

1. Food cans are coated with tin and NOT zinc because :

- (1) Zinc is less reactive than tin
- (2) Zinc is more reactive than tin
- (3) Zinc has higher melting point than tin
- (4) Zinc is costlier than tin

2. Find the ODD one out from the given options.

- (1) Ink : Pen
- (2) Stamp : Letter
- (3) Car : Engine
- (4) Ticket : Train

3. A ray of light appearing to meet at the principal focus of a concave lens emerge after refraction will be :

- (1) Parallel to the principal axis
- (2) Without any deviation
- (3) Through the centre of curvature
- (4) Through the principal focus

4. Which is the hardest substance in the human body ?

- (1) Knee cap
- (2) Finger nail
- (3) Tooth enamel
- (4) Skull bones

5. Find $\cos^2 A - \sin^2 A$.

- (1) 0
- (2) $\sin^2 A + \cos^2 A$
- (3) 2
- (4) $\cos 2A$

6. Compensatory Afforestation Fund Bill was passed by Rajya Sabha of India in the year :

- (1) 2008
- (2) 2014
- (3) 2010
- (4) 2016

7. What is the gain per cent when articles bought at 6 pieces for Rs. 5 are sold at 5 pieces for Rs. 6 ?

- (1) 30%
- (2) 44%
- (3) 33%
- (4) 25%

8. What is the relation between the frequency ν , wavelength λ and speed v of the sound ?

- (1) $v = \lambda \nu$
- (2) $\nu = \lambda v^2$
- (3) $v = \frac{\lambda}{\nu}$
- (4) $\nu = \frac{v}{\lambda}$

9. Which number will best complete the relationship given below ?

13 : 38 :: 17 : ?

- (1) 53
- (2) 55
- (3) 50
- (4) 57

10. How many squares are there in the given figure?



- (1) 18
- (2) 21
- (3) 26
- (4) 12

11. Which of these numbers has the most number of divisors ?

- (1) 240
- (2) 156
- (3) 200
- (4) 172

12. In this question, three statements are given followed by two Conclusions. Choose the Conclusion(s) which best fit(s) logically.

Statements :

1. Some Mumbai are Delhi.
2. Some Kolkata are Mumbai.
3. Some Chennai are Delhi.

Conclusions :

- I. All Kolkata are Chennai.
 - II. No Chennai is Kolkata.
- (1) Both Conclusions I and II follow
 - (2) Neither Conclusion I nor II follows
 - (3) Only Conclusion II follows
 - (4) Only Conclusion I follows
13. In which of the Union Territories does the Panchayati Raj system NOT exist ?

- (1) Delhi
 - (2) Daman and Diu
 - (3) Chandigarh
 - (4) Dadra and Nagar Haveli
14. If 'yellow' is called 'blue'; 'blue' is called 'white'; 'white' is called 'green'; 'green' is called 'brown' and 'brown' is called 'red', what is the colour of 'milk' ?

- (1) Blue
 - (2) Green
 - (3) White
 - (4) Red
15. 'A' sells goods to 'B' at 25% profit for Rs. 300. 'B' sells it to 'C' at 10% loss. In this sale, C's cost price is equal to what per cent of A's cost price ?
- (1) 87.5%
 - (2) 110%
 - (3) 112.5%
 - (4) 97.5%

16. Facing towards south, Ram started walking and turned left after walking 30 metre. He walked 25 metre and turned left and walked 30 metre. How far and in which direction is he from his starting position ?

- (1) 30 metre, east
- (2) At the starting point only
- (3) 25 metre, west
- (4) 25 metre, east

17. The battle of Khanwa was fought between :

- (1) Humayun and Nasiruddin Nasrat Shah
- (2) Humayun and Sher Shah Suri
- (3) Babur and Rana Sanga
- (4) Akbar and Rana Sanga

18. If $\frac{3}{11} < \frac{x}{3} < \frac{7}{11}$, which of the following values can 'x' take?

- (1) 2
- (2) 0.5
- (3) 3
- (4) 1

19. After full moon, the next fourteen days where the moon grows thinner and thinner and becomes invisible is called as _____.

- (1) Increasing phase of the moon
- (2) Waning phase of the moon
- (3) Waxing phase of the moon
- (4) Growing phase of the moon

20. After spending $\frac{1}{4}$ th of pocket money on chocolates and $\frac{1}{8}$ th on pizza, a girl is left with Rs. 40. How much money did she have at first ?

- (1) Rs. 100
- (2) Rs. 64
- (3) Rs. 52
- (4) Rs. 80

21. In which state did Bharatanatyam originate?

- (1) Gujarat
- (2) Tamil Nadu
- (3) Kerala
- (4) Odisha

22. Three men entered into a business in partnership for 14 months, 8 months and 7 months. If the ratio of their profit is 5 : 7 : 8, what is the ratio of their investments ?

- (1) 20 : 49 : 64
- (2) 5 : 4 : 4
- (3) 28 : 49 : 64
- (4) 5 : 7 : 8

23. In 1990, which sport was introduced in the Asian Games for the first time ?

- (1) Triathlon
- (2) Kabaddi
- (3) Snooker
- (4) Power lifting

24. How will the light rays passing from air into a glass prism bend ?

- (1) Away from the normal
- (2) Almost at 90 degrees with normal
- (3) As the normal
- (4) Towards the normal

25. Simplify : $3\frac{1}{2} + 5\frac{2}{3} - 4\frac{7}{6}$

- (1) 2
- (2) 8
- (3) 12
- (4) 4

26. Find the missing number in the following series.

28, 60, 90, 117, (...), 158

- (1) 132
- (2) 144
- (3) 136
- (4) 140

27. Which of the following is a byproduct of soap ?

- (1) Isoprene
- (2) Ethylene glycol
- (3) Butene
- (4) Glycerin

28. Find the ODD one out from the given options.

- (1) 885
- (2) 695
- (3) 489
- (4) 395

29. In which state is the Benaras Hindu University (BHU) located ?

- (1) Jharkhand
- (2) Bihar
- (3) Uttar Pradesh
- (4) Uttaranchal

30. Which of the following occurs due to deficiency of vitamin K?

- (1) Failure of clotting of blood
- (2) Non-maturation of ovum
- (3) Blastocyst formation in uterus
- (4) Neuritis

31. Complete the series.

5, 4, 6, 15, 56, (...)

- (1) 253
- (2) 275
- (3) 271
- (4) 283

32. Complete the series.

31, 29, 24, 22, 17, (...)

- (1) 13
- (2) 14
- (3) 12
- (4) 15

33. Which of the following blood groups is known as the 'universal donor'?

- (1) A
- (2) B
- (3) AB
- (4) O-

34. The valency of nitrogen in NH_3 is :

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

35. What happens to the irregularities of the two surfaces which causes static friction?

- (1) Vanishing
- (2) Interlocking
- (3) Rolling
- (4) Sliding

36. Raja is three times as old as Arun. Three years ago, he was four times as old as Arun. How old is Raja now?

- (1) 6
- (2) 12
- (3) 27
- (4) 15

37. A thief escapes in a car driving at 60 km/h towards a city 400 km away. Only after 30 minutes, the police start to chase at 80 km/h. What distance will the police have covered when the thief is caught?

- (1) 90 km
- (2) 120 km
- (3) 70 km
- (4) 85 km

38. The sum of the total number of protons and neutrons present in the nucleus of an atom is known as :

- (1) Avogadro number
- (2) Gauss number
- (3) Atomic number
- (4) Mass number

39. In a certain code language, 'put tir fin' means 'delicious juicy fruit', 'tie dip sig' means 'beautiful white lily', 'sig lon fin' means 'lily and fruit'. Which of the following stands for 'and' in that language ?

- (1) tir
- (2) lon
- (3) sig
- (4) fin

40. Which of the following reactions produces insoluble salts ?

- (1) Neutralisation
- (2) Oxidation
- (3) Precipitation
- (4) Reduction

41. WHO has established _____ initiative for the prevention and control of non communicable diseases.

- (1) Mobile MIM
- (2) Resolution MD
- (3) Be He@lthy, Be Mobile
- (4) Airstrip ONE

42. A courtyard 4.55 m long and 5.25 m broad is paved with square tiles of equal size. What is the largest size of tile used?

- (1) 21 cm
- (2) 25 cm
- (3) 35 cm
- (4) 28 cm

43. If $S = \frac{3T}{2}$, then express 'T' as

a percentage of $S + T$.

- (1) 75%
- (2) 40%
- (3) 25%
- (4) 20%

44. What is aerobic respiration?

- (1) Respiration through gills
- (2) Respiration through skin
- (3) Respiration without molecular oxygen
- (4) Respiration in presence of oxygen

45. Which of the following has highest amount of citric acid ?

- (1) Lime
- (2) Banana
- (3) Mango
- (4) Grapes

46. Evaluate :

$$1 + \frac{1}{2} + \frac{1}{4} + \frac{1}{8} + \frac{1}{16} + \dots$$

(1) $\frac{1}{50}$ (2) 3

(3) $\frac{1}{22}$ (4) 2

47. A certain distance is covered at a certain speed. If half the distance is covered in double the time, what is the ratio of the two speeds ?

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

48. What determines the sex of a child ?

- (1) Blood group of mother
- (2) Blood group of father
- (3) Rh factor of the parents
- (4) Chromosomes

49. Complete the series.

BB, OD, OG, KL, (...)

- (1) VD
- (2) AG
- (3) SS
- (4) LO

50. Who among the following is the youngest player to play for India in T20 Internationals ?

- (1) Jaydev Unadkat
- (2) Hardik Pandya
- (3) Washington Sundar
- (4) Ishan Kishan

51. Find the missing number in the following series.

5, 8, 13, 21, 34, 55, (...), 144, 233

(1) 85 (2) 91

(3) 94 (4) 89

52. In this question, a statement is given followed by three Conclusions. Choose the Conclusion(s) which best fit(s) logically.

Statement :

"Use cold cream for fair complexion" — an advertisement.

Conclusions :

I. People like to use cream for fair complexion.

II. People are easily fooled.

III. People respond to advertisements.

(1) Only Conclusion II follows

(2) Only Conclusions I and II follow

(3) None of the Conclusions follows

(4) Only Conclusion I follows

53. Find the missing group of alphabet in the following series.

DZ, LA, (...), PK, LP

(1) WV (2) PF

(3) OR (4) LK

54. What is the resultant resistance of 3Ω and 6Ω resistances connected in series ?

(1) 16Ω (2) 2Ω

(3) 9Ω (4) 12Ω

55. If 200 men can dig a canal working for 8 hours a day in 6 days, how long will it take to dig the canal, if 300 men work 6 hours per day ?

(1) $4\frac{2}{3}$ days (2) 6 days

(3) 7 days (4) $5\frac{1}{3}$ days

56. A power plant where the heat required to make steam to drive turbines to make electricity is obtained by burning fuels is called :

- (1) Solar power plant
- (2) Hydro electric power plant
- (3) Nuclear power plant
- (4) Thermal power plant

57. A substance that increases the rate of a reaction without itself being consumed is called :

- (1) Reactant (2) Inhibitor
- (3) Catalyst (4) Product

58. Which Indian waterfall has four distinct falls namely Raja, Rani, Rocket and Roarer in it ?

- (1) Athirappilly
- (2) Dudhsagar
- (3) Jog
- (4) Hirni

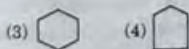
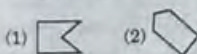
59. The perimeter of a rectangle is twice the perimeter of a square of side 18 units. If the breadth of the rectangle is 45 units, what is its area?

- (1) 1360 sq. units
- (2) 1050 sq. units
- (3) 1152 sq. units
- (4) 1215 sq. units

60. If $4 \times 4 \div 2 = 8$ and $3 \times 8 \div 2 = 12$, then $7 \times 6 \div 3 = ?$

- (1) 14 (2) 11
- (3) 16 (4) 9

61. Find the ODD one out from the given options.



62. When litmus is added to a solution of borax, it turns ____.

- (1) Pink (2) Orange
- (3) Blue (4) Red

63. Find the area of a square inscribed in a circle of radius 8 cm.

- (1) 128 cm² (2) 144 cm²
- (3) 136 cm² (4) 64 cm²

64. Arun wants to pay Rs. 16000 cash for a colour television and Bala wants to purchase the same for Rs. 17776, due after 2 years. If the rate of simple interest is 5% per annum, which of the deals is better for the shopkeeper ?

- (1) Both are the same
- (2) Neither of the deal
- (3) From Arun
- (4) From Bala

65. A train passes a platform in 36 seconds and a man standing on the platform in 20 seconds. If the speed of the train is 54 km/h, what is the length of the platform ?

- (1) 300 m (2) 360 m
- (3) 120 m (4) 240 m

66. Which of the following is a viral disease ?

- (1) Beriberi (2) Measles
- (3) Rickets (4) Syphilis

67. Which of the following canon of taxation is also known as 'ability to pay' principle of taxation?

- (1) Canon of certainty
- (2) Canon of equity
- (3) Canon of economy
- (4) Canon of convenience

68. How much does a watch lose per day, if the hands coincide every 64 minutes ?

- (1) $17\frac{5}{11}$ minutes
- (2) $32\frac{8}{11}$ minutes
- (3) $\frac{32}{11}$ minutes
- (4) $\frac{16}{11}$ minutes

69. Which of the following is a pesticide ?

- (1) DDT (2) TNT
- (3) HCL (4) VCR

70. The force of attraction between two objects of masses M and m which lie at a distance d from each other is inversely proportional to :

- (1) The distance between them : d
- (2) Square of distance between them : d²
- (3) The square root of distance between them : \sqrt{d}
- (4) The cube of distance between them : d³

71. Mukhyamantri Yuva Swabhiman Yojana launched by Madhya Pradesh government is associated with :

- (1) 100 days of employment every year to urban youth from economically weaker sections
- (2) 200 days of employment every year to urban youth from economically weaker sections
- (3) Financial support to the girls from economically weaker sections
- (4) Free education to the children from economically weaker sections

72. On a certain sum of money, the simple interest for 2 years is Rs. 140 at 4% per annum. Find the difference between compound interest and simple interest on the same sum at same rate and same period.

- (1) Rs. 3 (2) Rs. 1.80
- (3) Rs. 2.40 (4) Rs. 2.80

73. Find the LCM and HCF of 1.75, 5.6 and 7.

- (1) 24, 0.35 (2) 28, 0.25
- (3) 24, 0.25 (4) 28, 0.35

74. If $a \times b = a + b + \sqrt{ab}$, then

find the value of 4×9 .

- (1) 20 (2) 29
(3) 49 (4) 19

75. 'Pneumonia' is caused by the inflammation of :

- (1) Heart (2) Brain
(3) Liver (4) Lunga

76. Find the value of $(1 - \cos^2\theta)$
 $(\cot^2\theta + 1) - 1$.

- (1) $\sec^2\theta$ (2) -2
(3) 2 (4) 0

77. All acids produce _____ gas on reacting with metals.

- (1) Nitrogen
(2) Hydrogen
(3) Carbon dioxide
(4) Oxygen

78. Who among the following was posthumously awarded the Bharat Ratna in 2019 ?

- (1) Balwant Moreswar Purandare
(2) Ashok Laxmanrao Kulkarni
(3) Pranab Mukherjee
(4) Nanaji Deshmukh

79. To change a temperature on the Kelvin scale to the Celsius scale, you have to _____ the given temperature.

- (1) Add 273 to
(2) Divide 273 by
(3) Multiply 273 by
(4) Subtract 273 from

80. Six typists can type a given data in 16 days. How many days will 4 typists take to do the same work ?

- (1) 24 days (2) 22 days
(3) 18 days (4) 20 days

81. Read the following information carefully and answer the question given below :





Seven members L, H, K, T, F, J and R represent different countries in Olympics, USA, China, Korea, France, Russia, Australia and Japan; each one competes for a different sport, viz. volleyball, archery, rifle shooting, tennis, boxing, athletics and football. The order of persons, countries and games is not necessarily the same.

K represents China for archery. T represents USA but not for volleyball or rifle shooting. One who represents Japan competes for boxing. F competes for volleyball but not for Korea. L represents Australia for athletics. The one who represents Russia competes for tennis. J does not represent Korea or Japan. R competes for rifle shooting. Which of the following combinations of member, sport and country are CORRECTLY matched ?

- (1) J—Tennis—France
(2) J—Tennis—Russia
(3) R—Tennis—France
(4) R—Tennis—Russia

82. Choose the figure that best represents the relationship among the classes given below.

House, Brick, Bridge

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

83. If a current of 3 Amperes flows for 1 minute, how much charge flows in this time ?

- (1) 60 Coulombs
(2) 30 Coulombs
(3) 90 Coulombs
(4) 180 Coulombs

84. Find the percentage of wastage of material in converting a cylinder of base diameter 10 cm and height 20 cm into a cone of equal base, but double the height of the cylinder.

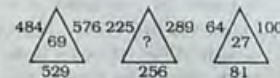
- (1) 33.3% (2) 20%
(3) 35% (4) 25%

85. Which number will best complete the relationship given below ?

12 : 46 :: 18 : ?

- (1) 70 (2) 74
(3) 72 (4) 76

86. Choose the alternative that best replaces the question mark (2) in the given figure.



- (1) 48 (2) 57
(3) 41 (4) 53

87. BrahMos II is a _____ currently under joint development by Russia's NPO Mashinostroyeniya and India's Defence Research and Development Organisation.

- (1) Main battle tank
(2) Hypersonic cruise missile
(3) Subsonic cruise missile
(4) Light Combat Aircraft

88. Which of these diseases is usually transmitted by mosquitoes ?

- (1) Arthritis
(2) Jaundice
(3) Chicken pox
(4) Malaria

89. Read the following information carefully and answer the question given below :

Arjun, Banu, Keerthi, Deepan, Harini, Vasanth, Gayathri and Kumar are sitting around a circle facing the centre. Banu is third to the right of Vasanth and third to the left of Kumar. Keerthi is fourth to the left of Arjun. Arjun is not an immediate neighbour of Vasanth and Banu. Harini is not an immediate neighbour of Banu. Gayathri is second to the right of Deepan.

Who among the following is third to the left of Harini ?

- (1) Deepan (2) Gayathri
(3) Banu (4) Arjun

90. What is the difference between the place and face values of '5' in the number 3675149 ?

- (1) 4995 (2) 5000
(3) 495 (4) 4990

91. A man walks 30 m towards south. Then, turning to his right, he walks 30 m. Then, turning to his left, he walks 20 m. Again, turning to his left, he walks 30 m. How far is he from his starting point ?

- (1) 30 m (2) 80 m
(3) 50 m (4) 20 m

92. Which of the following created the office of Governor General of India ?

- (1) Charter Act, 1833
(2) Charter Act, 1813
(3) Government of India Act, 1935
(4) Governor of India Act, 1858

93. With which of the following sports is Mahesh Bhupathi associated ?

- (1) Cricket (2) Hockey
(3) Football (4) Tennis

94. Which of the following elements has the highest electronegativity ?

- (1) Iodine (2) Bromine
(3) Fluorine (4) Chlorine

95. When two or more resistances are connected end to end consecutively, they are said to be connected in :

- (1) Series (2) Parallel
(3) Straight (4) Line

96. If $\text{BOOK-PEN} = 8$, then $\text{PEN-NIB} = ?$

- (1) 6 (2) 10
(3) 8 (4) 12

97. If $x + y = 11$, then $(-1)^x + (-1)^y$ is equal to _____

(where x, y are whole numbers).

- (1) 0 (2) 1
(3) 2 (4) -1

98. Find the value of $\sqrt{\cot^2 \theta - \cos^2 \theta}$:

- (1) $\cot \theta \operatorname{cosec} \theta$
(2) $\cot \theta \cos \theta$
(3) 1
(4) $\cos \theta \operatorname{cosec} \theta$

99. Age of A : age of B is 3 : 2. Ten years hence, the sum of their ages will be 80. What are their present ages ?

- (1) 42, 28 (2) 36, 24
(3) 45, 30 (4) 27, 18

100. Choose from the alternatives the figure that best completes the pattern given below.



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