Max. Marks : 100   **Time : 120 minutes**

1.   Conductivity of superconductors is:
      (A) Infinite   (B) Very large
      (C) Very Small   (D) Zero

2.   The S.I. unit of magnetic field intensity is:
      (A) Weber   (B) Tesla
      (C) Oerstead   (D) Gauss

3.   If the distance travelled by an object is zero, then the displacement of the object is:
      (A) zero   (B) not zero
      (C) negative   (D) May or may not be zero

4.   Which of the following is non-conservative force?
      (A) Electrostatics force   (B) Gravitational force
      (C) Viscous force   (D) Spring force

5.   Escape velocity of a particle from the earth is approximately.
      (A) 7 km/s   (B) 1.1 km/s
      (C) 11.2 km/s   (D) 112 km/s

6.   When a setellite falls to an orbit of smaller radius its kinetic energy:
      (A) decrease   (B) increase
      (C) remain same   (D) none of these

7.   How many time does a ray bend on passing through a prism?
      (A) once   (B) twice
      (C) thrice   (D) none

8.   Waves inside a gas are ;
      (A) longitudinal   (B) transverse
      (C) partly longitudinal partly transverse   (D) none of these

9.   Choose the source of energy which is different from others.
      (A) Sun light   (B) Falling water
      (C) Wind   (D) Petroleum

10.   Which is called Earth's satellite?
      (A) moon   (B) sun
      (C) venus   (D) mars

11.   Which is the colour at lower end of visible spectrum?
      (A) red   (B) green
      (C) yellow   (D) violet

12.   How many planets have rings around them?
      (A) 3   (B) 2
      (C) 4   (D) 5

13.   1k Wh equal to:
      (A) 3.6×10^4 J   (B) 3.6×10^5 J
      (C) 3.6×10^6 J   (D) 3.6×10^7 J

14.   Which one of the following will show Tyndall Effect.
      (A) Solution of salt   (B) Milk
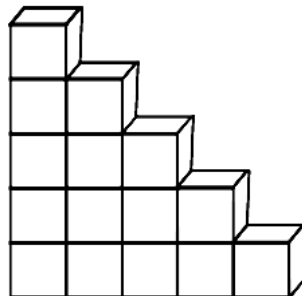   (C) Solution of copper sulphate   (D) None of the above

15. Which one of the following is solution.
(A) Soil
(B) Aerosols
(C) Coal
(D) Soda-water

16. Write chemical formula of Magnesium Chloride
(A) $MgCl_2$
(B) $CaCl_2$
(C) $Cu(NO_3)_2$
(D) $CaCO_3$

17. Isotopes of an element contains
(A) Similar physical properties
(B) Different chemical properties
(C) Different no. of Neutrons
(D) Different atomic number

18. Valency electron in Cl^- ions is
(A) 16
(B) 8
(C) 17
(D) 18

19. Which one of the following is correct electronic configuration of sodium.
(A) 2, 8
(B) 8, 2, 1
(C) 2, 1, 8
(D) 2, 8, 1

20. Physical state of water at 0^oC is
(A) Solid
(B) Liquid
(C) Gas
(D) None of the above

21. Solution is
(A) Homogeneous mixture
(B) Heterogeneous mixture
(C) Colloidal
(D) All of the above

22. Components present in air can be separated by
(A) Fractional distillation
(B) Evaporation
(C) Boiling
(D) None

23. Which one of the following is cation
(A) Na^+
(B) Cl^-
(C) H2
(D) None of the above

24. Electron is invented by
(A) J.J. Thomson
(B) Dalton
(C) Niels Bohr
(D) None of the above

25. The maximum number of electrons in a shell can be show by
(A) $2n^2$
(B) $2n^3$
(C) $2n^2 + 1$
(D) None of the above

26. Distribution of electrons is carbon is as follow
(A) 2, 4
(B) 2, 2, 2
(C) 4, 2
(D) None of the above

27. All fungi are
(A) Parasites
(B) Saprophytes
(C) Symbiont
(D) Heterotrophs

28. An exception to cell theory is
(A) Bacteria
(B) Virus
(C) Algae
(D) All

29. Chemical composition of chromosome is
(A) DNA and lipid
(B) DNA and carbohydrates
(C) Proteins and lipids
(D) DNA and proteins

30. DNA replication (synthesis) occurs in
(A) G-phase
(B) S-phase
(C) G2 phase
(D) M phase

31. Bacteria 'easter's are
(A) Virus
(B) Bacteria
(C) Fungi
(D) Algae

32. Cristae is associated with
(A) Nucleus
(B) Chloroplast
(C) Cell Wall
(D) Mitochondria

33. Association of algae and fungi forms
(A) Mycorrhiza
(B) Lichen
(C) Flower
(D) Bio fertilizer

34. Energy flow in ecosystem is
(A) Tetra directional
(B) Tri directional
(C) Bi-directional
(D) Uni-directional

35. Absorption of water is associated with
(A) Root apex
(B) Root hairs
(C) Bark of roots
(D) All of these

36. Which gas is not responsible for global warming
(A) CO_2
(B) O_3
(C) NO_2
(D) N_2

37. Lipoprotein is found in
(A) Cell membrane
(B) Nucleus
(C) Cytoplasm
(D) Cell wall

38. Glycolysis place in
(A) Mitochondria
(B) Cytoplasm
(C) Nucleus
(D) Chloroplast

39. Amphibians of plant kingdoms are
(A) Bacteria
(B) Gymnosperm
(C) Bryophyta
(D) Algae

40. When ATP is converted in to ADP it releases
(A) Enzymes
(B) Secretions
(C) Energy
(D) Hormones

41. The Harappan towns and cities were divided into large blocks
(A) Square
(B) Rectangular
(C) Circular
(D) Semi-circular

42. The most famous centre of learning during the Mauryan period was
(A) Taxila
(B) Ujjain
(C) Nalanda
(D) Vallabhi

43. In which year of Ashok coronation did the Kalinga war take place
(A) Fifth year
(B) First year
(C) Eighth year
(D) Thirteenth year

44. Who built the stup of Sanchi?
    (A) Saripurtra
    (B) Mahomogallana
    (C) Mahinda
    (D) Ashok

45. The founder of Vijaynagar kingdom was
    (A) Harihar I
    (B) Bukkaraya I
    (C) Both (A) and (B)
    (D) Krishnadevraya

46. Taj Mahal is located
    (A) In Agra
    (B) Fatehpur Sikeri
    (C) In Delhi
    (D) None of these

47. At where Britishers established the first factory in Bengal in 1651 A.D.
    (A) Hugli
    (B) Murshidabad
    (C) Kasim Bazar
    (D) Calcutta

48. Who is associated with the policy of Doctrine of Laps
    (A) Lord Hastings
    (B) Lord Dalhouise
    (C) Lord Wellesley
    (D) Lord Cornwallis

49. At which place was Tanya Tope hanged to death
    (A) Jhansi
    (B) Kanpur
    (C) Shivpuri
    (D) Sagar

50. Rani Laxmibai was also known as by which name
    (A) Chhabili
    (B) Manu
    (C) Manikarnika
    (D) All of the above

51. What was the real name of Swami Vivekanad
    (A) Narendranath
    (B) Mula Shankar
    (C) Gadadhar Chattopadhyaya
    (D) Mahes Das

52. Chandra Shekhar Azad was born on 23rd July 1806 at
    (A) Jhabua
    (B) Bangagaon
    (C) Gurudaspur
    (D) Gwalior

53. Who gave the title of Mahatma to Gandhiji
    (A) Romain Rolland
    (B) Louis Fisher
    (C) Ravindranath Tagore
    (D) Subhash Chandra Bose

54. The credit of merger of states in India goes to?
    (A) Jawahar Lal Nehru
    (B) Sardar Patel
    (C) Fazal Ali
    (D) Mahatma Gandhi

55. When was the constitution of India adopted
    (A) 9 December 1946
    (B) 16 August 1947
    (C) 26 November 1949
    (D) 26 January 1950

56. The resources are those things which
    (A) Satisfy human needs
    (B) Full fill some specific objective
    (C) Are needed for the human welfare
    (D) All the above

57. Meaning of Resource conservation is:
    (A) No use of resources
    (B) To keep resources reserved
    (C) Prevent misuse of resources
    (D) Balanced use of resources

58. The major natural hazard of India is
    (A) Drought
    (B) Flood
    (C) Earthquake
    (D) Volcano

59. Kagiranga National Park is located in-
(A) Uttar Pradesh   (B) Assam
(C) Rajasthan   (D) Orissa

60. Suitable soil for cotton production is
(A) Alluvial soil   (B) Black soil
(C) Red soil   (D) Laterite soil

61. Father of Green revolution is
(A) Dr. Bennett   (B) Billcox
(C) Norman Borlauge   (D) Nixon

62. Yellow revolution is related to
(A) Oilseeds production   (B) Fruits production
(C) Sheep production   (D) Fish production

63. Kharif crops are
(A) Rice, Millet, Maize   (B) Wheat, Gram, Jow
(C) Jute, Tea, Coffee   (D) Tobacco, Rubber, Linseed

64. Metallic Mineral is-
(A) Iron   (B) Diamond
(C) Mica   (D) Coal

65. Which type is not included in iron-ore
(A) Hametite   (B) Magnetite
(C) Limonite   (D) Lignite

66. Which is not a part of Public Distribution System.
(A) Proper value shop   (B) Co-operative customer storage
(C) Super market   (D) Buffer stock

67. First rank of Diamond Production in India.
(A) Madhya Pradesh   (B) Bihar
(C) Uttar Pradesh   (D) Orissa

68. Tarapur is famous for
(A) Nuclear electricity   (B) Solar energy
(C) Hydro electricity   (D) Wind energy

69. The manchestor of cotton textile is South India is called-
(A) Secunderabad   (B) Coimbatore
(C) Thiruvananthapuram   (D) Guntur

70. Which is the cheapest means of transport-
(A) Air transport   (B) Water transport
(C) Rail transport   (D) Road transport

71. Which country's parliament is treated is the mother of world parliament.
(A) America   (B) Britain
(C) India   (D) Switzerland

72. Who protects the constitution-
(A) Judiciary   (B) Legislature
(C) Executive   (D) Finance Commission

73. From which country did we adopt fundamental rights?
(A) England   (B) China
(C) U.S.A.   (D) Ireland

74. How long can an ordinace remain in force?
(A) Three months
(B) Four months
(C) Five months
(D) Six months

75. The quorum requirement to the Rajya Sabha-
(A) 25
(B) 50
(C) 75
(D) 100

76. The main function of the Foreign Exchange bank is:
(A) Receiving the deposits
(B) Advancing loans
(C) Exchange of money
(D) All above

77. Agmark security icon is:
(A) for Jewelery
(B) for agricultural products
(C) for woolen clothes
(D) for electrical appliances

78. Employment is provided in the National Rural Employment Guarantee Scheme for-
(A) 150 days
(B) 100 days
(C) 200 days
(D) One year

79. Expansion of the market is sported by-
(A) Means of Transport
(B) Means of Communication
(C) Bank and Financial Institution
(D) All of the above

80. World Trade Organization has been established:
(A) 1985 year
(B) 1995 year
(C) 2001 year
(D) 2005 year

81. Number r is termed as Rational number if it can be expressed as $\dfrac{p}{q}$, where p and q are integers and,

(A) $p = 0$
(B) $p \neq 0$
(C) $q = 0$
(D) $q \neq 0$

82. Zero of the polynomial p(x) = 2x +1 is:
(A) $-\dfrac{1}{2}$
(B) $\dfrac{1}{2}$
(C) 0
(D) ∞

83. Number of straight lines passing through the point (1,2) is:
(A) 1
(B) 2
(C) 3
(D) ∞

84. Shape made by the bisectors for angles of a parallelogram is.
(A) Rectangle
(B) Square
(C) Circle
(D) Straight line

85. If side of each cube is 3 cm. then Volume of given figure is.

(A) 3 cm³   (B) 27 cm³
(C) 15 cm³   (D) 405 cm³

86.   Hero's formula for the Area of triangle is:

(A) $\frac{1}{2}$(Base × Height)   (B) $\sqrt{s(s-a)(s-b)(s-c)}$

(C) $\frac{a+b+c}{2}$ (D) $\sqrt{s.a.b.c}$

87.   If the number of observations n is even, then median is.

(A) $\left(\frac{n+1}{2}\right)^{th}$ term   (B) $\left(\frac{n}{2}\right)^{n}$ term

(C) Mean of $\left(\frac{n}{2}\right)^{th}$ and $\left(\frac{n}{2}+1\right)^{th}$ term   (D) None of these

88.   Product of any three consecutive even numbers is divisible by
(A) 2   (B) 4
(C) 16   (D) 12

89.   Indian Mathematician Varahmihir wrote the
(A) Arya Bhattiyam   (B) Panch Siddhantika
(C) Ganitsaar Sangrah   (D) Leelawati

90.   Remainder on dividing polynomial 3x2 - x3 - 3x + 5 by x -1 - x2 is
(A) 7   (B) 3
(C) 0   (D) 2x + 5

91.   A rational number becomes 1/3 on substracting 1 from its numerator and it becomes 1/4 when 8 is added to its denominator, the rational number is
(A) 5/12   (B) 1/12
(C) 7/12   (D) 3/17

92.   How many numbers of two digits are divisible by 3
(A) 30   (B) 32
(C) 40   (D) 35

93.   Co-ordinates of a point on y-axis which is equidistant from the points (6,5) and (–4,3) are
(A) (9,0)   (B) (0,9)
(C) (3,2)   (D) (0,0)

94.   Value of sec A (1 – sin A)(sec A + tan A) is
(A) 0   (B) 2
(C) 1   (D) ∞

95.   Length of Minute hand of a clock is 14cm. Area formed by this hand in 5 minutes is:
(A) 154/3   (B) 154
(C) 215/3   (D) 205/3

96.   Mean of first n natural numbers is:

(A) $\frac{n(n+1)}{2}$ (B) $\frac{n+1}{2}$

(c) $\frac{n}{2}$ (D) $\frac{n(n-1)}{2}$

97. A box contain 3 blue, 2 white and 4 red marbles. A marble is drawn randomly. Probability of getting white marble is.
(A) 3/5 (B) 2/6
(C) 2/9 (D) 2/5

98. Choose false statement from following:
(A) All equilateral triangles are isosceles triangle (B) Some rational numbers are integers
(C) All integers are not rational number (D) Some Isosceles triangles are equilateral triangles

99. Angle of elevation of a tower from a point at a distance of 15 meter from foot of the tower is 60^0. Height of tower is
(a) 15 meter (b) $\sqrt{3}$ meter
(c) $15\sqrt{3}$ meter (d) $\dfrac{15}{\sqrt{3}}$ meter

100. n^{th} term of a list of numbers is given by $a_n = (3 + 2n)$. Sum of first 24 terms will be
(A) 672 (B) 670
(C) 570 (D) 572