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1. A semi conductor without any impurity is known as :
(A) Intrinsic Semi Conductor (B) PN Junction
(C) Extrinsic Semi Conductor (D) Semi Conductor

2. Unit of electrical resistance is :
(A) Ohm (B) Mho (C) Volt (D) Ampere

3. A transformer which increases voltage level is termed as :
(A) Step down transformer (B) Auto transformer
(C) Ideal transformer (D) Step up transformer

4. In single phase energy meter _____ type damping is used.
(A) eddy current (B) fluid friction (C) air friction (D) spring control

5. Transformation ratio of a transformer can be written as an equation. From the following which statement is true ?
(A) $\frac{N_1}{N_2} = \frac{I_2}{I_1}$ (B) $\frac{N_1}{N_2} = \frac{I_1}{I_2}$ (C) $\frac{V_1}{V_2} = \frac{N_2}{N_1}$ (D) $\frac{V_1}{V_2} = \frac{I_1}{I_2}$

6. DOL starters do not reduce _____.
(A) Voltage (B) Starting torque
(C) Starting current (D) Running torque

7. In 3 phase supply system motors "Single phasing" term means :
(A) Advantage (B) Supply (C) DOL starter (D) Fault

8. For holding objects, cutting and twisting wires, which tool is used ?
(A) Combination pliers (B) Nose pliers
(C) Nipper (D) None of these

9. A battery is a combination of _____.
- (A) Capacitors (B) Chemical cells (C) Inductors (D) Resistors
10. In earthing which of the following is used as earth electrode ?
- (A) Metal pipe (B) Porcelain Disc (C) Egg insulator (D) Cross arm
11. A device which converts electrical energy into mechanical energy is termed as :
- (A) Capacitor (B) Generator (C) Motor (D) Converter
12. Which of the following equation does not follow ohm's law ?
- (A) $R = \frac{V}{I}$ (B) $V = IR$ (C) $I = \frac{V}{R}$ (D) $R = \frac{1}{V}$
13. Synchronous motor runs at :
- (A) High speed (B) Constant speed
(C) Below synchronous speed (D) Above N_s
14. In two wattmeter method of power measurement phase angle is above 60° , then total power is :
- (A) $W_1 + W_2$ (B) $2W_2$ (C) W_2 (D) $W_2 - W_1$
15. Total power in a 3ϕ circuit can be calculated by the following equation :
- (A) $W = V_L I_L \cos\phi$ (B) $VI \cos\phi$
(C) $\sqrt{3} V_L I_L \cos\phi$ (D) $3 VI \cos\phi$
16. An instrument which is used to test the insulation resistance is :
- (A) P.F. meter (B) Meggar (C) Voltmeter (D) Hydrometer
17. Positive electrode in a volta cell is :
- (A) Carbon (B) Copper (C) Zinc (D) Lead
18. Which of the following is used as a filament in metal filament lamp ?
- (A) Germanium (B) Nichrome (C) Tungsten (D) Carbon

19. In a hydroelectric power station we require the following for the generation of electrical energy :
- (A) Coal (B) Water (C) Uranium (D) Lead
20. In an electric mixie _____ type motor is used.
- (A) Universal motor (B) Capacitor motor
(C) Repulsion motor (D) Stepper motor
21. In motors, starters are used to reduce :
- (A) Voltage (B) Current at starting
(C) Starting torque (D) Capacitance
22. In an electric heater the heating coil is generally made of :
- (A) Tungsten (B) Aluminium (C) Porcelain (D) Nichrome
23. A Diode can be used to convert alternating current into :
- (A) Eddy Current (B) Electron Current
(C) Direct Current (D) Heat Current
24. ACSR Conductors are used in :
- (A) Unground system (B) House wiring
(C) Overhead system (D) Factory wiring
25. Lagging flux density behind magnetizing force is termed as :
- (A) Hysterisis (B) Eddy current
(C) Reluctance (D) Force
26. In India supply voltage in a single phase system is about :
- (A) 440 V (B) 11 kV (C) 110 V (D) 230 V
27. In a single phase system of distribution service connection is made by using _____ wire.
- (A) Flexible wire (B) Weather proof (C) CTS wire (D) TRS wire

28. Electricity is a form of :
 (A) Energy (B) Shock (C) Lightening (D) Spark
29. MCB means :
 (A) Main Circuit Breaker (B) Metal Circuit Breaker
 (C) Miniature Circuit Breaker (D) Major Circuit Breaker
30. Transformer oil is a type of :
 (A) Vegetable oil (B) Mineral oil
 (C) Edible oil (D) Palm oil
31. Cleat wiring system is used for :
 (A) Factory wiring (B) Chemical plant
 (C) House wiring (D) Temporary wiring
32. An Instrument which can be used in DC Supply only is :
 (A) Induction type wattmeter
 (B) Hot wire
 (C) Permanent magnet moving coil instrument
 (D) Dynamometer type wattmeter
33. Synchronous speed of a 3 phase AC motor is given by :
 (A) $N_s = \frac{120 P}{F}$ (B) $N_s = \frac{120 F}{P}$
 (C) $N_s = \frac{N_s - N_r}{N_s}$ (D) $N_s = \frac{120 N_r}{P}$
34. A transistor has _____ PN Junctions.
 (A) Three (B) Four (C) One (D) Two
35. In electric traction _____ motors are generally used.
 (A) DC series motor (B) Universal motor
 (C) Shunt motor (D) Compound motor

36. Semi conductors have _____ type temperature co-efficient of resistance.
 (A) Positive (B) Negative (C) Constant (D) Permanent
37. In differential compound DC machine magnetic field produced by shunt and series field act in _____ direction.
 (A) Same (B) Opposite (C) Vertical (D) Horizontal
38. According to Lenz's law electromagnetically induced emf _____ the very cause which produces it.
 (A) Aids (B) Opposes (C) Pulsates (D) Rotates
39. In HRC fuse, fuse element is made of :
 (A) Copper (B) Silver (C) Aluminium (D) Lead
40. Opposition offered to magnetic lines of force :
 (A) Reluctance (B) Conductance (C) Capacitance (D) Resistance
41. Power factor is the ratio of resistance and _____.
 (A) impedance (B) capacitance (C) inductance (D) reactance
42. EMF equation of a DC generator can be given by :
 (A) $E = \frac{\phi ZN}{60} \times \frac{P}{a}$ (B) $E = \frac{d\phi \times N}{dt}$
 (C) $E = \frac{V}{\phi}$ (D) $E = IR$
43. In DC armature winding, wave winding has _____ parallel paths.
 (A) Many (B) Three (C) Four (D) Two
44. _____ type single phase motors cannot change its direction of Rotation.
 (A) Universal motor (B) Repulsion motor
 (C) Shaded pole motor (D) Shunt motor

45. SMPS means :
- (A) Simple Mechanical Power Supply
 (B) Sinusoidal Mode Power Supply
 (C) Switched Mode Power Supply
 (D) Simple Main Power Supply
46. The pressure plate of an ordinary Electric Iron is made of _____.
- (A) Aluminium (B) Cast iron (C) Copper (D) Zinc
47. Sodium Vapour lamp is best suited for :
- (A) Factory lighting (B) Bedroom lighting
 (C) Drawing room lighting (D) Street lighting
48. Electrically charged atom is generally termed as :
- (A) Iron (B) Isotope (C) Ion (D) Cations
49. In a series combination of resistances total resistance is given by :
- (A) $R = \frac{R_1 + R_2}{R_1 R_2}$ (B) $R = \frac{1}{R_1} + \frac{1}{R_2} + \dots$
 (C) $R = R_1 + R_2 + \dots$ (D) $R = \frac{V}{I}$
50. According to Indian electricity rules total earth resistance should be less than :
- (A) 5Ω (B) 500Ω (C) $5 M\Omega$ (D) $50 M\Omega$
51. Carbon arc lamps were generally used in :
- (A) Vehicles (B) Torch lights
 (C) Street light (D) Cinema projectors
52. Conductors have _____ specific resistance.
- (A) High (B) Low (C) Very high (D) No

53. Unit of electric charge is :
(A) Tesla (B) Henry (C) Coulomb (D) Farad
54. For plate earthing, the size of copper plate is :
(A) 60 cm × 60 cm × 3 mm (B) 60 cm × 60 cm × 3.15 mm
(C) 50 cm × 50 cm × 3.15 mm (D) 60 cm × 60 cm × 6.3 mm
55. A commutator is a device used in DC generators to convert :
(A) DC to AC (B) Single phase to three phase
(C) Three phase to single phase (D) AC to DC
56. Breather of a Distribution transformer contains :
(A) Sand (B) Sodium chloride
(C) Silica gel (D) Lead oxide
57. Open circuit test is conducted in a transformer to find out :
(A) Heat loss (B) Copper loss
(C) Stray loss (D) Iron loss
58. Fleming's right hand rule is used to find out :
(A) Direction of force (B) Direction of flux
(C) Direction of torque (D) Direction of emf
59. To reduce hysteresis loss cores of electric machines is generally made of :
(A) Silicon Steel (B) Wrought Iron
(C) Cast Iron (D) Carbon Steel
60. In DC supply energy is measured by using :
(A) Wattmeter (B) Energy meter
(C) Ampere-hour meter (D) Meggar
61. Wire gauge is used to measure _____ of a conductor.
(A) Height (B) Breadth (C) Length (D) Size

62. To change DOR of a 3 ϕ motor :
- (A) Change sequence of any two phases
 - (B) Change phase and neutral
 - (C) Change positive and negative terminals
 - (D) Change windings
63. Negative electrode of Dry cell is made of :
- (A) Carbon
 - (B) Zinc
 - (C) Copper
 - (D) Aluminium
64. In three phase power supply system earth wire is inducted by :
- (A) Yellow
 - (B) Red
 - (C) Black
 - (D) Green
65. A two coil heater gives its maximum heat output, when the coils are in :
- (A) Series
 - (B) Series parallel
 - (C) Parallel
 - (D) OFF
66. Conventional flow of electric current is from :
- (A) +ve to -ve
 - (B) -ve to +ve
 - (C) Phase to neutral
 - (D) Neutral to phase
67. In a single phase system of supply, which of the following is used to test the supply correctly ?
- (A) Neon tester
 - (B) Ammeter
 - (C) Wattmeter
 - (D) Test lamp
68. Transformers and alternators are generally rated in :
- (A) KVAR
 - (B) KVA
 - (C) KW
 - (D) Watts
69. In a domestic refrigerator heat inside is taken out through :
- (A) Capacitor
 - (B) Condenser
 - (C) Evaporator
 - (D) Compressor
70. Germanium and silicon are generally used as :
- (A) Conductors
 - (B) Insulators
 - (C) Semi Conductors
 - (D) Resistors

71. In alternators supply is taken out through :
 (A) Slip rings (B) Split rings (C) Commutator (D) Rocker arm
72. Which of the following is the strongest diamagnetic material ?
 (A) Iron (B) Steel (C) Bismuth (D) Aluminium
73. In a single phase motor, a centrifugal switch is used to disconnect :
 (A) Supply (B) Running winding
 (C) Starting winding (D) None of the above
74. Which of the following is used as power factor compensator ?
 (A) Inductor (B) Capacitor (C) Resistor (D) Conductor
75. In a shunt motor, shunt winding is connected _____ with armature winding.
 (A) Series (B) Series parallel
 (C) Compensating winding (D) Parallel
76. Which of the following materials is used for making brushes in electrical machines ?
 (A) Silver (B) Aluminium (C) Graphite (D) Iron
77. Complicated series parallel combination of resistances are also known as :
 (A) Electrical Networks (B) Combinations
 (C) Reactive Circuits (D) Tuned Circuits
78. Inductive reactance can be calculated by :
 (A) $X_L = 2\pi fL$ (B) $X_L = 2\pi fC$ (C) $2\pi rfC$ (D) $X_L = 2\pi RC$
79. Magnetic lines of force travel from _____ to _____ inside the magnet.
 (A) North to South (B) South to East (C) South to West (D) South to North
80. When an AC circuit has a relation of $R=Z$, which of the following statements is true ?
 (A) $R = X_L + X_C$ (B) $X_L = X_C$ (C) $R = X_L - X_C$ (D) $Z = R^2 X_L^2$

81. The leader of the Revolt of 1857 in Assam was :
(A) Kunwar Singh (B) Diwan Maniram Dutta
(C) Pir Ali (D) Piyali Baruah
82. A Malayali poet known as "The Singing Sword of Kerala", who actively participated in the temple entry satyagraha was :
(A) Kumaran Asan (B) A.K. Gopalan
(C) Vayalar Ramavarma (D) Subramanian Tirumumb
83. During the first twenty years of the Congress, which of the following acted as president of INC thrice :
(A) Dadabhai Naoroji (B) S.N. Banerjee
(C) Gopal Krishna Gokhale (D) W.C. Banerjee
84. Who organised a literary association called 'Vidhyaposhini' ?
(A) Sree Narayana Guru (B) Kumaran Asan
(C) K. Ayyappan (D) Chattambi Swamikal
85. Who gave the title of 'Rani' to the Naga woman leader Gaidinliu ?
(A) Subhash Chandra Bose (B) Mahatma Gandhi
(C) Vallabhbhai Patel (D) Jawaharlal Nehru
86. The brain behind the bomb attack on Viceroy Lord Hardinge, Delhi in December 1912 was :
(A) Rash Behari Bose (B) Sachindranath Sanyal
(C) Bai Paramanand (D) Bhagat Singh
87. When did Sree Narayana Guru establish Siva temple at Aruvippuram ?
(A) 1878 (B) 1887 (C) 1897 (D) 1898
88. The first Muslim President of the INC was :
(A) Badruddin Tyabji (B) Abul Kalam Azad
(C) Hakkim Ajmal Khan (D) None of these

89. Who among the following was the leader of 'Kochi Pulaya Mahasaba' ?
 (A) Sahodaran Ayyappan (B) Ayyankali
 (C) K.P. Karuppan (D) Pattam Thanupillai
90. Whom did B.G. Tilak call "The diamond of India" ?
 (A) Mahatma Gandhi (B) Gopal Krishna Gokhale
 (C) S.C. Bose (D) Jawaharlal Nehru
91. Who among the following was the disciple of Alathur Brahmananda Sivayogi ?
 (A) Vagbatananda (B) Ayyankali
 (C) Chattambi Swamikal (D) C. Krishnan
92. Mahatma Gandhi's first experiment with his technique of Satyagraha in India was :
 (A) Kaira Satyagraha (B) Champaran Satyagraha
 (C) Ahmedabad Millstrike (D) Anti-Rowlatt Act
93. The Hindustan Socialist Republican Association was founded in 1928, in :
 (A) Kanpur (B) Lahore (C) Delhi (D) Allahabad
94. Who killed Michael O' Dyer, the Governor of Punjab, who had ordered the brutal firing on the innocent people at Jallianwala Bagh, Amritsar ?
 (A) Madanlal Dingra (B) Sohan Singh Bakna
 (C) Kanilal Dutt (D) Udham Singh
95. Who started 'Yogakshemasabha' ?
 (A) Vakkom Moulavi (B) T.K. Madhavan
 (C) Mannath Padmanabhan (D) None of these
96. Name the Arabic-Malayalam Magazine started by Vakkom Abdul Qudir Moulavi ?
 (A) Al-Ameen (B) Al-Islam
 (C) Al-Hilal (D) None of these

97. Who said "Not Mercy, but service for man must be regarded as God" ?
(A) B.C. Chatterjee (B) Vivekananda
(C) Iswar Chandra Vidyasagar (D) Ramakrishna Paramahansa
98. The Poona Pact was signed in :
(A) 1930 (B) 1933 (C) 1932 (D) 1931
99. Who organised Abhinav Bharat, a secret society of revolutionaries in Indian Freedom struggle ?
(A) Khudiram Bose (B) Chandrasekhar Azad
(C) V.D. Savarkar (D) Prafulla Chaki
100. What was the main political weapon used by the nationalists against the partition of Bengal in 1905 ?
(A) Satyagraha (B) Civil disobedience
(C) Swadeshi and boycott (D) Non-Cooperation

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