

HELD ON :
29.04.2012
Based on Memory

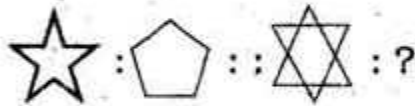
ESIC MULTI-TASKING STAFF (WEST BENGAL ZONE) EXAM

GENERAL INTELLIGENCE

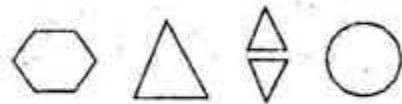
Directions (1 - 4) : Select the suitable alternative to satisfy the relationship in the following questions.

- A : Z :: B : ?
 (1) A (2) C
 (3) Y (4) X
- Beat : Heart :: Breath : ?
 (1) Mouth (2) Lungs
 (3) Life (4) Oxygen
- Water : Hose :: Bullet : ?
 (1) Rifle (2) Barrel
 (3) Trigger (4) Airm

4. Question Figures



Answer Figure

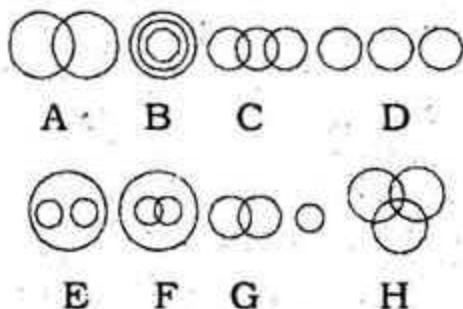


- (1) (2) (3) (4)

Directions (5-7) : Pick the odd one out.

- (1) Id (2) Diwali (3) Onam (4) Republic Day
- (1) Tiger (2) Lion (3) Leopard (4) Wolf
- (1) A (2) U (3) O (4) W

Directions (8-10) : A set of inter relationship diagrams are given below. Select the diagram which represent the relationship best in the questions given.



- Animals, Camel, Giraffe :
 (1) A (2) D
 (3) H (4) E
- Uneducated people, poor people, unemployed people:
 (1) E (2) B
 (3) D (4) H
- Females, mothers, sisters:
 (1) F (2) E
 (3) G (4) D

Directions (11-12) : A logical diagram is drawn following by four choice groups. Select the choice which fit the logic of the diagram.



- (1) Forest, Trees, Plants
 (2) Mathematics, Algebra, Geometry
 (3) River, House, Boy
 (4) Humans, Mothers, Computers



- (1) Lions, Tigers, Females
 (2) Laces, Sticks, Coats
 (3) Flowers, Trees, Grass
 (4) Rivers, Ganges, Yamuna
- C is A's father's nephew, D is A's cousin but not brother of C. How is D related to C ?
 (1) Father
 (2) Aunt
 (3) Sister
 (4) Mother

- A man is standing under a tree at night and walks in the northern direction for 5 km. He then turns 90° to his right and walks 5 km. In which direction should he walk to get the original tree ?
 (1) South
 (2) South East
 (3) South West
 (4) West

Directions (15-17) : A cube of side four inch is painted red, blue and black on the pairs of opposite faces. It is then cut into smaller cubes of side one inch each.

- How many cubes have one face red and one blue (the other faces may be painted or unpainted) ?
 (1) 16 (2) 8
 (3) 4 (4) 0
- How many cubes have one face red and all others unpainted ?
 (1) 8 (2) 4
 (3) 6 (4) 16
- How many cubes have faces painted with three different colours ?
 (1) 8 (2) 4
 (3) 6 (4) 16

Directions (18-19) : In the following questions if.

- means ×, × means +,
 + means ÷, ÷ means -

Give the answers to the following questions.

- $5 + 5 \times 20 \div 7 \times 15$:
 (1) 29 (2) 30
 (3) 25 (4) 31
- $(7 - 5) \times (27 + 9) \times (30 + 5)$:
 (1) 42 (2) 40
 (3) 44 (4) 49

Directions (20-22) : In the following questions, select the choice which completes the series.

- A 2 C, D 5 F, G 8 I
 (1) J13K
 (2) J11L
 (3) L13M
 (4) N14O
- 1, 2, C, 4, 5, F, 7, 8, I, ?:
 (1) 10, 11, L (2) 8, 9, K
 (3) 9, 10, L (4) 12, 13, M
- 123, DEF, 789, JKL, ?:
 (1) 13, 14, 15 (2) MNO
 (3) 9, 10, 11 (4) PQR

23. Five persons are standing in a queue. One of the two persons at the extreme end is a professor and the other is a businessman. An advocate is standing to the right of the student. An author is to the left of the businessman. The student is standing between the professor and the advocate. Counting from the left the author is at which place:

- (1) 1st (2) 2nd
(3) 3rd (4) 4th

Directions (24-26): There are five friends A, B, C, D, and E. A and B can work on Monday, Tuesday, Wednesday. B and C can work on Monday, Wednesday, Thursday. C and D can work on Monday, Friday, Thursday. D and E can work on Friday, Tuesday, Thursday. E and A can work on Friday, Tuesday, Wednesday. Select the appropriate choice in the following questions.

24. Who cannot work on a Thursday?

- (1) A (2) B
(3) C (4) E

25. Name the person who cannot work on Fridays:

- (1) A (2) B
(3) C (4) E

26. Each friend can work on how many days in a week?

- (1) 3 (2) 4
(3) 5 (4) 6

Directions (27-29): In the following questions select the choice of letters which completes the first word and begins the second. The letters in the bracket end the first word and begin the second.

27. CUT (...) RAIN:

- (1) ENT (2) UNF
(3) TER (4) TEL

28. SM (...) ERGY:

- (1) SYN (2) ELL
(3) ART (4) ALL

29. OPT (...) RLY:

- (1) CALL
(2) MISE
(3) MIST
(4) UMUM

Directions: In the following question a logic has been used to determine the answer. Examine the logic of the solved answers in first two columns and obtain the answer of the third column following the same logic.

30.	4	1	3
	2	4	7
	2	3	2
	<hr/>	<hr/>	<hr/>
	36	125	?
	(1) 81	(2) 64	
	(3) 100	(4) 121	

Directions (31-33): These questions follow a pattern. The answer of first two columns have been arrived at by following some logic. You have to find out the answer of third column following the same logic and select the choice to replace the question mark.

31.	$7\frac{1}{2}$	27	$4\frac{1}{4}$
	$8\frac{1}{2}$	8	$5\frac{1}{2}$
	$3\frac{1}{2}$	3	$1\frac{3}{4}$
	<hr/>	<hr/>	<hr/>
	$12\frac{1}{2}$	3	?
	(1) 8	(2) $7\frac{1}{2}$	
	(3) $6\frac{1}{2}$	(4) 9	

32.	82623	75696	221256
	3 2	7	
	<hr/>	<hr/>	<hr/>
	27541	37848	?
	(1) 110628	(2) 44251	
	(3) 31608	(4) 45846	

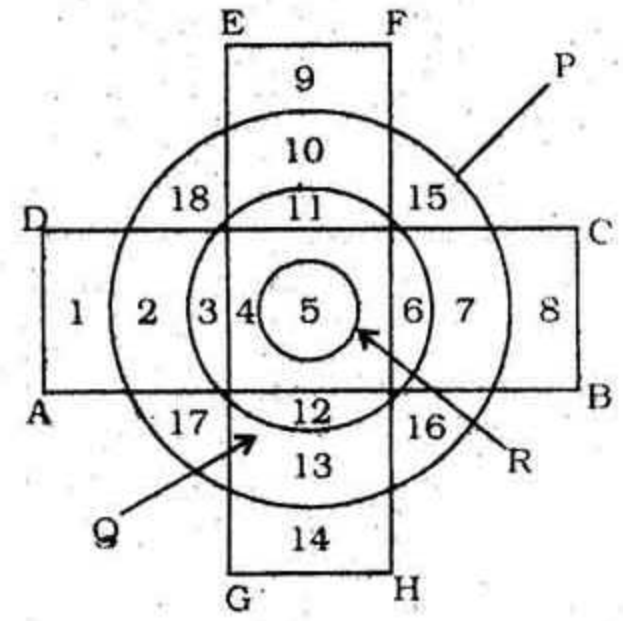
33.	xyz	876
	pq	23
	<hr/>	<hr/>
	xy + yz - pq	?
	(1) 46	(2) 80
	(3) 92	(4) 100

34. There are six villages A, B, C, D, E and F.
F is 1 km West of D
B is 1 km East of E
A is 2 km North of E
C is 1 km East of A
D is 1 Km South of A

Which of these villages are in a line?

- (1) AC and B (2) AD and E
(3) CB and F (4) EB and D

Directions (35-39): Based on the diagram, select the appropriate choice in the following questions.



The circle P represents Indians. The circle Q represents educated persons. The circle R represents honest persons. ABCD represents dark-skinned persons. GHFE represents intelligent persons.

35. All honest Indians are:
(1) Educated
(2) Fair Skinned
(3) Both the above
(4) None of these
36. Some intelligent Indians are:
(1) Honest
(2) Educated
(3) Dark-skinned
(4) All of these
37. Indians who are dark-skinned but neither honest, nor intelligent, nor educated are represented by:
(1) 10, 13 (2) 11, 12
(3) 2, 7 (4) 18, 16
38. To have more educated Indians we must:
(1) Increase radius of 'R'
(2) Increase the radius of 'Q'
(3) Increase the radius of 'P'
(4) Increase area of GHFE

NUMERICAL ABILITY

39. If the radius of circle 'P' was reduced to be equal to the radius of 'Q' then:
 (1) Number of educated would increase
 (2) The number of honest would decrease
 (3) The number of honest would increase
 (4) The percentage of honest Indians would increase
40. 8 boys sat in a row. Raju is immediate right of Rakesh and immediate left of Shekhar. Shyam is sitting after 3 boys on the right of Shekhar. How many boys were there between Raju and Shyam?
 (1) 3 (2) 4
 (3) 5
 (4) None of these
41. Meena is the mother of Guriya and Sonu. Puneet is the father in law of Meena. Puneet is the father of Bindoo and Deepa. Puneet has only one daughter. Deepa is the Aunt of Guriya. How is Sonu related to Bindoo?
 (1) Father (2) Son
 (3) Niece
 (4) None of these
42. Four friends, A, B, C and D distribute some money among themselves in such a manner that A gets one less than B, C gets 5 more than D, D gets 3 more than B. Who gets the smallest amount?
 (1) D (2) C
 (3) B (4) A
43. From a point P, Raman started walking towards south and walked 40 metres. He then turned towards his left and walked 30 metres and reached a point R. The point R is at what minimum distance and in what general direction from the point P?
 (1) 35 metres south-east
 (2) 50 metres south-west
 (3) 35 metres south-west
 (4) 50 metres south-east
44. How many 6's are there in the following number sequence

which are not immediately preceded by 3 but immediately followed by 1?

2 3 6 1 7 6 1 8 3 6 0 2 4 6 1 8
 8 6 6 1 4 0 3 6 1 2

- (1) Four (2) One
 (3) Two (4) Three

Directions: Select the suitable alternative to complete the series.

45. 15, 31, 63, 127, ___

- (1) 255 (2) 250
 (3) 254 (4) 210

Directions: This question follows some pattern. Pick the suitable choice from the alternatives given to fill the question mark place.

46. $\begin{matrix} 66 & 83 & 27 \\ 2 & 2 & 2 \end{matrix}$

$\begin{matrix} \sqrt{\quad} & \sqrt{\quad} & \sqrt{\quad} \\ \hline 8 & 9 & ? \end{matrix}$

- (1) 5 (2) 6
 (3) 7 (4) 8

47. A watch reads 7.30. If the minute hand points west, in what direction will the hour hand point?

- (1) North-West
 (2) North-East
 (3) South-West
 (4) South-East

48. In a certain language, RICH is coded as SJDI, then POOR will be coded as:

- (1) QPPS (2) MPPK
 (3) DEEP (4) ZXXV

49. Half the villagers of a village have their own houses. One fifth cultivate paddy. One third are literate. Four fifth of the villagers are under 25. Which of the following is certainly true?

- (1) Some villagers under 25 are literate
 (2) Only a quarter of villagers owning houses cultivate paddy
 (3) Only half who cultivate paddy are literate
 (4) No villager under 25 has his own house

50. What is represented by '?' in:
 EXAM : FWAN :: ? : NZZF

- (1) MACE (2) MARK
 (3) MASK (4) MAZE

51. A quadrilateral with a pair of opposite sides parallel is called:

- (1) Parallelogram
 (2) Trapezium
 (3) Polygon
 (4) None of these

52. A fruit seller had some apples. He sells 40% apples and still has 420 apples. Originally, he had:

- (1) 588 apples (2) 600 apples
 (3) 672 apples (4) 700 apples

53. The cost price of 20 articles is the same as the selling price of x articles. If the profit is 25%, then the value of x is:

- (1) 15 (2) 16
 (3) 18 (4) 25

54. In the first 10 overs of a cricket game, the run rate was only 3.2. What should be the run rate in the remaining 40 overs to reach the target of 282 runs?

- (1) 6.25 (2) 6.5
 (3) 6.75 (4) 7

55. A person crosses a 600 metre long street in 5 minutes. What is his speed in km per hour?

- (1) 3.6 (2) 7.2
 (3) 8.4 (4) 10

56. How much time will it take for an amount of ₹450 to yield ₹81 as interest at 4.5% per annum of simple interest?

- (1) 3.5 years (2) 4.5 years
 (3) 5 years (4) 4 years

57. What is the probability of getting a sum 9 from two throws of a dice?

- (1) $\frac{1}{6}$ (2) $\frac{1}{8}$
 (3) $\frac{1}{9}$ (4) $\frac{1}{12}$

58. An observer 1.6 metre tall is 203 metre away from a tower. The angle of elevation from his eye to the top of the tower is 30°. The height of the tower is:

- (1) 216 metre
(2) 23.2 metre
(3) 24.72 metre
(4) None of these
59. The ratio between the length and the breadth of a rectangular park is 3: 2. If a man cycling along the boundary of the park at the speed of 12 km/hr completes one round in 8 minutes, then the area of the park (in sq. m) is:
(1) 15360
(2) 153600
(3) 30720
(4) None of these
60. What least number which must be added to 1056, so that the sum is completely divisible by 23?
(1) 3 (2) 18
(3) 2 (4) 21
61. Select the correct equation:
(1) $C/5 = (F + 32)/9$
(2) $C/9 = (F - 32)/5$
(3) $C/5 = (F - 32)/9$
(4) None of these
62. If the radius of circle is 7 cm then the area of circle is:
(1) 153.86 cm square
(2) 145.22 cm square
(3) 150.00 cm square
(4) 152.67 cm square
63. Find the incorrect statement in respect of parallelogram :
(1) Opposite sides are equal
(2) Opposite angles are equal
(3) Diagonals bisect each other but need not be equal
(4) Sum of adjacent angles is 90°
64. Identify the incorrect statement:
(1) Diameter is the longest chord of a circle.
(2) A segment of a circle is the region between an arc and a chord of the circle
(3) A line segment joining the centre to any point on the circle is called its chord
(4) Two circles having the same centre and different radii are called concentric circles

65. A tax payer is exempted of income tax for the first ₹ 40,000.00 of his annual income and for the rest of the income, he has to pay tax at the rate of 20%. If he pays ₹3160 annually as income tax, find his monthly income:
(1) ₹4850
(2) ₹4650
(3) ₹45507
(4) None of these
66. Ram encashes a cheque of ₹ 600 from a bank. The bank pays him in 10 rupee and 5 rupee notes totalling 72. How many numbers of 10 rupee notes are given by the bank?
(1) 24
(2) 60
(3) 48
(4) None of these
67. In a question, instead of multiplying a number by $\frac{3}{4}$, a student multiplied it by $\frac{4}{3}$ and got 49 more than the correct answer. The correct answer is:
(1) 19 (2) 63
(3) 84 (4) 112
68. In a school with 600 students, the average age of the boys is 12 years and that of girls is 11 years. If the average age of the school is 11 years and 9 months, then the number of girls in the school is:
(1) 450 (2) 250
(3) 150 (4) 350
69. Which is the largest fraction:
(1) $\frac{1}{17}$ (2) $\frac{3}{17}$
(3) $\frac{4}{17}$ (4) $\frac{1}{27}$
70. 70% of 70% of ₹75000 is:
(1) ₹37650 (2) ₹36750
(3) ₹37650
(4) None of these
71. One-fourth of one third of two-fifth of a number is 15. What will be 40% of that number?

- (1) 120 (2) 180
(3) 270 (4) 350
72. The height of 5 boys is recorded as 146 cms, 154 cms, 164 cms, 148 cms and 158 cms. What is the average height of all these boys?
(1) 152 cms (2) 158 cms
(3) 156 cms (4) 154 cms
73. Ram purchased 25 kgs of rice at the rate of ₹45 per kg and 12 kgs of pulses at the rate of ₹28 per kg. What is the total amount that he paid to the shopkeeper?
(1) ₹1466 (2) ₹1416
(3) ₹1461 (4) ₹1471
74. What approximate value should come in place of the question mark?
 $\sqrt{343}$
(1) 18
(2) 58
(3) 78
(4) None of these
75. What will be the compound interest accrued on a sum of ₹35,000 at the rate of 8% Per annum in 2 years?
(1) ₹ 5884 (2) ₹ 5284
(3) ₹ 5524 (4) ₹ 5824
76. Ram bought a cycle and sold it for ₹4550 which is 30% more than the original price. What is the original price of the cycle?
(1) ₹ 3500 (2) ₹ 3800
(3) ₹ 3600 (4) ₹ 3400
77. Ramesh runs four kilometres everyday. On Saturday and Sunday he runs one kilometres extra (on each day). How many kilometres does he run in two weeks?
(1) 40 kms (2) 60 kms
(3) 50 kms (4) 70 kms
78. Rahim sales a cow at a loss of 15%. If he had sold it for ₹150 more, then he would have made a profit of 10%. Cost price of the cow was
(1) ₹660 (2) ₹600
(3) ₹575
(4) None of these

79. 53 % of a sum of money is ₹5194. What is the sum of money?

- (1) ₹ 9800 (8) ₹ 8800
(3) ₹ 7800 (4) ₹ 10000

80. There are some parrots and some tigers in a forest. If the total number of animal heads in the forest are 858 and total number of animal legs are 1746. What is the number of parrots in the forest?

- (1) 843 (2) 847
(3) 800
(4) None of these

81. Deepa invested an amount of ₹5800 for 2 years. At what compound interest will she get an amount of ₹594.5 at the end of two years?

- (1) 5%
(2) 4%
(3) 6%
(4) None of these

82. The product of two irrational numbers is:

- (1) Always irrational
(2) Always rational
(3) Always an integer
(4) Sometimes rational and sometimes irrational

83. The perimeter of an isosceles triangle is 42 cm and its base is $\frac{1}{2}$ times each of the equal sides. Find the length of each side of triangle:

- (1) 12cm, 12cm, 18cm
(2) 6 cm, 6 cm, 9 cm
(3) 18cm, 18cm, 24cm
(4) None of these

84. Find the total surface area of a cylinder having radius of the base 14 cm and height 30 cm.

- (1) 3872cm²
(2) 4872cm²
(3) 3782cm²
(4) None of these

85. The external diameter of an iron pipe is 25 cm and its length is 20 cm. If the thickness of the pipe is 1 cm, find the total surface area of the pipe:

- (1) 3168 cm² (2) 3872cm²
(3) 3264 cm²
(4) None of these

86. In 40 tosses of a coin, tail appears 22 times. If a coin is tossed at random, what is the probability of getting a head?

- (1) $\frac{9}{20}$ (2) $\frac{9}{25}$
(3) $\frac{11}{20}$
(4) None of these

87. If one kilometre is equal to 10 hectometre, then 1 hectometre is equal to:

- (1) 10 decametres
(2) 1 decametre
(3) 100 decametres
(4) 10 decimetres

88. A number consists of three digits. The middle figure is the sum of the other two. The first figure is equal to the square of the third. The number is:

- (1) 121
(2) 442
(3) 993
(4) None of these

89. The average of eight numbers taken together is 12. Two of these numbers are 0 and the remaining numbers are equal. What is the value of the non-zero number?

- (1) 12 (2) 14
(3) 16 (4) 18

90. The difference between simple and compound interest compounded yearly at rate of 4% in a two year period is ₹10. The amount of investment is:

- (1) ₹4500 (2) ₹5750
(3) ₹6000 (4) ₹6250

91. A sum of money invested at compound interest amounts in 3 years to Rs 800 and in 4 years to Rs 840. What is the percentage rate of interest?

- (1) 5% (2) 4%
(3) 3% (4) 10%

92. $(a + b)^3$ is equal to:

- (1) $(a + b)(a^2 + b^2 - ab)$
(2) $(a + b)(a^2 + b^2 + ab)$

- (3) $a^3 + b^3 + 3ab(a + b)$
(4) $a^3 + b^3 - 3ab(a + b)$

93. $\frac{2}{3}$ of the employees of a company are skilled workers and the rest are unskilled. If $\frac{5}{9}$ of

the skilled workers and $\frac{7}{8}$ of the unskilled workers are temporary workers, then find the total number of employees when the total number of permanent employees is 292:

- (1) 572 (2) 894
(3) 864
(4) None of these

94. LCM of 36, 45, 52, 108 and 236 is:

- (1) 414180
(2) 480414
(3) 441180
(4) None of these

95. A sum of ₹8,500 is to be divided among 5 men, 6 women and 8 boys in the ratio of 10:7:1. The share of one woman will be:

- (1) ₹ 85 (2) ₹ 385
(3) ₹ 850 (4) ₹ 595

96. Number A is 60 more than twice the number B, Number C is 10 more than twice the number A. If average of A, B and C is 110. What is the value of C?

- (1) 120
(2) 210
(3) 290
(4) None of these

97. Shyama sold 10 sarees for a total profit of Rs. 460 and 12 sarees for a total profit of Rs. 144. At what profit per saree should he sell the remaining 20 sarees so that he gets an average profit of Rs. 18 per saree?

- (1) Rs. 7.40 (2) Rs. 7.60
(3) Rs. 7.80 (4) Rs. 8.00

98. In what time period, a sum of ₹ 5000 will become ₹ 6655 if rate of compound interest is 10% per annum?

- (1) 2 years (2) 3 years
 (3) $2\frac{1}{2}$ years
 (4) None of these
99. When the fractions $\frac{9}{11}$, $\frac{8}{10}$, $\frac{7}{9}$, $\frac{7}{11}$ are arranged in the ascending order of value, the result is :
- (1) $\frac{7}{11}$; $\frac{8}{10}$; $\frac{7}{9}$; $\frac{9}{11}$
 (2) $\frac{9}{11}$; $\frac{8}{10}$; $\frac{7}{9}$; $\frac{7}{11}$
 (3) $\frac{7}{11}$; $\frac{7}{9}$; $\frac{8}{10}$; $\frac{9}{11}$
 (4) $\frac{8}{10}$; $\frac{7}{11}$; $\frac{9}{11}$; $\frac{7}{9}$
100. How many cubes of 3 cm. edge can be cut out of a cube of 18cm. edge?
 (1) 216 (2) 516
 (3) 36
 (4) None of these

GENERAL AWARENESS

101. How many bones are there in human body?
 (1) 201 (2) 203
 (3) 210 (4) 206
102. In between two Summer Olympic Games there is a difference of _____ years.
 (1) 2 (2) 3
 (3) 4 (4) 6
103. The Opening and Closing ceremonies of Commonwealth Games 2010 had held at:
 (1) Jawaharlal Nehru Sports Complex
 (2) Indira Gandhi Sports Complex
 (3) Siri Fort Sports Complex
 (4) Delhi University
104. The tobacco contains :
 (1) Caffeine (2) Codeine
 (3) Nicotine (4) Morphine
105. Which one of the following is not a derived quantity ?
 (1) Density (2) Mass
 (3) Volume (4) Speed

106. The sound waves travels fastest in:
 (1) Solids
 (2) Liquids
 (3) Gases
 (4) Vacuum
107. During summer days, water kept in an Earthen pot (Pitcher) becomes cool because of phenomenon of:
 (1) Diffusion
 (2) Transpiration
 (3) Osmosis
 (4) Evaporation
108. Which of the following is not a mixture?
 (1) Kerosene (2) Air
 (3) Alcohol (4) Petrol
109. A candidate for election to the Rajya Sabha must be not less than:
 (1) 35 Years of age.
 (2) 25 Years of age
 (3) 30 Years of age
 (4) 40 Years of age
110. This river rises from Trimbak plateau of north Sahyadri:
 (1) Cauvery
 (2) Godavari
 (3) Krishna
 (4) Mahanadi
111. Marmagao port occupies fifth position in terms of total traffic handled. Where is this ?
 (1) Tamil Nadu
 (2) West Bengal
 (3) Goa
 (4) Odisha
112. The first session of Indian National Congress was chaired by:
 (1) A.O.Hume
 (2) W.C. Bannerjee
 (3) Dada Bhai Naoroji
 (4) George Yule
113. Who among the following is not a sarod player?
 (1) Ali Akbar Khan
 (2) Alla Rakha Khan
 (3) Allauddin Khan
 (4) Amjad Ali Khan
114. Identify the incorrect match of the equivalent ranks in Army and Navy respectively:
 (1) Brigadier: Commodore

- (2) Captain : Lieutenant
 (3) Major: Commander
 (4) Major General: Rear admiral
115. Instrument for measuring humidity:
 (1) Hygrometer
 (2) Inclinator
 (3) Hydrometer
 (4) Hydroscope
116. Unit for measuring the volume of sound:
 (1) Decibel
 (2) Fathom
 (3) Erg
 (4) None of these
117. Female reproductive part of flower is known as:
 (1) Pistil (2) Stamen
 (3) Pedicel (4) Gametes
118. Fish have special structures that help in breathing is
 (1) Nostrils (2) Spiracle
 (3) Lungs (4) Gills
119. Salivary glands are present in:
 (1) Stomach
 (2) Small Intestine
 (3) Buccal Cavity
 (4) Alimentary canal
120. It is a standard way of sending computer files to other computers:
 (1) FTP
 (2) TCP
 (3) URL
 (4) Hyperlink
121. What is the length of the pitch in cricket ?
 (1) 20.75 Metres
 (2) 20.12 Metres
 (3) 18.25 Metres
 (4) 19.18 Metres
122. Ramachandra Narayanji Dwivedi is best known by the name of:
 (1) Sant Kabeer
 (2) Munshi Premchand
 (3) Kavi Pradeep
 (4) Goswami Tulsidas
123. Kargil is situated in which valley ?
 (1) Lidder (2) Suru
 (3) Sindh (4) Dras

- 124.** The description of Kautilya is found in which dynasty ?
 (1) The Kushanas
 (2) The Mauryas
 (3) Guptas
 (4) Cholas
- 125.** In which year the slogan 'Quit India' was given by Gandhiji ?
 (1) 1940 (2) 1942
 (3) 1939 (4) 1938
- 126.** Which among these is a credit rating agency ?
 (1) ICRA (2) SEBI
 (3) NSE (4) BSE
- 127.** Prem Pachisi was written by :
 (1) Maithili Sharan Gupta
 (2) Munshi Premchand
 (3) Mahavir Prasad Dwivedi
 (4) Jai Shankar Prasad
- 128.** A popular folk song of Uttar Pradesh is known as:
 (1) Maang (2) Kajri
 (3) Saul (4) Boli
- 129.** The speaker of Lok Sabha is removed by the :
 (1) President
 (2) Majority of members of Lok Sabha
 (3) Prime Minister
 (4) Member of both houses of Parliament
- 130.** The developer of the scale, known as Richter scale to measure seismic waves, was the native of which country ?
 (1) U.S.A.
 (2) Russia
 (3) U.K.
 (4) Japan
- 131.** Which of the following is the headquarters of Lakshadweep Islands ?
 (1) Kavaratti
 (2) Agatti
 (3) Andrott
 (4) Kalpeni
- 132.** Raja Reddy and Radha Reddy are associated with which of the following dance styles ?
 (1) Kuchipudi
 (2) Kathak
 (3) Bharatnatyam
 (4) Manipuri

- 133.** Antarctic was discovered by:
 (1) An Indian
 (2) An American
 (3) An Australian
 (4) A French
- 134.** Which is called the land of Kiwis ?
 (1) West Indies
 (2) Australia
 (3) England
 (4) New Zealand
- 135.** What is Noonmati ?
 (1) An Atomic Reactor
 (2) Army Brigade
 (3) A Space Shuttle
 (4) Oil Refinery
- 136.** Mahatma Jyotiba Phule's real name was:
 (1) Jyoti Rao Govind Rao
 (2) Jyoti Rao Mahendra Rao
 (3) Jyoti Rao Suresh Rao
 (4) Jyoti Rao Vijay Rao
- 137.** Elephant Pass is located in:
 (1) Pakistan
 (2) Sri Lanka
 (3) China
 (4) India
- 138.** The white band in India's national Flag was added by :
 (1) Pt. Motilal Nehru
 (2) Pt. Jawahar Lal Nehru
 (3) Mahatma Gandhi
 (4) Rabindra Nath Tagore
- 139.** Tiger was adopted National Animal in the year:
 (1) 1973 (2) 1968
 (3) 1982 (4) 1970
- 140.** Pulakesin, the Chalukya ruler, defeated Harshavardhana on the bank of the river:
 (1) Narmada
 (2) Godavari
 (3) Bramhaputra
 (4) None of these
- 141.** Nagin Lake is located in the State of:
 (1) Jammu and Kashmir
 (2) Madhya Pradesh
 (3) Jharkhand
 (4) Uttarakhand
- 142.** Elephant Marathon is held in which of the following cities ?

- (1) Trichur
 (2) Gangtok
 (3) Kohima
 (4) Mangalore
- 143.** UNICEF has its headquarters in:
 (1) Washington
 (2) San Francisco
 (3) Geneva
 (4) New York
- 144.** Rhine Valley in France is known for mineral deposits of:
 (1) Bauxite (3) Copper
 (2) Nickel (4) Zinc
- 145.** Bramhaputra river enters into India by which name:
 (1) Manas
 (2) Dhansiri
 (3) Dihang
 (4) Tsang Po
- 146.** A stone lying at the bottom of a pond appears to be at a higher point than it actually is due to the phenomena of:
 (1) Diffraction of light
 (2) Scattering of light
 (3) Reflection of light
 (4) Refraction of light
- 147.** A stick immersed in water appears bent due to the phenomenon of:
 (1) Reflection of light
 (2) Diffraction of light
 (3) Refraction of light
 (4) Dispersion of light
- 148.** Williams sisters are known for the game:
 (1) Badminton
 (2) Table-Tennis
 (3) Tennis
 (4) None of these
- 149.** The highest award in sports for a player in India is:
 (1) Dronacharya
 (2) Arjuna
 (3) Rajiv Gandhi Khel Ratna
 (4) Padma Shree
- 150.** The official mascot of Olympic Games 2012 is:
 (1) Appu, the Elephant
 (2) Shera
 (3) Fuwa
 (4) Wenlock and Mandeville

ENGLISH LANGUAGE

Directions (151-158) : In each of these questions, a sentence is divided into three part A, B, C. If there is some error in any part A, B or C, then this is your answer, otherwise answer is D.

151. I advised (1)/ to him(2)/ to do his work properly. (3)/ No error (4)
152. The teacher called Ram(1)/ and asked him (2)/ to describe about the incident. (3)/ No error (4)
153. This pen writes (1)/ very well (2)/ but it costed me 100 rupees. (3)/ No error (4)
154. The bomb caused (1)/ extensive damages (2)/ of the surrounding buildings. (3)/ No error (4)
155. There were (1)/ hardly no trees left (2)/just bare rocky land. (3)/ No error (4)
156. The visitors complained at (1)/ the poor accommodation (2)/ they were given. (3)/ No error (4)
157. You can not (1)/ prevent me (2)/ to go there. (3)/ No error (4)
158. I would like you to (1)/ complete this assignment (2)/ before you leave for Mumbai. (3)/ No error (4)

Directions (159-163) : Choose the wrongly spelt word.

159. (1) Goitre (2) Glorious
(3) Gravitation (4) Greivous
160. (1) Pregnant (2) Nutrition
(3) Negociation (4) Approach
161. (1) Appetite (2) Apathetic
(3) Appriasal (4) Aperture
162. (1) Campaign (2) Camera
(3) Camouflage (4) Carboret-tor
163. (1) Decesive (2) Decimal
(3) Decease (4) Deceive

Directions (164-168) : Choose the correctly spelt word.

164. (1) Deliberation
(2) Deleberation
(3) Deliberition
(4) Delaberation
165. (1) Detereorate
(2) Deteriorate
(3) Detiriorate
(4) Detireorate

166. (1) Exorbitant
(2) Exhorbitant
(3) Exorbetant
(4) Exohorbitant
167. (1) Freivolous (2) Frivelous
(3) Frevilous (4) Frivolous
168. (1) Miscarriage (2) Mescariage
(3) Mescarriage (4) Miscariage

Directions (169-172) : In each of these questions in the given sentence below there is a blank. Choose the word or phrase which best completes the sentence.

169. The doctor prescribed tablets to help.....the pain.
(1) Lighten (2) Calm
(3) Relieve (4) Rid
170. If you.....in arriving late, I shall have to report to the manager.
(1) Persist (2) Persevere
(3) Insist (4) Prevail
171. The police decided to.....the department store.
(1) Abandon (2) Evacuate
(3) Evict (4) Expel
172. Our hosts had prepared a meal to celebrate our arrival.
(1) Generous (2) Lavish
(3) Profuse
(4) Spendthrift

Directions (173-179) : In these questions fill in the blanks in the sentence with correct option.

173. She is beautiful.....brave.
(1) But (2) And
(3) Yet (4) So
174. If I.....the prime minister of India, I would do things differently.
(1) am (2) is
(3) were (4) was
175. Barking-dogs seldom.....
(1) Bite (2) Bites
(3) Eat (4) Pet
176. They still think that women are inferior.....men.
(1) To (2) Than
(3) From (4) By
177. The teacher was angryme.
(1) To (2) Upon
(3) At (4) Against
178. If you.....ice in warm water, it soon melts.

- (1) Will place (2) Place
(3) Would place
(4) Placed
179. When the post....., I will bring it to your office.
(1) Will arrive
(2) Arrives
(3) Is arriving
(4) Is going to arrive

Directions (180-182) : Read the passage and answer the questions based on it.

A faint picture of a maiden's life is reflected in the characterisation of Usha, the goddess of dawn, who has been described in many places as a maiden. In the earliest Mandalas, Usha is described as a pure and simple phenomenon of nature, sweeping away the darkness of night.

180. In this passage, Usha has been described as:
(1) A spinster
(2) A broom
(3) A gloomy maiden
(4) The symbol of ushering in of light
181. The expression 'a pure and simple phenomenon of nature' implies that 'Usha' is:
(1) A threat made by nature
(2) The beauty of nature
(3) A portent of nature
(4) Nothing but a benign aspect of nature
182. The function of Usha is to:
(1) Meet darkness and light
(2) Preside over day and night
(3) Remove darkness from the face of the Earth
(4) Counter-light with darkness
- Directions (183-185) :** Choose the correct alternative to complete the sentence.
183. Did no one.....him?
(1) Had help (2) Helped
(3) Have help (4) Help
184. They went home after they.....their home work.
(1) Have finished
(2) Did finish
(3) Had finished
(4) Finish
185. This child.....if the train had not stopped quickly.

- (1) Will have been killed
- (2) Would have been killed
- (3) Had been killed
- (4) Had had been killed

Directions (186-189) : Fill the sentence with appropriate preposition.

186. He comes to school daily
07:00 a.m.

- (1) At (2) Upon
- (3) On (4) In

187. I bought this book ten rupees.

- (1) In (2) At
- (3) For (4) By

188. He is very ashamed.....what he said.

- (1) For (2) By
- (3) At (4) Of

189. Don't look.....me like that!

- (1) To (2) At
- (3) For (4) Upon

Directions (190-192) : Choose the correct passive voice of the sentence given in each question.

190. Have you shut the door?

- (1) Has the door been shut by you?
- (2) Have the door been shut by you?
- (3) Has the door been shut?
- (4) Have the door being shut by you?

191. Deepa swept the floor yesterday.

- (1) The floor is swept by Deepa yesterday.
- (8) The floor was swept by Deepa yesterday.
- (3) The floor had been swept by Deepa yesterday.
- (4) The floor was being swept by Deepa yesterday

192. Meena should write a book.

- (1) A book should have been written by Meena.
- (2) A book shall be written by Meena.
- (3) A book should be written by Meena.
- (4) A book shall have been written by Meena

Directions (193-195) : Change the following sentences into reported speech.

193. I said to her, "He is a good boy".

- (1) I told her that he is a good boy.

(2) I told her that he was a good boy.

(3) I asked her that he is a good boy.

(4) I asked her that he was a good boy.

194. Rahim said, " I will watch a horror movie tonight".

(1) Rahim said that he will watch a horror movie tonight.

(2) Rahim said that he would watch a horror movie tonight.

(3) Rahim said that he would watch a horror movie that night.

(4) Rahim said that he should watch a horror movie tonight.

195. Manu said, "I am busy now".

(1) Manu said that he was busy then.

(2) Manu said that he is busy now.

(3) Manu said that he was busy now.

(4) Manu told that he was busy now.

Directions (196-198) : In the following questions, out of four alternatives, choose the one which best expresses the meaning of the given word and answer accordingly.

196. SUCCESSIVE

- (1) Rapid
- (2) Consecutive
- (3) Victorious
- (4) Beneficent

197. MENTOR

- (1) Guide (2) Principal
- (3) Stylist
- (4) Philosopher

198. FATAL

- (1) Terrible (2) Deadly
- (3) Poisonous (4) Wrong

Directions (199-200) : In the following questions, choose the word opposite in meaning to the given word.

199. FACILITATE

- (1) Help (2) Propagate
- (3) Hinder (4) Reject

200. CONFORMITY

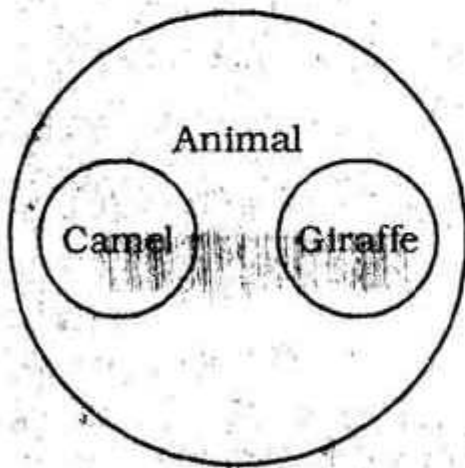
- (1) Dilution (2) Deviation
- (3) Distraction (4) Diversion

ANSWERS

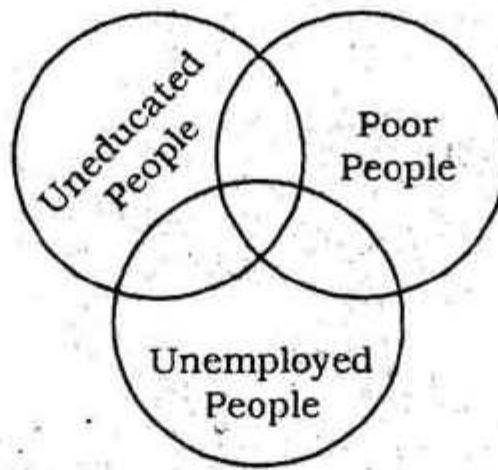
1. (3)	2. (2)	3. (2)	4. (1)
5. (4)	6. (4)	7. (4)	8. (4)
9. (4)	10. (1)	11. (4)	12. (1)
13. (3)	14. (3)	15. (1)	16. (1)
17. (1)	18. (1)	19. (3)	20. (2)
21. (1)	22. (1)	23. (4)	24. (1)
25. (2)	26. (2)	27. (3)	28. (4)
29. (2)	30. (3)	31. (1)	32. (3)
33. (3)	34. (2)	35. (1)	36. (4)
37. (3)	38. (2)	39. (1)	40. (2)
41. (4)	42. (1)	43. (4)	44. (4)
45. (1)	46. (1)	47. (1)	48. (1)
49. (1)	50. (4)	51. (1)	52. (4)
53. (2)	54. (1)	55. (2)	56. (4)
57. (3)	58. (4)	59. (2)	60. (3)
61. (3)	62. (1)	63. (4)	64. (3)
65. (2)	66. (3)	67. (2)	68. (3)
69. (3)	70. (2)	71. (2)	72. (4)
73. (3)	74. (1)	75. (4)	76. (1)
77. (2)	78. (2)	79. (1)	80. (1)
81. (1)	82. (4)	83. (1)	84. (1)
85. (1)	86. (1)	87. (1)	88. (1)
89. (3)	90. (4)	91. (1)	92. (3)
93. (3)	94. (1)	95. (4)	96. (2)
97. (2)	98. (2)	99. (3)	100. (1)
101. (4)	102. (3)	103. (1)	104. (3)
105. (2)	106. (1)	107. (4)	108. (3)
109. (3)	110. (2)	111. (3)	112. (2)
113. (2)	114. (3)	115. (1)	116. (1)
117. (1)	118. (4)	119. (3)	120. (4)
121. (2)	122. (3)	123. (2)	124. (2)
125. (2)	126. (1)	127. (2)	128. (2)
129. (2)	130. (1)	131. (1)	132. (1)
133. (2)	134. (4)	135. (4)	136. (1)
137. (2)	138. (3)	139. (1)	140. (1)
141. (1)	142. (1)	143. (4)	144. (1)
145. (2)	146. (3)	147. (3)	148. (3)
149. (3)	150. (4)	151. (2)	152. (3)
153. (3)	154. (3)	155. (2)	156. (3)
157. (3)	158. (4)	159. (4)	160. (3)
161. (3)	162. (4)	163. (1)	164. (1)
165. (2)	166. (1)	167. (4)	168. (1)
169. (3)	170. (1)	171. (3)	172. (2)
173. (2)	174. (3)	175. (1)	176. (1)
177. (3)	178. (2)	179. (2)	180. (4)
181. (4)	182. (3)	183. (4)	184. (3)
185. (2)	186. (1)	187. (3)	188. (3)
189. (2)	190. (1)	191. (2)	192. (3)
193. (2)	194. (3)	195. (1)	196. (2)
197. (1)	198. (2)	199. (3)	200. (2)

EXPLANATIONS

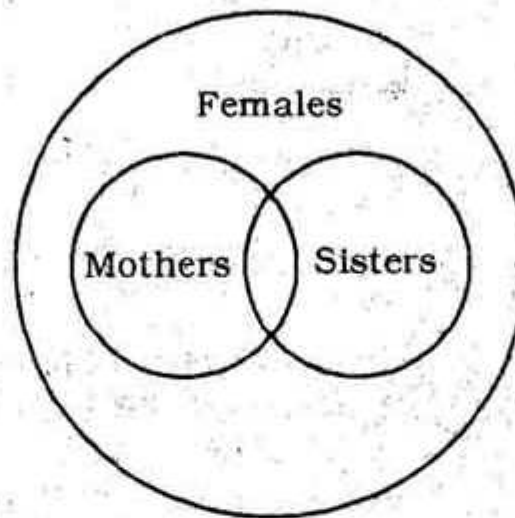
- (3) A ↔ Z : Pair of Opposite Letters
B ↔ Y : Pair of Opposite Letters
- (2) Beating is the action of Heart. Similarly, Breathing is related to Lungs.
- (2) Water flows through hose (a pipe of rubber). Similarly, Bullet passes through barrel.
- (1) If we join the vertices of the star we will get a pentagon. Similarly, if we join the vertices of two intersecting triangles we will get a hexagon.
- (4) Republic Day is a National Festival.
- (4) Tiger, Lion and Leopard belong to the cat family. Wolf looks like a dog.
- (4) Except W, all others are Vowels. W is a Consonant.
- (4) Camel is different from Giraffe. But both come under the class Animal.



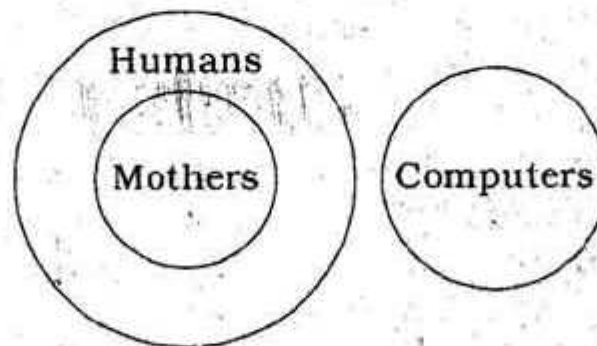
- (4) Some uneducated people may be poor and vice-versa. Some poor people may be unemployed and vice-versa. Some uneducated people may be unemployed and vice-versa. Some uneducated poor people may be unemployed. Some poor unemployed people may be uneducated. Some unemployed poor people may be uneducated.



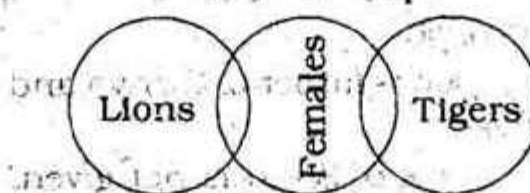
- (1) All mothers are females. All sisters are females. Some mothers may be sisters and vice-versa.



- (4) Mothers are humans. Computer is different from both of these.

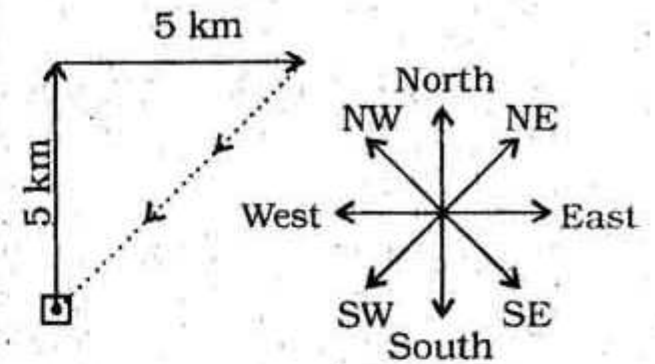


- (1) If two items are partly related to the third and are themselves independent of each other they are represented by three intersecting circles in a line. Among the given items Lions, Tigers and Females seems to be most appropriate.

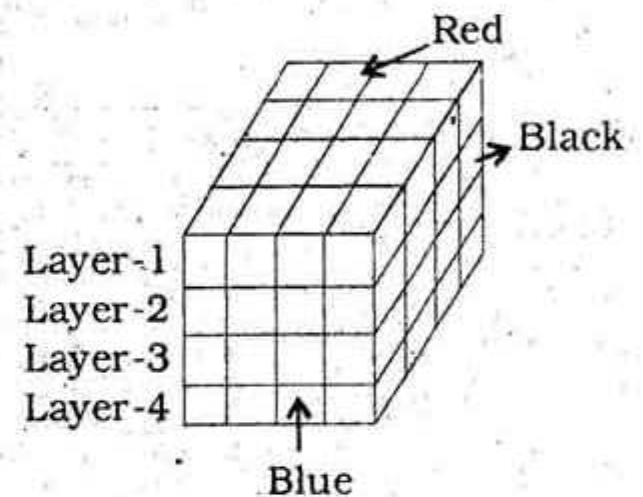


Some Lions and some tigers are females.

- (3) C is cousin of A.
D is also cousin of A.
Therefore, D is sister of C.
- (3)

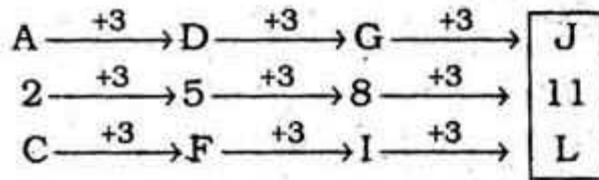


(15 - 17) :



- (1) There are eight cubes in Layer-1 and eight cubes in Layer-4 which have two faces painted red and blue and other faces painted or unpainted. Thus there are 16 such cubes.
- (1) There are four cubes in Layer-1 and four cubes in Layer-4 which have only one face painted red and all other faces unpainted. Thus, there are 8 such cubes.
- (1) Four corner cubes in Layer-1 and four corner cubes in Layer-4 have faces painted with different colours. Thus there are 8 such cubes.
- (1) $5 + 5 \times 20 \div 7 \times 15$
 $\Rightarrow 5 + 5 + 20 - 7 + 15$
 $\Rightarrow 1 + 20 - 7 + 15$
 $\Rightarrow 36 - 7 = 29$
- (3) $(7 - 5) \times (27 + 9) \times (30 + 5)$
 $\Rightarrow (7 \times 5) + (27 \div 9) + (30 \div 5)$
 $\Rightarrow (35) + (3) + (6) = 44$

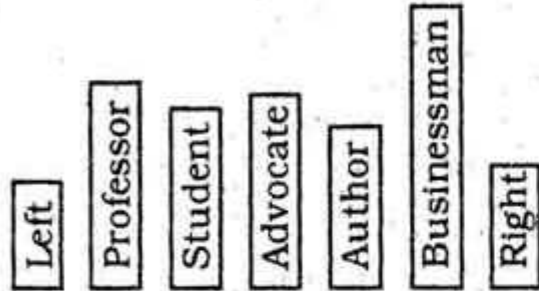
20. (2)



21. (1) 1, 2, 3(C), 4, 5, 6(F), 7, 8, 9(I), 10, 11, 12 (L)

22. (1) 1,2,3 DEF(4,5,6), 7,8,9 JKL (10,11,12), 13,14,15

23. (4)



(24 - 26) :

Day	Friends				
	A	B	C	D	E
Monday	✓	✓	✓	✓	×
Tuesday	✓	✓	×	✓	✓
Wednesday	✓	✓	✓	×	✓
Thursday	×	✓	✓	✓	✓
Friday	✓	×	✓	✓	✓

24. (1) A cannot work on Thursday.

25. (2) B cannot work on Friday.

26. (2) Four days

27. (3) CUT TER
TER RAIN

28. (4) SM ALL
ALL ERGY

29. (2) OPTI MISE
MISE RLY

30. (3) $(4 + 2)^2 = (6)^2 = 36$
 $(1 + 4)^3 = (5)^3 = 125$
 $(3 + 7)^2 = (10)^2 = 100$

31. (1) $7\frac{1}{2} + 8\frac{1}{2} - 3\frac{1}{2}$
 $\Rightarrow (7 + 8 - 3)\frac{1}{2} = 12\frac{1}{2}$

$$27 + 8 - 3 = 32$$

$$4\frac{1}{4} + 5\frac{1}{2} - 1\frac{3}{4}$$

$$\Rightarrow \frac{17}{4} + \frac{11}{2} - \frac{7}{4}$$

$$\Rightarrow \frac{17 + 22 - 7}{4} = \frac{32}{4} = 8$$

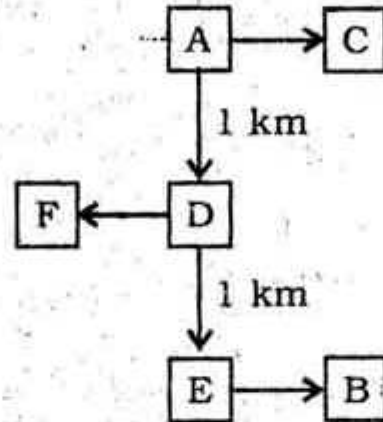
32. (3) $\frac{82623}{3} = 27541$

$$\frac{75696}{2} = 37848$$

$$\frac{221256}{7} = 31608$$

33. (3) $(8 \times 7) + (7 \times 6) - (2 \times 3)$
 $\Rightarrow 56 + 42 - 6 = 92$

34. (2)



35. (1) All honest Indians are educated, dark-skinned and intelligent persons.

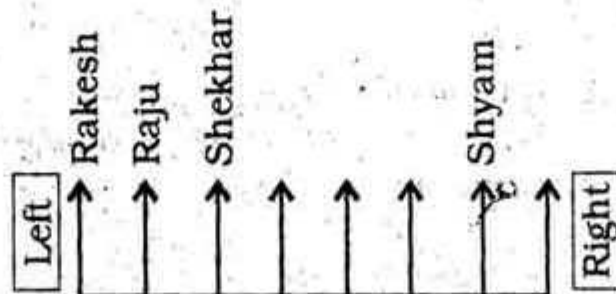
36. (4) Some intelligent Indians are honest, educated and dark skinned.

37. (3) Indians who are dark-skinned, but neither honest, nor intelligent nor educated are represented by 2 and 7.

38. (2) The circle Q represents educated persons.

39. (1) Number of educated persons would increase.

40. (2)



41. (4) Puneet is father of Bindoo and Deepa.

Deepa is daughter of Puneet. Therefore, Bindoo is son of Puneet.

Bindoo is father of Guriya and Sonu.

The sex of Sonu is not given.

Therefore, Sonu is either son or daughter of Bindoo.

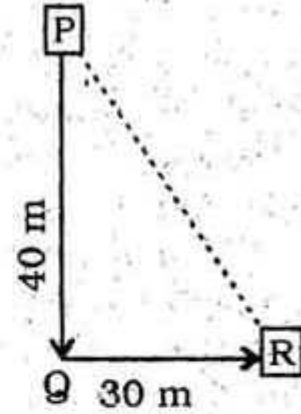
42. (1) Suppose B gets x
Now,

$$A = x - 1$$

$$D = x + 3$$

$$C = x + 3 + 5$$

43. (4)



$$PR = \sqrt{(40)^2 + (30)^2}$$

$$= \sqrt{1600 + 900}$$

$$= \sqrt{2500} = 50 \text{ m}$$

R is 50 metres to the South East of P.

44. (4) 23617 61 836024 61

886 61 403612

45. (1) $15 \times 2 + 1 = 31$

$$31 \times 2 + 1 = 63$$

$$63 \times 2 + 1 = 127$$

$$127 \times 2 + 1 = 255$$

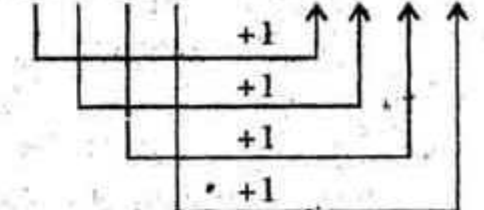
46. (1) $66 - 2 = 64 \Rightarrow \sqrt{64} = 8$

$$83 - 2 = 81 \Rightarrow \sqrt{81} = 9$$

$$27 - 2 = 25 \Rightarrow \sqrt{25} = 5$$

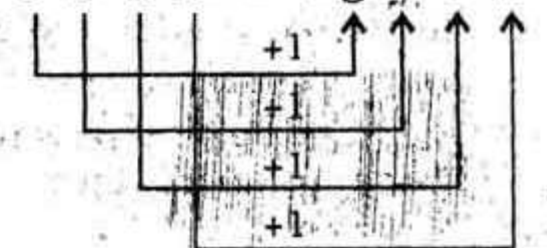
47. (1) At 7.30, if the minute hand points West, then hour hand would point North-West.

48. (1) R I C H \rightarrow S J D I



Similarly,

P O O R \rightarrow Q P P S



66. (3) If the number of 10-rupee notes be x ,
then, number of 5-rupee notes
= $72 - x$
 $\therefore 10x + (72 - x) \times 5 = 600$
 $\Rightarrow 10x + 360 - 5x = 600$
 $\Rightarrow 5x = 600 - 360 = 240$
 $\Rightarrow x = \frac{240}{5} = 48$

67. (2) If the multiplicand be x ,
then
 $x \times \frac{4}{3} - \frac{x \times 3}{4} = 49$
 $\Rightarrow 16x - 9x = 49 \times 12$
 $\Rightarrow 7x = 49 \times 12$
 $\Rightarrow x = 84$
 \therefore Required product
= $84 \times \frac{3}{4} = 63$

68. (3) If the number of girls be x ,
then
Number of boys = $(600 - x)$
 $\therefore (600 - x) \times 12 + x \times 11$
= $600 \times 11 \frac{9}{12}$
 $\Rightarrow 7200 - 12x + 11x$
= $600 \times 11 \frac{3}{4} = 7050$
 $\Rightarrow x = 7200 - 7050 = 150$

69. (3) $\frac{1}{27} < \frac{1}{17} < \frac{3}{17} < \frac{4}{17}$

70. (2) $75000 \times \frac{70}{100} \times \frac{70}{100}$
= 36750

71. (2) Let the number be x .
 $\therefore x \times \frac{2}{5} \times \frac{1}{3} \times \frac{1}{4} = 15$
 $\Rightarrow x = \frac{15 \times 5 \times 3 \times 4}{2} = 450$
 \therefore 40% of 450
= $\frac{450 \times 40}{100} = 180$

72. (4) Required average
= $\frac{\text{Sum of quantities}}{\text{Number of quantities}}$
= $\frac{770}{5} = 154$ cm

73. (3) Amount paid
= Rs. $(45 \times 25 + 28 \times 12)$
= Rs. $(1125 + 336)$
= Rs. 1461

74. (1) $? = \sqrt{343} = 18$

75. (4) C.I. = $P \left[\left(1 + \frac{R}{100} \right)^T - 1 \right]$
= $35000 \left[\left(1 + \frac{8}{100} \right)^2 - 1 \right]$
= $35000 \left[\left(\frac{27}{25} \right)^2 - 1 \right]$
= $35000 \left[\frac{729}{625} - 1 \right]$
= $\frac{35000 \times 104}{625} = \text{Rs. } 5824$

76. (1) Original price of the cycle
= $4550 \times \frac{100}{130} = \text{Rs. } 3500$

77. (2) Total distance
= $(4 \times 10 + 5 \times 4)$ km
= 60 km

78. (2) If the C.P. of cow be Rs. x ,
then
 $\frac{x \times 110}{100} - \frac{x \times 85}{100} = 150$

$\Rightarrow \frac{25x}{100} = 150$

$\Rightarrow x = \frac{150 \times 100}{25} = \text{Rs. } 600$

79. (1) If the sum of money be Rs. x ,
then
 $\frac{x \times 53}{100} = 5194$

$\Rightarrow x = \frac{5194 \times 100}{53} = \text{Rs. } 9800$

80. (1) A tiger has four feet and a parrot has two feet:
If the number of parrots be x
and that of tigers be y , then
 $2x + 4y = 1746$... (i)
 $x + y = 858$... (ii)

By Equation (ii) $\times 4$ — equation (i),
 $4x + 4y - 2x - 4y$
= $4 \times 858 - 1746$
 $\Rightarrow 2x = 3432 - 1746 = 1686$
 $\Rightarrow x = 843$

81. (1) Amount
= $5800 + 594.5 = \text{Rs. } 6394.5$

$\therefore A = P \left(1 + \frac{R}{100} \right)^T$
 $\Rightarrow 6394.5 = 5800 \left(1 + \frac{R}{100} \right)^2$

$\Rightarrow \frac{6394.5}{5800} = \left(1 + \frac{R}{100} \right)^2$

$\Rightarrow \frac{63945}{58000} = \left(1 + \frac{R}{100} \right)^2$

$\Rightarrow \frac{441}{400} = \left(1 + \frac{R}{100} \right)^2$

$\Rightarrow \left(1 + \frac{R}{100} \right)^2 = \left(\frac{21}{20} \right)^2$

$\Rightarrow 1 + \frac{R}{100} = \frac{21}{20}$

$\Rightarrow \frac{R}{100} = \frac{21}{20} - 1 = \frac{1}{20}$

$\Rightarrow R = \frac{1}{20} \times 100$

= 5% per annum

82. (4) $\sqrt{2} \times \sqrt{3} = \sqrt{6}$; $\sqrt{2} \times \sqrt{2} = 2$

83. (1) Each equal side = x cm.

\therefore Base = $\frac{3x}{2}$ cm.

$\therefore x + x + \frac{3x}{2} = 42$

$\Rightarrow 7x = 42 \times 2$

$\Rightarrow x = 12$ cm.

\therefore Base = $12 \times \frac{3}{2} = 18$ cm.

84. (1) Total surface area of the cylinder
= $2\pi rh + 2\pi r^2$
= $2\pi r (h + r)$
= $2 \times \frac{22}{7} \times 14 (30 + 14)$

$$= 2 \times \frac{22}{7} \times 14 \times 44$$

$$= 3872 \text{ sq. cm.}$$

85. (1) Internal radius of pipe (r_1)

$$= \frac{25}{2} - 1 = \frac{23}{2} \text{ cm}$$

External radius of pipe (r_2)

$$= \frac{25}{2} \text{ cm}$$

\therefore Total surface area

$$= 2\pi (r_2^2 - r_1^2) + 2\pi (r_1 + r_2)h$$

$$= 2 \times \frac{22}{7} \left[\left(\frac{25}{2} \right)^2 - \left(\frac{23}{2} \right)^2 \right]$$

$$+ 2 \times \frac{22}{7} \left(\frac{25}{2} + \frac{23}{2} \right) \times 20$$

$$= 2 \times \frac{22}{7} \times \frac{48}{2} + 2 \times \frac{22}{7} \times \frac{48}{2} \times 20$$

$$= 2 \times \frac{22}{7} (24 + 480)$$

$$= 2 \times \frac{22}{7} \times 504$$

$$= 3168 \text{ sq. cm.}$$

86. (1) Probability of getting a tail

$$= \frac{22}{40} = \frac{11}{20}$$

Probability of getting a head

$$= 1 - \frac{11}{20} = \frac{9}{20}$$

87. (1) 1 hectometre = 10 deca metre

88. (1) Number = 121

$$2 = 1 + 1 \text{ and } 1^2 = 1$$

89. (3) Sum of eight numbers

$$= 12 \times 8 = 96 \text{ in which two are zero.}$$

\therefore Each non-zero number

$$= \frac{96}{6} = 16$$

90. (4) Principal (P)

$$= \frac{\text{Difference} \times (100)^2}{(\text{rate})^2}$$

$$= \frac{10 \times 10000}{4 \times 4}$$

$$= \text{Rs. } 6250$$

$$91. (1) A = P \left(1 + \frac{R}{100} \right)^T$$

$$\therefore 800 = P \left(1 + \frac{R}{100} \right)^3 \dots (i)$$

$$\text{and, } 840 = P \left(1 + \frac{R}{100} \right)^4 \dots (ii)$$

Dividing equation (ii) by equation (i),

$$\frac{840}{800} = 1 + \frac{R}{100}$$

$$\Rightarrow \frac{R}{100} = \frac{840}{800} - 1$$

$$= \frac{40}{800} = \frac{1}{20}$$

$$\therefore R = \frac{1}{20} \times 100$$

$$= 5\% \text{ per annum}$$

$$92. (3) (a + b)^3 = a^3 + b^3 + 3a^2b + 3ab^2$$

$$= a^3 + b^3 + 3ab(a + b)$$

93. (3) Total number of employees = x

Temporary employees = $x - 292$

$$\therefore \frac{2x}{3} \times \frac{5}{9} + \frac{x}{3} \times \frac{7}{8} = x - 292$$

$$\Rightarrow \frac{10x}{27} + \frac{7x}{24} = x - 292$$

$$\Rightarrow \frac{80x + 63x}{216} = x - 292$$

$$\Rightarrow 143x = 216x - 292 \times 216$$

$$\Rightarrow 216x - 143x = 63072$$

$$\Rightarrow 73x = 63072$$

$$\Rightarrow x = 63072 \div 73 = 864$$

OR

$$\frac{2x}{3} \times \left(1 - \frac{5}{9} \right) + \frac{x}{3} \left(1 - \frac{7}{8} \right) = 292$$

$$\Rightarrow \frac{8x}{27} + \frac{x}{24} = 292$$

$$\Rightarrow \frac{64x + 9x}{216} = 292$$

$$\Rightarrow 73x = 292 \times 216$$

$$\Rightarrow x = 4 \times 216 = 864$$

94. (1)

2	36,	45,	52,	108,	236
2	18,	45,	26,	54,	118
3	9,	45,	13,	27,	59
3	3,	15,	13,	9,	59
	1,	5,	13,	3,	59

\therefore LCM

$$= 2 \times 2 \times 3 \times 3 \times 5 \times 13 \times 3 \times 59$$

$$= 414180$$

95. (4) Ratio of the amounts distributed.

$$= 10 \times 5 : 7 \times 6 : 1 \times 8$$

$$= 50 : 42 : 8$$

$$= 25 : 21 : 4$$

$$\text{Sum of ratios} = 25 + 21 + 4$$

$$= 50$$

\therefore 6 women's share

$$= \frac{21}{50} \times 8500 = \text{Rs. } 3570$$

\therefore 1 woman's share

$$= \frac{3570}{6} = \text{Rs. } 595$$

96. (2) $A = 2B + 60$

$$\Rightarrow B = \frac{A - 60}{2}$$

$$C = 2A + 10$$

$$\therefore A + \frac{A - 60}{2} + 2A + 10$$

$$= 3 \times 110$$

$$\Rightarrow 2A + A - 60 + 4A + 20$$

$$= 330 \times 2$$

$$\Rightarrow 7A - 40 = 660$$

$$\Rightarrow 7A = 700$$

$$\Rightarrow A = 100$$

$$\therefore C = 2A + 10 = 210$$

97. (2) Total gain on 42 sarees

$$= 18 \times 42 = \text{Rs. } 756$$

Total gain on 22 sarees

$$= 460 + 144 = \text{Rs. } 604$$

\therefore Gain to be had from remaining 20 sarees

$$= 756 - 604$$

$$= \text{Rs. } 152$$

\therefore Gain on each saree

$$= \frac{152}{20}$$

$$= \text{Rs. } 7.6$$

98. (2) $A = P \left(1 + \frac{R}{100}\right)^T$

$\Rightarrow 6655 = 5000 \left(1 + \frac{10}{100}\right)^T$

$\Rightarrow \frac{6655}{5000} = \left(\frac{11}{10}\right)^T$

$\Rightarrow \frac{1331}{1000} = \left(\frac{11}{10}\right)^3 = \left(\frac{11}{10}\right)^T$

$\Rightarrow T = 3$ years

99. (3) $\frac{9}{11} = 0.82$; $\frac{8}{10} = 0.8$;

$\frac{7}{9} = 0.78$; $\frac{7}{11} = 0.64$

$\therefore \frac{7}{11} < \frac{7}{9} < \frac{8}{10} < \frac{9}{11}$

100. (1) Volume of the original cube
 $= 18 \times 18 \times 18 = (18)^3$ cu.cm.
 Volume of the small cube
 $= (3)^3$ cu.cm.

\therefore Number of small cubes

$= \frac{18 \times 18 \times 18}{3 \times 3 \times 3}$

$= 6 \times 6 \times 6 = 216$

151. (2) It is not proper to use preposition 'to' with 'advise'.

152. (3) It is not proper to use 'about' here.

153. (3) Here, but it cost me 100 rupees ... should be used.

Look at the sentences :

I did not get it because it cost too much.

The project needs to be costed in detail.

154. (3) Here, to the buildings in the surrounding/to the nearby buildings should be used.

155. (2) Hardly has a negative sense. Hence, hardly any trees left should be used here.

156. (3) Here, The visitors complained against/about should be used.

157. (3) Here, from going (gerund) should be used.

159. (4) The correct spelling is : Grievous = very serious and often causing great pain or suffering.

160. (3) The correct spelling is : Negotiation.

161. (3) The correct spelling is : Appraisal = a judgement of the value, performance or nature of something.

162. (4) The correct spelling is : Carburettor = part of an engine where petrol/gas and air are mixed together.

163. (1) The correct spelling is : Decisive = very important for the final result of a particular situation.

196. (2) The word **Successive (Adjective)** means : following immediately one after the other; consecutive.

Look at the sentence :

This was their fourth successive win.

197. (1) The word **Mentor (Noun)** means : an experienced person who advises and helps somebody with less experience; guide.

198. (2) The word **Fatal (Adjective)** means : causing or ending in death; deadly; causing disaster.

Look at the sentence :

If she gets ill again it could prove fatal.

199. (3) The word **Facilitate (Verb)** means : to make an action or a process possible or easier.

The word **Hinder (Verb)** means : to make it difficult for somebody to do something; hamper.

Look at the sentence :

The new trade agreement should facilitate more rapid economic growth.

An injury was hindering him from playing his best.

200. (2) The word **Conformity (Noun)** means : behaviour or actions that follow the accepted rules of society; conforming something.

The word **Deviation (Noun)** means : the act of moving away from what is normal or acceptable.

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