

112/2015

Maximum : 100 marks

Time : 1 hour and 15 minutes

1. The safe and proper way of removing the existing software from the computer is :  
(A) removing (B) disabling  
(C) deleting (D) uninstalling
2. The type code printed on the zener is BZC9V1, where 'B' indicates :  
(A) germanium (B) silicon  
(C) carbon (D) boron
3. In MS-Word file, the short cut key used to save the document is :  
(A) Ctrl+A (B) Ctrl+S  
(C) Ctrl+V (D) Ctrl+X
4. The number of diodes used for a centre tapped full wave rectifier is :  
(A) 1 (B) 2  
(C) 3 (D) 4
5. Expansion of SPDT is :  
(A) Single Phase Double Throw (B) Single Pole Double Throw  
(C) Single Phase Dual Throw (D) Single Pole Dual Throw
6. Open circuit test is conducted on a transformer to determine :  
(A) eddy current loss (B) copper loss  
(C) hysteresis loss (D) core loss
7. One Pico farad is equal to :  
(A)  $10^{-6}$  farad (B)  $10^{-9}$  farad  
(C)  $10^{-12}$  farad (D)  $10^{-15}$  farad
8. The number of complete cycles produced in one second is called :  
(A) frequency (B) period  
(C) amplitude (D) peak value

9. The function of tweezer is to :
- (A) grip and hold the cylindrical objects
  - (B) cut small diameter wires and cables
  - (C) hold light weight and very small components and wires
  - (D) remove the sheath and insulation from cables and boards
10. 1 joule = :
- (A) 1 Nm
  - (B) 1 Nm<sup>2</sup>
  - (C) 1 N<sup>2</sup>m<sup>2</sup>
  - (D) 1 kgm/sec<sup>2</sup>
11. The melting point of aluminium is :
- (A) 810°C
  - (B) 660°C
  - (C) 560°C
  - (D) 360°C
12. Specific gravity of electrolyte is measured by :
- (A) lactometer
  - (B) pyrometer
  - (C) hydrometer
  - (D) galvanometer
13. Find the square root of 15376 :
- (A) 414
  - (B) 124
  - (C) 214
  - (D) 324
14. Which type of drawing sheet having biggest area?
- (A) A3
  - (B) A2
  - (C) A1
  - (D) A0
15. What is the potential energy in a body, mass 5 kg on top of a pole 20 m high?
- (A) 100 j
  - (B) 980 j
  - (C) 1000 j
  - (D) 9800 j
16. Which is the example of mandatory sign?
- (A) Risk of electric shock
  - (B) Wear safety belt
  - (C) Smoking prohibited
  - (D) All of the above
17. The unit of quantity of electricity is :
- (A) Watt hour
  - (B) Coulomb
  - (C) Ampere
  - (D) Volt

18. What is the value of medium resistance based on its ohmic values?  
(A) Above 1 ohm upto 1000 ohms (B) Above 1 ohm upto 100 K ohms  
(C) Above 100 K ohms (D) Below one ohm
19. Which tool is used to measure the size of the conductor?  
(A) Bevel gauge (B) Vernier caliper  
(C) Standard wire gauge (D) Depth gauge
20. In which classification of accessories, the switch will belong?  
(A) Holding (B) Safety  
(C) General (D) Controlling
21. What is the name of defect occurred in a cell, due to the presence of impurities on the zinc plate?  
(A) Polarisation (B) Sulphation  
(C) Buckling (D) Local action
22. The mass of a substance liberated from an electrolyte by one coulomb of electricity is termed as :  
(A) electrochemical equivalent (B) quantity of electricity  
(C) electric charge (D) electrochemical expression
23. What is the method of charging the battery at very low rate?  
(A) Rectifier method (B) Constant current method  
(C) Trickle charge method (D) Constant voltage method
24. The distance between two adjacent teeth of hacksaw blades are called :  
(A) pitch of the blades (B) specification of the blades  
(C) size of the blades (D) number of the blades
25. Which substance is diamagnetic?  
(A) Manganese (B) Nickel  
(C) Bismuth (D) Cobalt
26. Tesla is the unit of :  
(A) flux density (B) flux  
(C) reluctance (D) magnetic field strength

27. Which type of DC generator is used for welding generator sets?
- (A) Shunt generator
  - (B) Series generator
  - (C) Cumulative compound generator
  - (D) Differential compound generator
28. How many parallel paths in simplex wave winding of a D.C. generator having 8 poles?
- (A) 8
  - (B) 6
  - (C) 4
  - (D) 2
29. As per BIS the series tied winding terminals must be marked as :
- (A)  $B_1 B_2$
  - (B)  $E_1 E_2$
  - (C)  $D_1 D_2$
  - (D)  $F_1 F_2$
30. Which law/rule states that the magnitude of the induced e.m.f. is directly proportional to the rate of change of flux linkage?
- (A) Lenz's law
  - (B) Faraday's law of electromagnetic induction
  - (C) Fleming's right hand rule
  - (D) Faraday's law of electrolysis
31. The table fan is not oscillating. The cause may be :
- (A) the loose guards
  - (B) the defective speed control switch
  - (C) the spur gear with broken teeth
  - (D) the blades are out of balance
32. Which one has negative temperature co-efficient of resistance?
- (A) Copper
  - (B) Nichrome
  - (C) Aluminium
  - (D) Mica
33. Which type of resistors are called as thermistors?
- (A) PTC resistors
  - (B) Varistors
  - (C) LDR
  - (D) NTC resistors

34. Which one is NOT an application of electromagnet?
- (A) Calling bell (B) Protective relays  
(C) Electric iron (D) DOL starter
35. The magnetic term analogous to electrical term current is :
- (A) reluctance (B) flux  
(C) flux density (D) m.m.f.
36. The fire extinguisher not used for electric fire :
- (A) Foam type (B) Halon type  
(C) Carbon tetrachloride (D) Dry powder type
37. Six carbon-zinc cells in series have an output of :
- (A) 6 V (B) 9 V  
(C) 12 V (D) 7.5 V
38. A 100 Ah capacity battery should deliver a current of 10 A for approximately \_\_\_\_\_ hours.
- (A) 12 (B) 10  
(C) 100 (D) 25
39. A fluorescent tube may burn out if the choke coil is :
- (A) open circuited (B) grounded  
(C) short circuited (D) connected to the neutral line
40. The starting torque of a single phase induction motor is :
- (A) low (B) high  
(C) very low (D) zero
41. While testing a capacitor with a multimeter, the needle shows zero position indicating the capacitor is :
- (A) in good condition (B) open circuited  
(C) short circuited (D) leaky

42. The direction of rotation of a capacitor-start motor can be reversed by :
- (A) reversing the supply terminal connections
  - (B) reversing the connection of the auxiliary winding
  - (C) reversing the connection of both the main and auxiliary winding
  - (D) reversing the connection of either the main or the auxiliary winding
43. What is the synchronous speed of a six-pole induction motor running on power at 60 Hz supply?
- (A) 1200 rpm
  - (B) 1000 rpm
  - (C) 7200 rpm
  - (D) 6000 rpm
44. The output of an alternator is in :
- (A) HP
  - (B) KVA
  - (C) KW
  - (D) BHP
45. The other name of field current in an alternator is :
- (A) load current
  - (B) armature current
  - (C) exciting current
  - (D) induced current
46. A 6-pole, 1200 rpm alternator will generate emf at the frequency of :
- (A) 50 Hz
  - (B) 60 Hz
  - (C) 40 Hz
  - (D) 30 Hz
47. The voltage induced in the armature of an alternator will be :
- (A) pulsating DC
  - (B) oscillating
  - (C) DC
  - (D) AC
48. In Scot connection, the teaser transformer has a tapping of \_\_\_\_\_ transformer.
- (A) 86% of main
  - (B) 56% of main
  - (C) 50% of secondary
  - (D) 58% of secondary
49. The common method of cooling a power transformer is :
- (A) air cooling
  - (B) air blast cooling
  - (C) oil cooling with air blast
  - (D) oil cooling with water forced

50. Three single phase transformers, each with 10 KVA rating connected in delta. If one of the transformer is damaged and taken out, the output of the system will be :
- (A) 20 KVA (B) 17.4 KVA  
(C) 8.66 KVA (D) 10 KVA
51. Transformer oil is used to :
- (A) cool (B) lubricate  
(C) lubricate and cool (D) insulate and cool
52. Which one of the following transformer is largest in size?
- (A) 2 KVA, 600 Hz (B) 2 KVA, 400 Hz  
(C) 2 KVA, 200 Hz (D) 2 KVA, 50 Hz
53. Power transformers are designed to have maximum efficiency at :
- (A) near full load (B) no load  
(C) half load (D) more than full load
54. A transformer has maximum efficiency at an iron loss of 400 watts. Its copper loss will be :
- (A) 200 W (B) 300 W  
(C) 400 W (D) 800 W
55. When a 440/220 V transformer is connected to a 440 V DC supply :
- (A) the output will be zero volt  
(B) the output will be 220 V  
(C) the transformer may burn  
(D) the output will be less than 220 V
56. In a transformer, the primary and secondary induced voltages are :
- (A) 90° out of phase  
(B) in phase  
(C) 180° out of phase  
(D) in any phase difference
57. \_\_\_\_\_ is the most suitable material for the core of a transformer.
- (A) Cold rolled grain oriented steel (B) Hot rolled grain oriented steel  
(C) Cast steel (D) Carbon steel

58. The current drawn by a 240 DC motor of armature resistance 0.5 ohm and back emf of 220 V will be :
- (A) 20 A (B) 30 A  
(C) 10 A (D) 40 A
59. For wide and very sensitive speed control, the usual method is :
- (A) Field control (B) Armature control  
(C) Voltage control (D) Ward-Leonard control
60. The speed of a DC motor can be controlled by varying :
- (A) the resistance of the armature circuit (B) its flux per pole  
(C) the voltage (D) all of the above
61. A compound motor has :
- (A) two fields (B) three fields  
(C) one field (D) four fields
62. A 4-point starter is essential for a :
- (A) compound motor with speed control above normal  
(B) shunt motor with speed control below normal  
(C) series motor with speed control above normal  
(D) compound motor with speed control below normal
63. The power output of any electrical motor is taken from the :
- (A) shaft (B) terminal box  
(C) armature (D) brushes
64. In DC motor three-point starter the hold ON coil is connected :
- (A) in series to field coil (B) in series to armature  
(C) in parallel with field coil (D) in parallel with armature
65. How many parallel paths are formed in DC motor four point starter?
- (A) One (B) Two  
(C) Three (D) Four



66. The inter poles are connected in :  
(A) series with the armature (B) parallel with the armature  
(C) series with the field (D) parallel with the field
67. The standard length of PVC wiring conduit available in the market is :  
(A) 3 meters (B) 2.5 meters  
(C) 2 meters (D) 3.5 meters
68. If five numbers of lamps to be installed in godown wiring, we require :  
(A) one SPT and five two-way switches (B) one SPT and six two-way switches  
(C) two SPT and four two-way switches (D) one SPT and four two-way switches
69. The minimum length of pipe electrode used for earthing should not be less than :  
(A) 3 m (B) 3.5 m  
(C) 2.5 m (D) 4 m
70. According to IE rules, the leakage current in an installation should not exceed one \_\_\_\_\_ the part of the maximum current in the installation.  
(A) 5000 (B) 500  
(C) 100 (D) 50000
71. An ON-LOAD tap changer is provided with :  
(A) power transformer (B) distribution transformer  
(C) instrument transformer (D) isolation transformer
72. The repeated closure of the circuit to start a motor from rest, producing small movements is called :  
(A) starting (B) jolting  
(C) jogging (D) flashing
73. The number of contactors used in a semi-automatic star-delta starter is :  
(A) 1 (B) 2  
(C) 3 (D) 4
74. The edges of the slot liner should be folded on either end to prevent them from sliding in the slots is called :  
(A) cuffing (B) wedging  
(C) packing (D) over hanging

75. The periphery of the armature divided by the number of poles of the machine is called :  
 (A) front pitch (B) pole pitch  
 (C) back pitch (D) commutator pitch
76. An electromagnetic device used to detect and locate grounded, shorted and open coils in an armature :  
 (A) external growler (B) internal growler  
 (C) megger (D) mulimeter
77. Pick up the odd one out :  
 (A) agitator type (B) fuzzy logic type  
 (C) air power wash type (D) saucepan type
78. The amount of emergent light downward is 60 to 90%. The type of lighting system is :  
 (A) direct (B) semi indirect  
 (C) semi direct (D) indirect
79. Coupling gap reading can be taken with the help of \_\_\_\_\_ while coupling and aligning MG sets.  
 (A) spirit level (B) feeler gauge  
 (C) steel rule (D) shims
80. As per Rule 51, a clear space of not less than 91.44 cm in width shall be provided :  
 (A) behind the switch board (B) above the switch board  
 (C) below the switch board (D) in front of the switch board
81. The highest peak of Himalaya :  
 (A) Gangothri (B) Mount Everest  
 (C) Anamudi (D) Dhaulagiri
82. Which state receive the heaviest rainfall in India?  
 (A) Megalaya (B) Kerala  
 (C) Orissa (D) Gujarat
83. What is the longest river in India?  
 (A) Kaveri (B) Ganga  
 (C) Narmada (D) Palaru

84. The greatest mountain range come between northern and southern India :
- (A) Aravalli (B) Satpura  
(C) Vindhya (D) Ponmudi
85. In the Sangam period the hilly regions were called as :
- (A) Mullai (B) Kurinji  
(C) Marutham (D) Palai
86. The first martyr of 1857 revolt :
- (A) Nana Sahib (B) Mangal Pande  
(C) Rani Lakshmi Bai (D) Tantya Tope
87. The founder of the Indian National Congress was :
- (A) W.C. Banarjee (B) Tilak  
(C) Gandhiji (D) A.O. Hume
88. Importance of the year 1942 is :
- (A) Civil Disobedience Movement (B) Non Co-operation Movement  
(C) Quit India Movement (D) None of these
89. \_\_\_\_\_ was responsible for the partition of Bengal.
- (A) Lord Wavell (B) Lord Curzon  
(C) Lord Rippon (D) Lord Mountbatten
90. The famous Edakkal cave is situated in \_\_\_\_\_ district.
- (A) Wayanad (B) Idukki  
(C) Pathanamthitta (D) Alappuzha
91. Kallumala agitation was led by :
- (A) Ayya Vaikundar (B) Ayyankali  
(C) Thycaud Ayya (D) Sree Narayana Guru
92. Ezhava Memorial was submitted under the leadership of :
- (A) Dr. Palpu (B) Sree Narayana Guru  
(C) V.T. Bhattathirippad (D) Thycaud Ayya

93. Who was the author of the famous work "Jathikummi"?
- (A) Kumaranasan (B) C.P. Ramaswamy  
(C) Swami Sivayogi (D) Pandit Karuppan
94. \_\_\_\_\_ was considered as the father of Muslim Renaissance in Kerala.
- (A) Rahmath Ali (B) Vakkom Moulavi  
(C) Abdul Kadhar (D) Mohammed Iqbal
95. Kuriakose Elias Chavara was died on :
- (A) 3<sup>rd</sup> January 1871 (B) 3<sup>rd</sup> February 1871  
(C) 3<sup>rd</sup> November 1871 (D) 3<sup>rd</sup> December 1871
96. Which political party won the 2015 Delhi Assembly Election?
- (A) CPM (B) AAP  
(C) INC (D) BJP
97. Who got Vayalar Award of 2014?
- (A) K.R. Chithra (B) Beena Paul  
(C) Sara Joseph (D) K.R. Meera
98. Which of the following is the Multilateral Bank operated by BRICS states?
- (A) Development Credit Bank (B) National Development Bank  
(C) New Development Bank (D) Asian Development Bank
99. Who was the Chief Guest of 2015 Republic Celebration in India?
- (A) Yingluck Shinawatra (B) Barack Obama  
(C) Bill Clinton (D) Shinzo Abe
100. The first Malayali to win Oscar Award was :
- (A) Resul Pookutty (B) Manju Wariyar  
(C) A.R. Rahman (D) Mamooty