bright from different viewing angles.
- (A) ABCD (B) BADC (C) BDAC (D) DCAB
147. 1. Commercially reared chicken can be usually aggressive, and are often kept in darkened sheds to prevent them pecking at each other.
- A. The birds spent far more of their time—up to a third—pecking at the inanimate objects in the pens, in contrast to birds in order pens which spent a lot of time attacking others.
 - B. In low light conditions, they behave less belligerently, but are more prone to ophthalmic disorders and respiratory problems.
 - C. In an experiment, aggressive head-pecking was all but eliminated among birds in the enriched environment.
 - D. Altering the birds environment, by adding bales of wood—springs to their pens, can work wonders.
6. Bales could diminish aggressiveness and reduce injuries; they might even improve productivity, since a happy chicken is a productive chicken.
- (A) DCAB (B) CDBA (C) DBAC (D) BDCA

148. 1. The concept of a 'nation-state' assumes a complete correspondence between the boundaries of the nation and the boundaries of those who live in a specific state.
- A. Then there are members of national collectivities who live in other countries, making a mockery of the concept.
- B. There are always people living in particular states who are not considered to be (and often do not consider themselves to be) members of the hegemonic nation.
- C. Even worse, there are nations which never had a state or which are divided across several states.
- D. This, of course, has been subject to severe criticism and is virtually everywhere a fiction.
6. However, the fiction has been, and continues to be, at the basis of nationalist ideologies.
- (A) DBAC (B) ABCD (C) BACD (D) DACB
149. 1. In the sciences, even questionable examples of research fraud are harshly punished.
- A. But no such mechanism exists in the humanities much of what humanities researchers call research does not lead to results that are replicable by other scholars.
- B. Given the importance of interpretation in historical and literary scholarship, humanities researchers are in a position where they can explain away deliberate and even systematic distortion.
- C. Mere suspicion is enough for funding to be cut off; publicity guarantees that careers can be effectively ended.
- D. Forgeries which take the form of pastiches in which the forger intersperses fake and real parts can be defended as mere mistakes or aberrant misreading.
6. Scientists fudging data have no such defences.
- (A) BDCA (B) ABDC (C) CABD (D) CDBA
150. 1. Horses and communism were, on the whole, a poor match.
- A. Fine horses bespoke the nobility the party was supposed to despise.
- B. Communist leaders, when they visited villages, preferred to see cows and pigs.
- C. Although a working horse was just about tolerable, the communists were right to be wary.
- D. Peasants from Poland to the Hungarian Pustza preferred their horses to party dogma.
6. "A farmer's pride is his horse; his cow may be thin but his horse must be fat", went a Slovak saying.
- (A) ACDB (B) DBCA (C) ABCD (D) DCBA