

**DIRECTIONS (Qs. 1-2):** Choose the odd word/letters number/ number pair from the given alternatives.

1.

(a) Sirius

(b) Proximacentauri

(c) Deimos

(d) Alpha centauri
2.

(a) PON

(b) SRQ

(c) XYZ

(d) VUT

**DIRECTIONS (Q. 3):** A series is given with one term missing. Choose the correct alternative from the given ones that will complete the series.

3.

30, 60, 360, 3600, ?

(a) 48500

(b) 50500

(c) 50400

(d) 40800
4.

Five boys A, B, C, D and E are standing in a line. A is taller than E but shorter than D. B is shorter than E and C is the tallest. Who is in the middle?

(a) A

(b) C

(c) D

(d) E
5.

In a certain code language, "RIVER" is written as "12351" and "RED" is written as "156". How is "DRIVER" written in that code language?

(a) 612311

(b) 612531

(c) 621351

(d) 612351
6.

In the following question, select the missing number from the given series.
- |    |     |     |
|----|-----|-----|
| 49 | 169 | 484 |
| 81 | 144 | 625 |
| 16 | 25  | ?   |
- (a) 37

(b) 47

(c) 48

(d) 25
7.

If "+" means "minus", "×" means "divided by", "÷" means "plus" and "-" means "multiplied by", then  $126 \times 14 + 7 - 3 \div 2 = ?$

(a) -10

(b) -12

(c) -17

(d) -41

8.

In the following question, which one set of letters when sequentially placed at the gaps in the given letter series shall complete it?

d \_ ba \_ c \_ a \_ cb \_

(a) cdbda

(b) cdbad

(c) bdacd

(d) abdca

9.

Neeraj is facing north, then he turns 45 degree right and goes 25 m, then turns in south – east direction to move 25 m and from there 25 m to east. In which direction/place is he from his original place?

(a) North

(b) East

(c) West

(d) South

10.

Introducing a boy Ankit said, "He is the son of daughter of my grandfather's son". How is that boy related to Ankit?

(a) Cousin

(b) Brother

(c) Father – in – law

(d) Nephew

11.

B-1, D-2, F-4, H-8, J-16, \_\_\_\_?

(a) K-64

(b) L-32

(c) M-32

(d) L-64

12.

If A = 1, B = 2 and N = 14, then BEADING = ?

(a) 2154(14)97

(b) 2514(14)79

(c) 25149(14)7

(d) 2154(14)79

**DIRECTIONS (Q. 13) :** In question, which one set of letters when sequentially placed at the gaps in the given letter series shall complete it ?

13. a \_ n \_ b \_ \_ n c b \_ \_ n c b

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

14. Introducing a girl, Ram said to his son-in-law. "Her brother is the only son of my brother-in-law." Who is the girl of Ram?

- (a) Sister-in-law (b) Niece  
(c) Daughter (d) Sister

**DIRECTIONS (Qs. 15-16):** Select the related letter/word/number from the given alternatives:

15.  $L \times M : 12 \times 13 :: U \times W : ?$

- (a)  $21 \times 23$  (b)  $24 \times 26$   
(c)  $9 \times 11$  (d)  $12 \times 23$

16. Man : Mammal :: ?

- (a) Liberty : Literate (b) Hail : Snow  
(c) Native : Inhabitant (d) Offspring : Family

17. A group of alphabets are given with each being assigned a numerical code. These have to be unscrambled into a meaningful word and the correct code so obtained may be indicated from the given responses ?

RAHKS

1 2 3 4 5

- (a) 5 1 2 3 4 (b) 5 4 2 1 3  
(c) 5 3 2 1 4 (d) 5 3 1 2 4

18. If a man on a moped starts from a point and rides 4 km South, then turns left and rides 2 km to turn again to the right to ride 4 km more, towards which direction is he moving?

- (a) North (b) West  
(c) East (d) South

19. Among 5 boys, Vasant is taller than Manohar, but not as tall as Raju. Jayant is taller than Dutta but shorter than Manohar. Who is the tallest in the group?

- (a) Manohar (b) Vasant  
(c) Jayant (d) Raju

20. How many 9's are followed by and preceded by numbers divisible by 2?

8 9 6 5 3 5 9 6 8 3 4 9 6 5 2 6 9 7 3 7 2 9 4 1 3 7 9 4 1 7 3 4 9 8 4 5 3 9 7 6 1 5 3 1 9 5 7 4 2 9 6 8 5 3 2 9 5 7 4 8 9 4 5 1

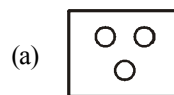
- (a) 12 (b) 6  
(c) 8 (d) 10

21. If Ramya's rank is 22<sup>nd</sup> out of 46 students. What is her rank from the last?

- (a) 29 (b) 32  
(c) 25 (d) 26

22. Identify the figure which best represents the relationship among Tree, Plant, and House.

**Answer figures :**



23. If  $73 + 46 = 42$  and  $95 + 87 = 57$ , then  $62 + 80 = ?$

- (a) 32 (b) 48  
(c) 64 (d) 36

24. If '+' stands for 'multiplication', '<' stands for 'division', '÷' stands for 'subtraction', '-' stands for 'addition' and '×' stands for 'greater than', identify which expression is correct.

- (a)  $20 - 4 \div 4 + 8 < 2 \times 26$   
(b)  $20 \times 8 + 15 < 5 \div 9 - 8$   
(c)  $20 < 2 + 10 \div 4 - 6 \times 100$   
(d)  $20 < 5 + 25 \div 10 - 2 \times 96$

25. Which one set of letters when sequentially placed at the gaps in the given letter series shall complete it?

aa\_aabb\_b\_aa\_aabb\_bb

- (a) abbab (b) bbbbaa  
(c) babba (d) aabbb

26. What is the LCM (least common multiple) of 57 and 93?

- (a) 1767 (b) 1567  
(c) 1576 (d) 1919

27. Marked price of an item is Rs 500. On purchase of 2 items discount is 8%, on purchase of 3 items discount is 16%. Radha buys 5 items, what is the effective discount?

- (a) 20.4 percent  
(b) 23.25 percent  
(c) 12.8 percent  
(d) 35 percent

28. The mean of marks secured by 60 students in division A of class X is 64, 40 students of division B is 60 and that of 60 students of division C is 58. Find the mean of marks of the students of three divisions of Class X.

- (a) 60.05 (b) 59.35  
(c) 62.15 (d) 60.75

29. The price of an article is cut by 33%, to restore to its original value, the new price must be increased by

- (a) 33 percent  
(b) 49.25 percent  
(c) 24.81 percent  
(d) 41.25 percent

30. The total surface area of a hemisphere is 166.32 sq cm, find its radius?

- (a) 4.2 cm (b) 8.4 cm  
(c) 1.4 cm (d) 2.1 cm

31. The line passing through  $(-2, 5)$  and  $(6, b)$  is perpendicular to the line  $20x + 5y = 3$ . Find  $b$ ?
- (a)  $-7$  (b)  $4$   
(c)  $7$  (d)  $-4$
32. If  $3x - 8(2 - x) = -19$ , then the value of  $x$  is
- (a)  $-3/11$  (b)  $-33/11$   
(c)  $-3/5$  (d)  $-33/5$
33. If  $2x - 3(2x - 2) > x - 1 < 2 + 2x$ , then  $x$  can take which of the following values?
- (a)  $2$  (b)  $-2$   
(c)  $4$  (d)  $-4$
34. The unit's digit in the product  $7^{35} \times 3^{71} \times 11^{55}$  is :
- (a)  $1$  (b)  $3$   
(c)  $7$  (d)  $9$
35. When the price of a radio was reduced by 20%, its sale increased by 80%. What was the net effect on the sale?
- (a) 44% increase  
(b) 44% decrease  
(c) 66% increase  
(d) 75% increase
36. The batting average of 40 innings of a cricket player is 50 runs. His highest score exceeds his lowest score by 172 runs. If these two innings are excluded, the average of the remaining 38 innings is 48. His highest score was :
- (a) 172 (b) 173  
(c) 174 (d) 176
37. The sixth term of the sequence 2, 6, 11, 17, ..... is
- (a) 24 (b) 30  
(c) 32 (d) 36
38. A number, when divided by 136, leaves remainder 36. If the same number is divided by 17, the remainder will be
- (a) 9 (b) 7  
(c) 3 (d) 2
39. By what least number should 675 be multiplied so as to obtain a perfect cube number ?
- (a) 3 (b) 5  
(c) 24 (d) 40
40.  $\left(1\frac{1}{2} + 11\frac{1}{2} + 111\frac{1}{2} + 1111\frac{1}{2}\right)$  is equal to
- (a) 1236 (b)  $1234\frac{1}{2}$   
(c) 618 (d) 617
41.  $\frac{\sqrt{3+x} + \sqrt{3-x}}{\sqrt{3+x} - \sqrt{3-x}} = 2$  then  $x$  is equal to
- (a)  $\frac{5}{12}$  (b)  $\frac{12}{5}$
- (c)  $\frac{5}{7}$  (d)  $\frac{7}{5}$
42. In an examination, a student scores 4 marks for every correct answer and loses 1 mark for every wrong answer. A student attempted all the 200 questions and scored, in all 200 marks. The number of questions, he answered correctly was
- (a) 82 (b) 80  
(c) 68 (d) 60
43. The mean of 50 numbers is 30. Later it was discovered that two entries were wrongly entered as 82 and 13 instead of 28 and 31. Find the correct mean.
- (a) 36.12 (b) 30.66  
(c) 29.28 (d) 38.21
44. If 60% of  $A = \frac{3}{4}$  of  $B$ , then  $A : B$  is
- (a) 9 : 20 (b) 20 : 9  
(c) 4 : 5 (d) 5 : 4
45. A shopkeeper earns a profit of 12% on selling a book at 10% discount on the printed price. The ratio of the cost price and the printed price of the book is
- (a) 45 : 56 (b) 45 : 51  
(c) 47 : 56 (d) 47 : 51
46. What annual payment will discharge a debt of ₹6,450 due in 4 years at 5% per annum simple interest ?
- (a) ₹1,400 (b) ₹1,500  
(c) ₹1,550 (d) ₹1,600
47. What must be added to each term of the ratio 7 : 11, so as to make it equal to 3 : 4 ?
- (a) 8 (b) 7.5  
(c) 6.5 (d) 5
48. A can complete a piece of work in 18 days, B in 20 days and C in 30 days, B and C together start the work and are forced to leave after 2 days. The time taken by A alone to complete the remaining work is
- (a) 10 days (b) 12 days  
(c) 15 days (d) 16 days
49. A train, 300 m long, passed a man, walking along the line in the same direction at the rate of 3 km/hr in 33 seconds. The speed of the train is
- (a) 30 km/hr (b) 32 km/hr  
(c)  $32\frac{8}{11}$  km/hr (d)  $35\frac{8}{11}$  km/hr
50. If the circumference of a circle is decreased by 50% then the percentage of decrease in its area is
- (a) 25 (b) 50  
(c) 60 (d) 75

51. Bromine is-
  - (a) colourless gas insoluble in water
  - (b) A highly inflammable gas
  - (c) A Black solid.
  - (d) A red liquid.
52. The metal used in storage batteries-
  - (a) Iron
  - (b) Copper
  - (c) Lead
  - (d) Zinc
53. Water has maximum density at-
  - (a)  $-4^{\circ}\text{C}$
  - (b)  $0^{\circ}\text{C}$
  - (c)  $4^{\circ}\text{C}$
  - (d)  $100^{\circ}\text{C}$
54. The colour of Emerald is-
  - (a) Violet
  - (b) Yellow
  - (c) Deep Green
  - (d) Prussian Blue
55. Permanent hardness of water, due to sulphates of the metal, can be destroyed by the use of
  - (a) Nitrates
  - (b) Zeolites
  - (c) Sulphonates
  - (d) None of these
56. Rust is-
  - (a) A mixture of  $\text{Fe}_2\text{O}_3$  and  $\text{Fe}(\text{OH})_2$
  - (b) A mixture of  $\text{FeO}$  and  $\text{Fe}(\text{OH})_2$
  - (c)  $\text{FeO}$  only
  - (d) A mixture of  $\text{Fe}_2\text{O}_3$ ,  $3\text{H}_2\text{O}$  and  $\text{FeO}$
57. Which of the following elements is obtained from sea weeds ?
  - (a) Argon
  - (b) Sulphur
  - (c) Vanadium
  - (d) Iodine
58. The metallic constituents of hard water are
  - (a) Magnesium, Calcium and tin
  - (b) Iron, tin and calcium
  - (c) Calcium, magnesium and iron
  - (d) Magnesium, tin and iron
59. Who suggested that the most of the mass of atom is located in nucleus ?
  - (a) Bohr
  - (b) Thomson
  - (c) Rutherford
  - (d) Avogadro
60. Meson particles are found in-
  - (a) R-rays
  - (b) X-rays
  - (c) Laser beam
  - (d) Cosmic rays
61. An atom of an element with mass number 23 and atomic number 11 will have-
  - (a) 11 neutrons, 12 protons and 11 electrons
  - (b) 11 protons, 12 neutrons and 11 electrons
  - (c) 11 protons, 12 electrons and 11 neutrons
  - (d) 23 protons and 11 electrons
62. Which of the following is a protein ?
  - (a) Wool
  - (b) Starch
  - (c) Natural rubber
  - (d) Cellulose
63. Optical fibres are mainly used in-
  - (a) Communication
  - (b) Weaving
  - (c) Musical Instruments
  - (d) Food Industry
64. The first synthetic fibre made by man was-
  - (a) Rayon
  - (b) Nylon
  - (c) Polyester
  - (d) Terycott
65. Polythene is industrially prepared by the polymerization of
  - (a) Methane
  - (b) Styrene
  - (c) Acetylene
  - (d) Ethylene
66. A mixture of water and alcohol can be separated by
  - (a) Filtration
  - (b) Evaporation
  - (c) Distillation
  - (d) Decantation
67. One micron is equal to-
  - (a) 1/10th of mm
  - (b) 1/100th of mm
  - (c) 1/1000th of mm
  - (d) 1/10000th of mm
68. Equal volumes of different gases at any definite temperature and pressure have-
  - (a) Equal weights
  - (b) equal masses
  - (c) equal density
  - (d) equal no. of molecules
69. Milk is an example of
  - (a) suspension
  - (b) true solution
  - (c) emulsion
  - (d) gel
70. Which of the following modes of expressing concentration is independent of temperature-
  - (a) Molarity
  - (b) Molality
  - (c) Normality
  - (d) Formality
71. Which of the following substances undergoes chemical change on heating ?
  - (a) Sodium chloride
  - (b) Silica
  - (c) Lead nitrate
  - (d) Platinum wire
72. Cooking oil can be converted into vegetable ghee by the process of
  - (a) oxidation
  - (b) hydrogenation
  - (c) distillation
  - (d) crystallisation

73. The contact process is involved in the manufacture of-
  - (a) nitric acid
  - (b) Sulphuric acid
  - (c) Ammonia
  - (d) Caustic soda
74. Antidiuretic hormone (ADH)-
  - (a) inhibits the secretion of growth hormone by the pituitary
  - (b) inhibits the rate of heart beat
  - (c) causes the muscular walls of the arterioles to contract that simulates the reabsorption of water from the kidney tubules.
  - (d) causes an increase in the blood pressure
75. Which of the following is used as lubricant ?
  - (a) Graphite
  - (b) Silica
  - (c) Diamond
  - (d) Iron Oxide
76. The purest form of iron is
  - (a) Steel
  - (b) Pig iron
  - (c) Cast iron
  - (d) Wrought iron
77. The percentage of carbon is the least in-
  - (a) Grey cast iron
  - (b) Wrought iron
  - (c) White cast iron
  - (d) Steel
78. The inert gas which is substituted for nitrogen in the air, used by deep sea drivers for breathing is-
  - (a) Helium
  - (b) Argon
  - (c) Krypton
  - (d) Xenon
79. Old-written material, which cannot be read easily can be read by
  - (a) Cosmic Rays
  - (b) Ultraviolet rays
  - (c) Infra Red rays
  - (d) None of these
80. In an atomic nucleus, neutrons and protons are held together by
  - (a) Gravitational forces
  - (b) Magnetic forces
  - (c) Exchange forces
  - (d) Coulombic forces
81. Who is referred as the Father of Indian Economic Planning?
  - (a) Jawaharlal Nehru
  - (b) Sardar Vallabhai Patel
  - (c) Visveswaraiyah
  - (d) Radha Kant
82. The Article associated with Compulsory Education is
  - (a) Article 20
  - (b) Article 20A
  - (c) Article 21
  - (d) Article 21A
83. The Khangchendzonga National Park is in
  - (a) Manipur
  - (b) Meghalaya
  - (c) Sikkhim
  - (d) Uttarakhand
84. Koniology is this study of
  - (a) Muscle Movements
  - (b) Dust in relation to its effect on health
  - (c) Form and Structure
  - (d) Chemicals Living at molecular level
85. The World Tourism Day is observed on
  - (a) September 23
  - (b) September 25
  - (c) September 27
  - (d) September 29
86. When is Border Security Force Formed?
  - (a) 1952
  - (b) 1962
  - (c) 1970
  - (d) 1965
87. Which classical dance is famous in Assam?
  - (a) Manipuri
  - (b) Sattriya
  - (c) Kathak
  - (d) Kuchipudi
88. What is the head quarters of North Central railway Zone?
  - (a) Delhi
  - (b) Mumbai
  - (c) Allahabad
  - (d) Jaipur
89. The Highest Civilian Award in India
  - (a) Padma Bushan
  - (b) Padma Shri
  - (c) Padma Vibhushan
  - (d) Bharat ratna
90. Pyridoxine is
  - (a) Vitamin B2
  - (b) Vitamin B1
  - (c) Vitamin B6
  - (d) Vitamin B12
91. The Vikram Sarabhai Space Centre is located in which state?
  - (a) Karnataka
  - (b) Andhra Pradesh
  - (c) Kerala
  - (d) Tamil Nadu
92. The National Housing Bank (NHB) was established as a wholly owned subsidiary of RBI under which act?
  - (a) Reserve Bank of India Act, 1934
  - (b) National Housing Bank Act, 1987
  - (c) Banking Regulation Act, 1949
  - (d) Companies Act, 1956
93. Which country will host the 21st Commonwealth Games?
  - (a) Kuala Lumpur, Malaysia
  - (b) Birmingham, England
  - (c) Glasgow, Scotland
  - (d) Gold Coast, Australia
94. As per the Economic Survey 2017-18, the GDP growth of India is pegged at \_\_\_\_\_ percent for the fiscal ending March 31, 2017
  - (a) 7.2 Percent
  - (b) 6.50 Percent
  - (c) 7 Percent
  - (d) 6.75 Percent

95. Who has been elected as the President of Finland?
- (a) Sauli Niinisto
  - (b) Stefan Lofven
  - (c) Valentina Matviyenko
  - (d) Erna Solberg
96. Which Governor General is associated with Doctrine of Lapse ?
- (a) Lord Ripon
  - (b) Lord Dalhousie
  - (c) Lord Bentinck
  - (d) Lord Curzon
97. Which of the following is called the 'ecological hot spot of India'?
- (a) Western Ghats
  - (b) Eastern Ghats
  - (c) Western Himalayas
  - (d) Eastern Himalayas
98. Which is an extra-constitutional body ?
- (a) Language Commission
  - (b) Planning Commission
  - (c) Election Commission
  - (d) Finance Commission
99. Under which market condition do firms have excess capacity?
- (a) Perfect competition
  - (b) Monopolistic competition
  - (c) Duopoly
  - (d) Oligopoly
100. What type of information system would be recognised by digital circuits ?
- (a) Hexadecimal system
  - (b) Binary system
  - (c) Both hexadecimal and binary system
  - (d) Only Roman system