064/2017

1. The cell used in Appollo Space Programme :
   - (A) Dry Cell
   - (B) Mercury Cell
   - (C) Nickel-Cadmium Cell
   - (D) Fuel Cell

2. The element which have positive Electron gain Enthalpy :
   - (A) H
   - (B) Cl
   - (C) Ne
   - (D) Na

3. Bond order of oxygen molecule :
   - (A) 2
   - (B) 3
   - (C) 1
   - (D) 0

4. Which of the following orbital is not possible ?
   - (A) 2s
   - (B) 3p
   - (C) 2d
   - (D) 4d

5. The unit of rate constant for a first order reaction :
   - (A) $mol\, l\, sec^{-1}$
   - (B) $mol\, l^{-1}\, sec^{-1}$
   - (C) $mol^{-1}\, l\, sec^{-1}$
   - (D) sec^{-1}

6. Zig-Zag movement of colloidal particle is called :
   - (A) Tyndall Effect
   - (B) Brownian movement
   - (C) Electrophoresis
   - (D) Peptization

7. The Geometry of CH_4 molecule :
   - (A) Square Planar
   - (B) Octahedral
   - (C) Tetrahedral
   - (D) Trigonal Bipyramid

8. Ideal gas Equation is :
   - (A) $P = nRT$
   - (B) $P_1V_1 = P_2V_2$
   - (C) $PV = nRT$
   - (D) $\dfrac{V_1}{T_1} = \dfrac{V_2}{T_2}$

9. The condition for a thermodynamic process to be adiabatic :
   - (A) $q = 0$
   - (B) $\Delta T = 0$
   - (C) $\Delta V = 0$
   - (D) $W = 0$

B

3

{P.T.O.}

10. pH of pure water :

   (A) 0   (B) 7   (C) 12   (D) 5

11. The molecular formulae of an organic compound is C_2H_2. The compound is an :

   (A) Alkane   (B) Alkyne   (C) Alkene   (D) Aldehyde

12. Hybridisation in Alkane is :

   (A) sp^2 (B) sp^3 (C) sp (D) sp^3d

13. The reaction used for the preparation of chlorobenzene from diazonium chloride is :

   (A) Sandmayer's Reaction   (B) Aldol Condensation

   (C) Cannizzaro Reaction   (D) Wurtz Reaction

14. The IUPAC name of Acetaldehyde is :

   (A) Methanal   (B) Propanal   (C) Ethanol   (D) Ethanal

15. Acid used for the coagulation of rubber latex commercially :

   (A) Formic Acid   (B) Acetic Acid   (C) Citric Acid   (D) Lactic Acid

16. Chemical substance used for relieving pain :

   (A) Antiseptic   (B) Tranquillizer (C) Antibiotic   (D) Analgesics

17. The most abundant protein in the living world is _____ .

   (A) Collagen   (B) Rubisco   (C) Glucagon   (D) Myosin

18. Which among the following is known as pregnancy hormone ?

   (A) Oestrogen   (B) Testosterone   (C) Aldosterone   (D) Progesterone

19. Typhoid is caused by the bacterium _____ .

   (A) Salmonella   (B) Shigella   (C) Klebsiella   (D) Clostridium

B

20. The two cerebral hemispheres of brain in mammals are connected by _____ .

    (A) Association areas

    (B) Corpus callosum

    (C) Thalamus

    (D) Medulla

21. The polymerase chain reaction is helping for the synthesis of multiple copies of _____ .

    (A) Deoxyribonucleic acid

    (B) Oxaloacetic acid

    (C) Palmitic acid

    (D) Ribonucleic acid

22. What change occurs to the sixth amino acid of beta globin chain of sickle cell anaemic patients ?

    (A) Valine to Glutamic acid

    (B) Leucine to Valine

    (C) Glutamic acid to Valine

    (D) Valine to Leucine

23. _____ is an example for a gaseous plant growth regulator.

    (A) Auxin   (B) Cytokinin   (C) Abscisic acid   (D) Ethylene

24. Which of the following set of enzymes present in gastric juice ?

    (A) Pepsin, Rennin and Amylase

    (B) Amylase, Pepsin and Lipase

    (C) Pepsin, Rennin and Lipase

    (D) Lipase, Rennin and Amylase

25. Vitamin that is exclusively of animal origin is _____ .

    (A) Vitamin B_{12} (B) Vitamin B_1 (C) Vitamin B_6 (D) Vitamin B_2

26. Which of the following animal lack radial symmetry ?

    (A) Physalia   (B) Asterias   (C) Cucumaria   (D) Limulus

27. Pollination by wind is called _____ .

    (A) Anemophily   (B) Hydrophily   (C) Zoophily   (D) Entomophily

28. The cell organelle known as "power houses" of the cell :

    (A) Ribosome

    (B) Mitochondria

    (C) Endoplasmic reticulum

    (D) Lysosome

29. Plants growing in dry habitat are called _____ .

   (A) Xerophytes   (B) Lithophytes   (C) Mesophytes   (D) Crysophytes

30. The study of fossil is known as _____ .

   (A) Osteology   (B) Histology   (C) Mycology   (D) Palaentology

31. The loss of water in liquid form from the leaves of plants is _____ .

   (A) Transpiration   (B) Guttation   (C) Evaporation   (D) Translocation

32. Which of the following set is the pyramidines present in RNA ?

   (A) Uracil and Cytosine   (B) Adenine and Uracil

   (C) Guanine and Uracil   (D) Thymine and Uracil

33. The sum of the first 10 terms common to the series 17, 21, 25 .... and 16, 21, 26 .... is :

   (A) 1100   (B) 1010   (C) 1110   (D) 1200

34. The radius of the sphere through the points (4, 3, 0), (0, 4, 3), (0, 5, 0) and (4, 0, 3) is :

   (A) 5   (B) 7   (C) 4   (D) 6

35. The maximum value of $xy+5$ subject to $2x+y=4$ is :

   (A) 4   (B) 3   (C) 8   (D) 7

36. The number of solutions of $\sin 5x.\cos 3x = \sin 9x.\cos 7x$ in $\left[0, \frac{\pi}{2}\right]$ is :

   (A) 10   (B) 9   (C) 5   (D) 4

37. The equation of Hyperbola referred to its axes as axes of coordinate whose distance between the foci is 20 and eccentricity equals $\sqrt{2}$ is :

   (A) $x^2-y^2=25$ (B) $x^2-y^2=50$ (C) $x^2-y^2=125$ (D) $x^2-y^2=40$

38. If 3 distinct numbers are chosen randomly from the first 100 natural numbers, then the probability that all three of them are divisible by both 2 and 3 is :

(A) $\dfrac{4}{1155}$ (B) $\dfrac{4}{1255}$ (C) $\dfrac{3}{1155}$ (D) $\dfrac{3}{1255}$

39. The number of triangles which can be formed by using the vertices of a regular polygon of $(n+3)$ sides is 220. Then the value of n is :

(A) 10   (B) 8   (C) 11   (D) 9

40. The distance between the parallel planes $3x+y+3z=8$ and $9x+3y+9z=15$ is :

(A) $\dfrac{5}{\sqrt{19}}$ (B) $\dfrac{7}{\sqrt{19}}$ (C) $\dfrac{3}{\sqrt{19}}$ (D) $\dfrac{9}{\sqrt{19}}$

41. The digit at the unit place in the number $19^{2005}+11^{2005}-9^{2005}$ is :

(A) 3   (B) 0   (C) 9   (D) 1

42. Mean deviation of the data 3, 10, 10, 4, 7, 10, 5, 7 from mean is :

(A) 2   (B) 2.25   (C) 3   (D) 3.25

43. The area bounded by the curve $y=|x|-1$ and $y=-|x|+1$ is :

(A) 4   (B) $\sqrt{2}$ (C) 2   (D) $2\sqrt{2}$

44. A straight line parallel to the line $2x-y+5=0$ is also a tangent to the curve $y^2=4x+5$. Then the point of contact is :

(A) $(-1, 1)$ (B) $(-1, 2)$ (C) $(2, 1)$ (D) $(1, 3)$

45. The number of 4 digit even numbers that can be formed using 0, 1, 2, 3, 4, 5, 6 without repetition is :

(A) 420   (B) 300   (C) 120   (D) 320

46. The number of terms in the expansion of $(a+b+c)^{10}$ is :

(A) 11   (B) 55   (C) 66   (D) 44

47. If $a^2 + b^2 = 7ab$ then the value of $\log\left(\dfrac{a+b}{3}\right)$ is :

(A) $\dfrac{1}{2}\log(a+b)$ (B) $\dfrac{1}{2}\log(ab)$ (C) $\dfrac{1}{2}\log\left(\dfrac{a}{b}\right)$ (D) $\dfrac{1}{2}\log\left(\dfrac{b}{a}\right)$

48. If a matrix A is Symmetric as well as Skew Symmetric, then :

(A) A is a diagonal matrix

(B) A is a unit matrix

(C) A is a triangular matrix

(D) A is a null matrix

49. Process of adding vitamins to milk is known as :

(A) Flavouring   (B) Fortification   (C) Fermentation   (D) Sterilization

50. The minimum fat % required in ice-cream is :

(A) 10%   (B) 9%   (C) 8%   (D) 15%

51. A method for destroying all pathogenic organism in milk for safely consumption for human.

(A) Standardization

(B) Homogenization

(C) Coagulation

(D) Pasteurization

52. Kerala Co-operative Milk Marketing Federation (KCMMF) was formed on :

(A) 1980   (B) 1985   (C) 1975   (D) 1970

53. _____ is a heat acid coagulated product.

(A) Lassi   (B) Peda   (C) Paneer   (D) Khoa

54. _____ is used for determining the specific gravity of milk.

(A) Butyrometer   (B) Thermometer   (C) Barometer   (D) Lactometer

55. Headquarters of National Dairy Research Institute (NDRI) is at _____ .

(A) Karnal   (B) Bangalore   (C) Delhi   (D) Hyderabad

56. According to FSSAI rule butter should contain a minimum of _____ % milk fat.

(A) 50%   (B) 80%   (C) 99%   (D) 90%

57. Milk letdown hormone is _____ .

(A) Oestrogen   (B) Progesterone   (C) Oxytocin   (D) Prolactin

58. Name a compound that can be used both detergent and sanitizer in a dairy plant.

(A) Chlorine   (B) Sodium chloride

(C) Carbonate   (D) Iodophore

59. Optimum dry period needed for dairy animal is _____ days.

(A) 70 days   (B) 80 days   (C) 60 days   (D) 50 days

60. Adulteration of milk with starch can be detected by _____ Test.

(A) Platform Test   (B) Alcohol Test   (C) Reduction Test   (D) Iodine Test

61. Name the milk sugar :

(A) Lactose   (B) Sucrose   (C) Raffinose   (D) Fructose

62. Largest Milk producing country in the world :

(A) France   (B) India   (C) USA   (D) Germany

63. Under the PFA rules, Toned milk should contain _____ % Fat and _____ % SNF.

(A) 3% Fat, 8.5% SNF   (B) 1.5% Fat, 9% SNF

(C) 4% Fat, 9% SNF   (D) 2% Fat, 7.5% SNF

64. The specific gravity of normal milk ranges from _____ .

(A) 1.0   (B) 1.05 - 1.08   (C) 1.028 - 1.032   (D) 1.042 - 1.045

65. Which part of the Indian Constitution contains the Directive Principles of State Policy ?

(A) Part : I   (B) Part : IV   (C) Part : VI   (D) Part : VII

66. The Constituent Assembly formed the 'drafting committee' of Indian Constitution on :

(A) 29th August, 1947

(B) 29th October, 1947

(C) 29th August, 1948

(D) 29th October, 1948

67. Which schedule of Indian Constitution deals with the Anti-Defection Act ?

(A) Second   (B) Fifth   (C) Seventh   (D) Tenth

68. Section 15(1) of the Right to Information Act of 2005 refers to :

(A) Time limit for the supply of information

(B) Formation of State Information Commission

(C) Designation of Public Information Officer

(D) All of the above

69. Which reform movement was started by Pandit K.P. Karuppan at Thevara in Ernakulam District ?

(A) Vala Samudaya Parishkarani Sabha

(B) Vala Seva Samithi

(C) Araya Samajam

(D) Cochin Pulaya Sabha

70. Who started an English School at Mattancherry in 1818 with the financial aid of the Cochin government ?

(A) W.T. Ringletaube

(B) Col. Munro

(C) Rev. Mead

(D) Rev. J. Dawson

71. 'Kozhanchery Speech' is related with which of the following movements ?

(A) Electricity Agitation

(B) Abstention Movement

(C) Punnapra-Vayalar Upheaval

(D) Vaikkom Sathyagraha

72. Who was the founder of the newspaper 'Kerala Kaumudi' ?

(A) K. Ayyappan   (B) Kumaran Asan   (C) K. Sukumaran   (D) C.V. Kunjiraman

73. Who was hailed by Gandhiji as 'Jhansi Rani of Travancore' ?
  (A) Accamma Cheriyan   (B) Anna Chandy
  (C) A.V. Kuttimalu Amma   (D) Lalitha Prabhu

74. The social reformer who served as a member of both Kochi and Tiru-Kochi Ministries ?
  (A) C. Kesavan   (B) Mannathu Padmanabhan
  (C) Sahodaran Ayyappan   (D) T.K. Madhavan

75. Which scheme aims to distribute LED bulbs to all electrified houses in India ?
  (A) KIRAN   (B) UJALA   (C) RASMI   (D) LED Revolution

76. The date on which the National Rural Employment Guarantee Programme was launched ?
  (A) 2005 August 23   (B) 2005 August 25
  (C) 2006 February 2   (D) 2006 October 2

77. Who is the author of the drama 'Gopuranatayil' ?
  (A) M.T. Vasudevan Nair   (B) Thoppil Bhasi
  (C) N.N. Pillai   (D) K. Damodaran

78. Which of the following train is running between Kolkata and Dhakka ?
  (A) Thar Express   (B) Maitree Express
  (C) Samjhauta Express   (D) All of the above

79. What is 'Durand line' ?
  (A) Boundary line between Germany and Poland
  (B) Boundary line between Pakistan and Afghanistan
  (C) Boundary line between India and China
  (D) Boundary line between Germany and France

80. Which Five Year Plan is known as Mahalanobis plan ?
  (A) First Five Year Plan   (B) Second Five Year Plan
  (C) Third Five Year Plan   (D) Fifth Five Year Plan

81. Which place is declared as the second capital of Himachal Pradesh ?

    (A) Shimla   (B) Mandi   (C) Manali   (D) Dharamsala

82. Who was the chief guest of the official ceremony in the Republic Day in 2017 ?

    (A) President of Indonesia   (B) King of Qatar

    (C) President of France   (D) Crown Prince of UAE

83. Which movie won the best film award in 47th Kerala state film awards ?

    (A) Kammattipadam   (B) Kadu Pookkunna Neram

    (C) Manhole   (D) Kamboji

84. What was the theme of 2017 National Girl Child Day ?

    (A) Beti Bachao, Beti Padhao   (B) A Girl is whole by all means

    (C) End child marriage   (D) "Little Girls are Heaven's Flowers"

85. Ohm's Law states that :

    (A) $V = IR$ (B) $V = \dfrac{I}{R}$ (C) $I = \dfrac{R}{V}$ (D) $I = VR$

86. Choose the odd one :

    (A) Electromagnetic force   (B) Gravitational force

    (C) Strong nuclear force   (D) Spring force

87. Earth magnetism is due to :

    (A) Dynamo effect (B) Doppler effect (C) Solar effect   (D) Magnus effect

88. Which principle is used to check the correctness of an equation ?

    (A) Principle of Continuity   (B) Principle of Parallax

    (C) Principle of Conduction   (D) Principle of Homogeneity

89. The acronym LASER stands for :

(A) Light Amplification by Stimulated Emission of Radiation.

(B) Light Attenuation by Stimulated Emission of Radiation.

(C) Large Amplification by Stimulated Emission of Radiation.

(D) Light Amplification by Slowed Emission of Radiation.

90. In a uniform circular motion :

(A) Velocity is constant   (B) Distance is constant

(C) Displacement is constant (D) Speed is constant

91. The process of deliberate addition of desirable impurity in an intrinsic semiconductor is :

(A) Doping   (B) Bonding   (C) Diffusion   (D) Sublimation

92. In 1921 Albert Einstein was awarded Nobel Prize in the study of :

(A) Black body Radiation   (B) Photoelectric effect

(C) Mass-Energy Relation   (D) Atom model

93. Henry is the unit of :

(A) Capacitance   (B) Resistance   (C) Inductance   (D) Reactance

94. The superposition of a low frequency message signal on a high frequency carrier wave is called :

(A) Amplification   (B) Modulation   (C) Attenuation   (D) Demodulation

95. A quantum mechanical theory for explaining superconductivity is :

(A) KC Rule   (B) BCS theory   (C) KV Rule   (D) NMR theory

96. Which experiment proved the particle nature of light ?

(A) Interference   (B) Diffraction   (C) Compton effect   (D) Polarisation

[P.T.O.]

97. A magnet dropped through an aluminium pipe takes more time than through a PVC pipe of same dimension to reach the bottom. This is due to :

   (A) Electrostatic shielding   (B) Electromagnetic damping

   (C) Electromagnetic radiation   (D) Convection

98. The principle which helps in explaining blood flow and heart attack in artery :

   (A) Torricelli's Law   (B) Hooke's Law

   (C) Bernoulli's Principle   (D) Snell's Law

99. Which of the following substances has more specific heat capacity ?

   (A) Carbon   (B) Copper   (C) Water   (D) Silver

100. In an isothermal process :

   (A) Heat Constant   (B) Volume Constant

   (C) Pressure Constant   (D) Temperature Constant

- o 0 o -

B