ALLEN

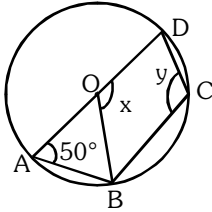**1.** Which of the following responsible for flow of water in rivers?

(1) Force of friction   (2) Kinetic energy

(3) Gravitational force   (4) Electrostatic force

2. 2kg ice at 0°C is mixed with 8 kg of water at 20° C. The final temperature is

(1) 0°C   (2) 20°C

(3) 16°C   (4) None of these

3. A wave completes 24 cycles in 0.8 Sec. The frequency of the wave is.

(1) 30Hz   (2) 8Hz   (3) 24Hz   (4) 12Hz

4. Van Allen radiation belts were discovered by?

(1) Explorer-1   (2) Viking-1

(3) Aryabhatta   (4) Sputnik

5. When 60 calories of heat are supplied to 1g of water, the rise in temperature is

(1) 75° C   (2) 900°C

(3) 60°C   (4) 0.25°C

6. 1 gauss is equal to

(1) 10^4T   (2) 10^{-4}T

(3) 10^3T   (4) 10^{-3}T

7. 4/25 coulomb of charge contains.......electrons.

(1) 10^{15} (2) 10^{18}

(3) 10^{20} (4) None of these

8. One erg is equal to

(1) 1 g cm S^{-2} (2) 1 Nm

(3) 10^{-7} J   (4) 10^{-5} J

9. A force acts for 10s on a body of mass 10 kg after which the force stops and the body covers 50 m in the next 5s. Calculate force:

(1) 20 N   (2) 15 N   (3) 10 N   (4) 30 N

10. To produce an echo, the minimum distance the sound must travel between source and reflector:

(1) 16.2 m   (2) 8.2 m

(3) 34.4 m   (4) 17.2 m

11. An object is placed at 30 cm in front of a convex mirror of focal length 15 cm. Find the nature and position of image.

(1) Image is real, inverted and 15 cm behind mirror

(2) Image is real, virtual and 20 cm behind mirror

(3) Image is erect, virtual and 10 cm behind mirror

(4) Image is real, virtual and erect and 15 cm from mirror

12. Five electric bulbs having resistance of 440 ohm each are connected in parallel to a suppy of 220 volts. Find electricity bill if bulbs are lighted for 5 hours a day for 30 days. The cost of one unit is Rs. 3.

(1) Rs. 258   (2) Rs. 228.50

(3) Rs. 230   (4) Rs. 247.5

13. Due to refraction of light in atmosphere

(1) stars appear to twinkle.

(2) clouds appear of white colour.

(3) sun looks white at noon.

(4) the phenomena of mirage and looming take place.

14. A cylindrical bar magnet is kept along the axis of a circular coil. If the magnet is rotated about its axis, then

(1) a current will be induced in the coil

(2) no current will be induced in the coil

(3) only emf will be induced in the coil

(4) an emf and current both will be induced in the coil.

15. Polymerization of which compound will give benzene

(1) Ethane   (2) Ethyne

(3) Ethene   (4) Methane

16. Volume of CO_2 liberated at STP on burning 24g of methane in excess of air is

(1) 11.2L   (2) 22.4L

(3) 33.6L   (4) 44.8L

17. $2SO_2(g) + O_2(g) \rightleftharpoons 2SO_3(g)$ +heat

Fovourable conditions for the reaction are

(1) Low pressure, high temperatures

(2) Low pressure, low temperatures

(3) High pressure, low temperatures

(4) High pressure, high temperatures

18. 10g of $CaCO_3$ contain

(1) 10 moles of $CaCO_3$

(2) 0.1 gm atom of Ca

(3) 6×10^{23} atoms of Ca

(4) None of these

19. Aluminium and phosphorus belong respectively to groups

(1) 10 and 12   (2) 13 and 15

(3) 10 and 15   (4) 12 and 13

20. Which of the following is the most metallic element?

(1) Oxygen   (2) Fluorine

(3) Krypton   (4) Beryllium

21. In each of following compound carbonyl group is present except in

(1) HCHO   (2) CH_3COCH_3

(3) $H-CH_2-OH$ (4) $CH_3-\overset{\overset{O}{\|}}{C}-H$

22. Which of the following would yield a basic oxide?

(1) Sulphur   (2) Sodium

(3) Silicon   (4) Phosphorus

23. In a solution which contains $[H^+]$ ion concentration is 10^{-3} mole/litre, the pH of solution will be

(1) 1   (2) 3   (3) 8   (4) 10

24. In which of the following colloids both dispersed phase and dispersion medium are liquid

(1) Blood   (2) Smoke

(3) Paint   (4) Milk

25. Total number of atoms present in 0.49g of H_2SO_4 is

(1) 2.1×10^{22} atoms   (2) 6.02×10^{23} atoms

(3) 3.01×10^{21} atoms   (4) 1.2×10^{24} atoms

26. Which of the following has maximum number of molecules?

(1) 7 grams nitrogen (g)

(2) 23 grams nitrous oxide (g)

(3) 2 grams Hydrogen (g)

(4) 16 grams oxygen (g)

27. Select the incorrect statement.

(1) C_3H_8 does not have any isomer.

(2) $HCOOCH_3$ and CH_3COOH are not same organic compounds.

(3) There is no organic compound with formula CH_2O.

(4) C_3H_4 has two π – bonds.

28. Which of the following statements is not correct about Parenchyma tissue ?

(1) The cells are thin walled.

(2) Large cells are placed together with intercellular spaces.

(3) The cells are loosely packed.

(4) The cells are thick walled.

29. Which of the following fishes have skeleton which is entirely made up of cartilage ?

(1) Shark   (2) Cat fish

(3) Salmon   (4) Cod

30. Which of the following helps to transport glucose and oxygen from the mother to the embryo?

(1) Placenta   (2) Fallopian tube

(3) Ovary   (4) Uterus

31. In diabetes mellitus the patient drinks more as there is loss of………..during urination.

(1) Fat   (2) Insulin

(3) Protein   (4) Water

32. Which of the following pairs is incorrectly matched ?

(1) Malaria-Anopheles

(2) Plague-cat

(3) Dengue- Aedes

(4) Food Poisoning-Cockroach

33. Which of the following organ is associated with adrenal gland ?

(1) Pharynx   (2) Pancreas

(3) Kidney   (4) Brain

34. The Wings of an Insect and a bird are the example of

(1) Analogous organs   (2) Homologous organs

(3) Vestigial organs   (4) Atavism

35. Pollen grain represents

(1) a male gametophyte

(2) a female gametophyte

(3) a male sporophyte

(4) a female sporophyte

36. A farmer wishes to start poultry farm but he is not aware about the type of birds, suggest him the name of Indigenous breed.

(1) Aseel   (2) Rhode island red

(3) White leghorn   (4) All of these

37. Which of the following disease is caused by virus?

(1) Diphtheria   (2) Influenza

(3) Typhoid   (4) cholera

38. The terminal end of a chromosome is often called

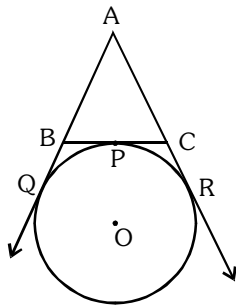(1) Centromere   (2) Chromomere

(3) Telomere   (4) Metamere

39. Humans are unable to digest the cellulose of the food because

(1) their stomach is not divided into compartments.

(2) the lumen of the small intestine is narrow.

(3) they are unable to chew cellulose.

(4) certain bacteria are not present in humans that are present in ruminants.

40. Which of the options given below would not work in the following sentence?

In order for the body to absorb and use_____ these must be broken down by hydrolysis into _____.

(1) polysaccharides, monosaccharides

(2) amino acids, proteins

(3) fats, glycerol and fatty acids

(4) disaccharides, monosaccharides

41. If $a^{1/3} + b^{1/3} + c^{1/3} = 0$, then

(1) $a + b + c = 0$ (2) $(a + b + c)^3 = abc$

(3) $a + b + c = 3abc$ (4) $a^3 + b^3 + c^3 = 0$

42. If $x^{101} + 101$ is divided by $(x + 1)$, then remainder is

(1) 0   (2) –1   (3) 49   (4) 100

43. A square and equilateral triangle have equal perimeter. If the diagonal of the square is $12\sqrt{2}$ cm, then area of the triangle is

(1) $24\sqrt{2}\,\text{cm}^2$ (2) $24\sqrt{3}\,\text{cm}^2$

(3) $48\sqrt{3}\,\text{cm}^2$ (4) $64\sqrt{3}\,\text{cm}^2$

44. A bag contains 50 coins and each coin is marked from 51 to 100. One coin is picked at random. The probability that the number on the coin is not a prime number is

(1) $\dfrac{1}{5}$ (2) $\dfrac{2}{5}$ (3) $\dfrac{3}{5}$ (4) $\dfrac{4}{5}$

45. If $\dfrac{\sqrt{1369}}{\sqrt{5476}} \times \sqrt{0.0001} = x$ then the value of x will be

(1) 10^{-1} (2) 10^{-2}

(3) 5×10^{-3} (4) $6\sqrt{5}$

46. X takes 3 hours more than Y to walk 30 km. But if X doubles his pace, he is ahead of Y by $1\dfrac{1}{2}$ hours. Their speed of walking is

(1) $\dfrac{20}{3}$ km/hr., 6km/hr.

(2) 5 km/hr., 3km/hr.

(3) $\dfrac{3}{10}$ km/hr., 4km/hr.

(4) $\dfrac{10}{3}$ km/hr., 5km/hr.

47. The prime factorisation of the number 32760 will be

(1) $2^3 \times 5^2 \times 7^2 \times 13$

(2) $2^2 \times 3^3 \times 5 \times 7 \times 13$

(3) $2^3 \times 3^2 \times 5 \times 7 \times 13$

(4) $2^3 \times 3^3 \times 5^2 \times 7 \times 13$

48. The vertices of an equilateral triangle are (a, a), (–a, –a) and its area will be (in sq. unit)

(1) $3\sqrt{2}a$ (2) $3\sqrt{2}a^2$

(3) $2\sqrt{3}a^2$ (4) $2\sqrt{3}a$

49. If a = 0.1039 then the value of $\sqrt{4a^2 - 4a + 1} + 3a$ is

(1) 0.1039   (2) 0.2078

(3) 1.1039   (4) 2.1039

50. If pth, qth and rth terms of an A.P. are a,b,c respectively then the value of

a(q − r)+ b(r − p) + c(p − q) is equal to:

(1) 2   (2) 1   (3) –1   (4) 0

51. The solution of $(x - 3)(x - 4) = \dfrac{34}{(33)^2}$ is

(1) $\dfrac{98}{33}$ or $\dfrac{133}{33}$ (2) $\dfrac{97}{32}$ or $\dfrac{132}{33}$

(3) $\dfrac{96}{33}$ or $\dfrac{131}{33}$ (4) $\dfrac{95}{33}$ or $\dfrac{130}{33}$

52. If the radius of a circular wire is decreased to one-third and if volume remains the same, then the length of the wire will be

(1) 3 times   (2) 6 times

(3) 9 times   (4) 27 times

53. In the given figure O is the centre of circle and $\angle DAB = 50°$, then the measure of x & y are

(1) x = 90°, y = 120°   (2) x = 60°, y = 120°

(3) x = 70°, y = 130°   (4) x = 100°, y = 130°

54. In the figure, a circle touches the side BC of ΔABC at P and touches AB and AC produced at Q and R respectively. If AQ = 5 cm then perimeter of ΔABC is
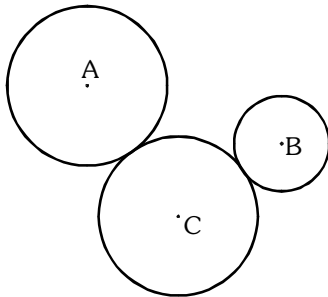

(1) 10 cm   (2) 12.8 cm

(3) 11.8 cm   (4) 13 cm

55. If A_1, A_2 and A_3 denotes the areas of three adjacent faces of a cuboid, then its volume is

(1) $A_1A_2A_3$ (2) $2A_1A_2A_3$

(3) $\sqrt{A_1A_2A_3}$ (4) $\sqrt[3]{A_1A_2A_3}$

56. In the figure A and B are the centres of two circles of radii 9 cm and 2cm, such that AB=13cm and $\angle ACB=90°$, where C is the centre of another circle. Then the area of the circle with centre C is:

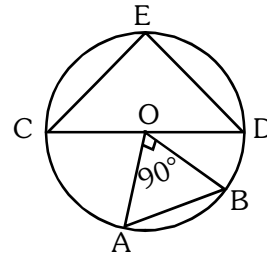(1) 3π cm²   (2) $9\pi^2$ cm²

(3) 9π cm²   (4) $9\sqrt{\pi}$ cm²

57. If $a = \dfrac{4xy}{x+y}$, then the value of $\dfrac{a+2x}{a-2x}+\dfrac{a+2y}{a-2y}$ will be

(1) 0   (2) 1   (3) 2   (4) $\dfrac{4xy}{2x+y}$

58. In the figure, CD is the diameter of circle with centre O. CE and DE are equal chords and AB is an another chord. If $\angle AOB = 90°$, then the ratio of areas of ΔCED and ΔAOB is

(1) 2 : 1   (2) 3 : 1   (3) 5 : 3   (4) 4 : 1

59. The ratio of the volume of a cube to that of a sphere which will exactly fit inside the cube is

(1) 4 : π (2) 5 : π (3) 6 : π (4) 7 : π

60. Complete the sentence with suitable answer from the options:

"Every real number is either a………….number or an……….number."

(1) natural : integral   (2) rational : irrational

(3) irrational : whole   (4) rational : natural

61. Tropic of Cancer does not pass through which of the following states

(1) Rajasthan   (2) Gujarat

(3) Karnataka   (4) Madhya Pradesh

62. Which of the following rivers falls into Arabian sea?

(1) Mahanadi   (2) Ganga

(3) Brahmaputra   (4) Narmada

63. The western Coastal strip, south of Goa is known as:

(1) Konkan coast   (2) Coromandal Coast

(3) Northern Cast   (4) East coast

64. Which of the following crop requires more water for its growth?

(1) Wheat   (2) Barley

(3) Pulses   (4) Rice

65. Tides occur mainly due to the following factor.

(1) Gravitational pull of the earth

(2) Sea Winds

(3) Gravitational pull of the sun and the moon

(4) Heating of Ocean Water

66. Which of the following soil is also known as 'Regur soil'?

(1) Laterite soil   (2) Alluvial soil

(3) Black soil   (4) Desert soil

67. Which one of the following is not a type of coffee?

(1) Arabica   (2) Britannica

(3) Robusta   (4) Liberica

68. Approximately at What degree of latitude the Gulf Stream (warm water current) and the Labrador current (cold water current) meet near Newfound land?

(1) 20°N   (2) 45°N   (3) 20°S   (4) 45°S

69. In which Industry limestone is mostly used?

(1) Paper   (2) Cement

(3) Petro-Chemical   (4) Textile

70. Which is the largest delta of the world?

(1) Danube-Don Delta   (2) Volga Delta

(3) Kaveri Delta   (4) Sunderban Delta

71. What was the Profession of Guru Nanak Devji's father ?

(1) Jagirdar   (2) Peasant

(3) Patwari   (4) Shopkeeper

72. Which Guru started The Manji System?

(1) Guru Amardas ji   (2) Guru Angad Dev ji

(3) Guru Ramdas ji   (4) Guru Arjun Dev ji

73. Which religion has Protestants ?

(1) Hindu religion   (2) Muslim religion

(3) Sikh religion   (4) Christian religion

74. Of which country Columbus was native?

(1) Italy   (2) Japan

(3) Germany   (4) China

75. The second world war was fought between ....and.........

(1) Germany, Japan, Italy- France, Britain, Italy Soviet Union & United States

(2) Germany, Britain, France-Italy, United States

(3) Germany, United States- Britain, France

(4) Britain, France, Soviet Union -Germany, Japan, United States

76. What is the name given to Punjab by the Latin Historians in Latin Language?

(1) Penta Patamia   (2) Sapta Sindu

(3) Panch Nand   (4) Lahore Suba

77. What was the basic objective of the Vernacular Press Act?

(1) To ensure reports and editorial in the vernacular press

(2) To Promote freedom of Press

(3) To censor foreign press

(4) None of the above

78. Who wrote Kadambari?

(1) Bana Bhatta   (2) Raja Ram Mohan Rai

(3) Mahatma Gandhi   (4) Raja Rai Verma

79. Who developed the Principal of Garden city?

(1) Ebenezer Howard   (2) Charles Dickens

(3) Thomas Hardy   (4) Andrews Mearns

80. Who invented the Steam Engine ?

(1) James watt   (2) New comen

(3) Richard Arkwright   (4) None of the above

81. The Indian constitution has article

(1) 93   (2) 394

(3) 395   (4) 396

82. Which of the following is not work of legislature?

(1) To make laws   (2) To amend constitution

(3) Administration   (4) Control Money

83. Which among the following is vested with Residuary powers in the Indian Federal Structure ?

(1) State

(2) Centre

(3) Both centre and State

(4) Panchayats

84. The Governor's salary and allowances are Charged on

(1) The consolidated fund of the State

(2) The Contingency fund of India

(3) The Treasury

(4) The Consolidated fund of India

85. Which day is Celebrated as Human Rights Day around the world ?

(1) 10 December   (2) 2 February

(3) 8 March   (4) 5 September

86. In 1954, India signed Panchsheel, Agreement with which of the following country ?

(1) Bangladesh   (2) China

(3) Pakistan   (4) Sri Lanka

87. As per the constitution of India which of the following institution is entrusted with the power of Judicial Review ?

(1) Lok Sabha   (2) Rajya Sabha

(3) Supreme Court   (4) President

88. Minimum age required to become a member of Rajya Sabha is:

(1) 21Years   (2) 25 Years

(3) 30 Years   (4) 35 Years

89. The basis of the formation of Uttarakhand, Jharkhand and Chhattisgarh States is

(1) Cast   (2) Population

(3) Regionalism   (5) Communalismz

90. For which of the following groups, seats are not reserved for any of the Elections:-

(1) Scheduled Tribes   (2) Scheduled Castes

(3) Physical Disability   (4) Women

91. The time Period of 1st five year plan of India is.............

(1) 1948-53   (2) 1949-54

(3) 1950-55   (4) 1951-1956

92. Continuous and high increase in general Price level is called......

(1) Trade cycle   (2) Inflation

(3) Deflation   (4) Recession

93. Under Monopoly, the relation between Average income and Marginal income is

(1) AR>MR   (2) AR=MR

(3) AR<MR   (4) AR/MR= ∞

94. _____ is the ratio of Consumption expenditure income

(1) APS   (2)APC

(3) MPS   (4) MPC

95. Who is the chairman of Planning Commission of India?

(1) President   (2) Prime Minister

(3) Finance Minister   (4) Home Minister

96. Match the following:

State	Neighbouring Country
A. Uttaranchal	i. Myanmar
B. Rajasthan	ii. Pakistan
C. Meghalaya	iii. China
D. Nagaland	iv. Bangladesh

(1) A-iv, B-iii, C-ii, D-i   (2) A-iii, B-ii, C-iv, D-i

(3) A-i, B-iii, C-ii, D-iv   (4) A-ii, B-iv, C-i, D-iii

97. A major latitude dividing Indian mainland into two equal halves is

(1) Arctic circle   (2) Equator

(3) Tropic of Capricorn   (4) Tropic of Cancer

98. India shares longest international boundary with

(1) China   (2) Nepal

(3) Pakistan   (4) Bangladesh

99. Maldive Islands are situated to the south of the

(1) Port Blair   (2) Ross Island

(3) Nicobar Island   (4) Lakshadweep Island

100. India is separated from Sri Lanka by

(1) Arabian Sea   (2) Gulf of Kutchh

(3) Indian ocean   (4) Palk Strait