

055/2026

Question Booklet  
Alpha Code

A

Question Booklet  
Serial Number

Total No. of questions : 100

Time : 1 Hour 30 Minutes

Maximum : 100 Marks

**INSTRUCTIONS TO CANDIDATES**

1. The question paper will be given in the form of a Question Booklet. There will be four versions of question booklets with question booklet alpha code viz. A, B, C & D.
2. The Question Booklet Alpha Code will be printed on the top left margin of the facing sheet of the question booklet.
3. The Question Booklet Alpha Code allotted to you will be noted in your seating position in the Examination Hall.
4. If you get a question booklet where the alpha code does not match to the allotted alpha code in the seating position, please draw the attention of the Invigilator IMMEDIATELY.
5. The Question Booklet Serial Number is printed on the top right margin of the facing sheet. If your question booklet is un-numbered, please get it replaced by new question booklet with same alpha code.
6. The question booklet will be sealed at the middle of the right margin. Candidate should not open the question booklet, until the indication is given to start answering.
7. Immediately after the commencement of the examination, the candidate should check that the question booklet supplied to him contains all the 100 questions in serial order. The question booklet does not have unprinted or torn or missing pages and if so he/she should bring it to the notice of the Invigilator and get it replaced by a complete booklet with same alpha code. This is most important.
8. A blank sheet of paper is attached to the question booklet. This may be used for rough work.
9. **Please read carefully all the instructions on the reverse of the Answer Sheet before marking your answers.**
10. Each question is provided with four choices (A), (B), (C) and (D) having one correct answer. Choose the correct answer and darken the bubble corresponding to the question number using Blue or Black Ball-Point Pen in the OMR Answer Sheet.
11. **Each correct answer carries 1 mark and for each wrong answer 1/3 mark will be deducted. No negative mark for unattended questions.**
12. No candidate will be allowed to leave the examination hall till the end of the session and without handing over his/her Answer Sheet to the Invigilator. Candidates should ensure that the Invigilator has verified all the entries in the Register Number Coding Sheet and that the Invigilator has affixed his/her signature in the space provided.
13. Strict compliance of instructions is essential. Any malpractice or attempt to commit any kind of malpractice in the Examination will result in the disqualification of the candidate.



**055/2026**

Maximum : 100 marks

Time : 1 hour and 30 minutes

1. Which of the following statement is false?
  1. Metals are good electric conductors
  2. Electrons flow from negative terminal to positive terminal.
  3. Conventional current flow is assumed as negative to positive.
  4. Copper is more conductive than silver(A) Only 2 & 3 (B) Only 3 & 4  
(C) Only 3 (D) Only 4
  
2. If \_\_\_\_\_ electrons per second pass through a conductor having one ohm resistance with a potential difference of one volt causes one ampere current.  
(A)  $6.24 \times 10^{18}$  (B)  $6.24 \times 10^{23}$   
(C)  $1.602 \times 10^{18}$  (D)  $1.602 \times 10^{19}$
  
3. The electron configuration of a copper atom is :  
(A) 2, 8, 3 (B) 2, 8, 18, 1  
(C) 2, 8, 1 (D) 2, 8, 2
  
4. Which of the following material is an insulator?  
(A) Eureka (B) Nichrome  
(C) Lead (D) Mica
  
5. Which of the following statement is true?
  1. On molten solder due to repeated melting Lead content is reduced.
  2. On molten solder due to repeated melting Tin content is reduced.
  3. Dip soldering is used for quantity production and for tinning work.
  4. Soldering of copper conductors is more difficult than soldering of Aluminium conductor.(A) 1, 2, 3 (B) 1, 2, 4  
(C) 2, 3 (D) 2, 3, 4
  
6. Normal current carrying capacity of 1.5 sq mm copper cable = 16 amps (normal rating), current carrying capacity of the same cable when protected by coarse excess current protection is :  
(A) 12.96 amps (B) 19.44 amps  
(C) 18 amps (D) 20 amps

7. The number of valence electrons in Si and Ge are \_\_\_\_\_ respectively.
- (A) 3 and 4 (B) 5 and 4  
(C) 4 and 4 (D) 4 and 5
8. For a semiconductor :
- (A) Resistance decreases with decrease in temperature  
(B) Resistance increases with increase in temperature  
(C) Resistance decreases with increase in temperature  
(D) Both (A) & (B)
9. Two wires of equal length and equal resistance, the ratio of their cross sectional area is 3:5. Then the ratio of their specific resistances will be :
- (A) 1 : 1 (B) 3 : 8  
(C) 5 : 3 (D) 3 : 5
10. Which is provided above the metallic sheath in UG Cable?
- (A) Armouring (B) Bedding  
(C) Serving (D) Paper insulation
11. The specific resistance of a substance depends on :
- (A) Its length (B) Its cross sectional area  
(C) Its kind of material (D) All the above stated factors
12. Kirchoff's current law is applicable to only :
- (A) Junctions in a network (B) Closed loops in a network  
(C) Electric Circuit (D) Electronic circuit
13. With rise in temperature the resistance of pure metals :
- (A) Increases (B) Decreases  
(C) First increases and then decreases (D) Remain constant
14. A lead acid cell is rechargeable because :
- (A) Its electrolyte is sulphuric acid  
(B) It is a wet cell  
(C) Its chemical action is reversible  
(D) Its electrolyte has high specific gravity
15. What is the output voltage of Lithium cell?
- (A) 1.2 V (B) 1.5 V  
(C) 1.8 V (D) 2.5 V

16. What is the Electro Chemical Equivalent of copper?  
(A) 0.329 mg/coulomb (B) 0.329 g/coulomb  
(C) 1.1182 mg/coulomb (D) 1.1182 g/coulomb
17. What is the resistance of Light Dependent Resistor, if the intensity of light is increased?  
(A) Increases (B) Decreases  
(C) Remains constant (D) Becomes infinity
18. Sedimentation in lead acid batteries occurs due to :  
(A) Slow charging at low rate (B) Over charging at high rate  
(C) Non- utilization for longer period (D) Over discharging at slow rate
19. Cells are connected in series in order to :  
(A) Increase the voltage rating (B) Increase the current rating  
(C) Increase the life of the cell (D) Decrease the voltage rating
20. Sulphation in Lead acid battery occurs due to :  
(A) Heavy charging (B) Fast charging  
(C) Trickle charging (D) Incomplete charging
21. The unit of capacitance is :  
(A) Coulomb (B) Farad  
(C) Ohm (D) Ampere
22. The opposition offered to the flow of current by a capacitor is called :  
(A) Resistance (B) Inductive Reactance  
(C) Power factor (D) Capacitive Reactance
23. The unit of mmf is :  
(A) Ampere turns (B) Farad  
(C) Webers (D) mho
24. The total number of lines of force per square metre of the cross sectional area of the magnetic core is called :  
(A) Reluctance (B) Permeability  
(C) Flux density (D) Flux
25. The substances which are slightly repelled by a magnet of powerful strength only are known as :  
(A) Para magnetic substance (B) Dia magnetic substance  
(C) Ferro magnetic substance (D) Electro magnet

26. The unit of magnetic flux is :
- (A) Ampere turns (B) Coulomb  
(C) Henry (D) Weber
27. The magnetic pressure that drives magnetic flux through a magnetic circuit :
- (A) Flux density (B) Electro motive force  
(C) Magnetic motive force (D) Magnetic neutral axis
28. The material strongly attracted to the magnetic field and can become magnetised themselves when placed in a magnetic field?
- (A) Ferro magnetic material (B) Dia magnetic material  
(C) Para magnetic material (D) None of the above
29. The ratio of magnetic flux density to the magnetic field strength is called :
- (A) Reluctance (B) Permeability  
(C) Inductance (D) mmf
30. The material ability to retain its magnetism even after the external magnetic field is removed :
- (A) Susceptibility (B) Permeability  
(C) Resistivity (D) Retendivity
31. What is the maximum permissible voltage drop at the point of the commencement of supply at the consumers end for high and extra high voltage as per IE rule?
- (A) 6% (B) 7%  
(C) 3% (D) 12.5%
32. What is the average value for Voltage ( $V_{av}$ ), if the maximum value is  $V_m$ ?
- (A)  $V_{av} = 1.11 V_m$  (B)  $V_{av} = \sqrt{2} V_m$   
(C)  $V_{av} = 0.637 V_m$  (D)  $V_{av} = 0.707 V_m$
33. What is called the maximum value of potential difference between a point on the ground and a live point touched by a person?
- (A) Step potential (B) Touch potential  
(C) Skin effect (D) Potential difference
34. Which represents the physical position of accessories in the wiring installation?
- (A) Circuit diagram (B) Layout diagram  
(C) Wiring diagram (D) Installation plan

35. Where do you connect megger terminals while measuring insulation resistance between conductors in a wiring Installation?
- Outgoing terminals of Phase and Neutral wire in the main switch.
  - Outgoing terminals of Phase and Earth wire in the main switch.
  - Incoming terminals of Phase and Neutral wire in the main switch.
  - Incoming terminals of Phase and Earth wire in the main switch.
36. What is the current capacity of the wire, if the normal current carrying capacity is 20 Amps while it is protected by coarse excess current protection?
- 20 Amps
  - 24.6 Amps
  - 16.2 Amps
  - 18.2 Amps
37. What is the main reason for leakage current flowing in wiring installation?
- High insulation reactance
  - Insulation failure
  - Low earth resistance
  - High insulation resistance of wire
38. What is the minimum depth at which the top edge of plate electrodes should be buried from the surface of the ground level?
- 1.5 m
  - 0.5 m
  - 1.0 m
  - 2.0 m
39. What is the permissible leakage current in any wiring installation as per IE rule?
- Not exceed  $1/500^{\text{th}}$  part of full load current
  - Not exceed  $1/50^{\text{th}}$  part of full load current
  - Not exceed  $1/50000^{\text{th}}$  part of full load current
  - Not exceed  $1/5000^{\text{th}}$  part of full load current
40. Which type of wiring system requires special sockets or plug with fuse?
- Distribution board system
  - Looping out from junction box
  - Ring main system
  - Tree system
41. What is the necessity of residual magnetism in a self excited DC generator?
- To Build up voltage
  - Reduce the field current
  - Reduce armature current
  - Maintain constant output voltage
42. What is the purpose of pole shoe in DC generator?
- Reduce air gap
  - Increase the field strength
  - Minimize the magnetic losses
  - Spread out flux uniformly in the air gap

43. In a DC generator if the magnetic flux is doubled and the speed of the armature is halved, what happens to the generated EMF?
- (A) It is doubled (B) It remains the same  
(C) It increases by 50% (D) It is halved
44. Which of the following DC generator will have negligible terminal voltage on no load?
- (A) Shunt (B) Series  
(C) Compound (D) None of these
45. A differentially compounded DC motor is running at rated speed. If the series field winding of the motor get short circuited. What happened to the speed of the motor?
- (A) Remains constant (B) Increase  
(C) Decrease (D) Zero
46. Which Speed control method used for increasing the speed of DC motor above rated speed?
- (A) Field control method (B) Armature control method  
(C) Both (A) and (B) (D) None of these
47. The series field of a short shunt DC generator is excited by \_\_\_\_\_ current.
- (A) Armature current (B) Shunt field current  
(C) Load current (D) None of these
48. In a DC shunt motor, the 3 point starter :
- (A) Limits the starting current (B) Provide overload protection  
(C) Provides no volt protection (D) All of the above
49. The speed of DC shunt motor can be increased above its normal speed by :
- (A) Increasing the field current (B) Decreasing the field current  
(C) Decreasing the terminal voltage (D) Increasing the terminal voltage
50. What is the main drawback of 3 point starter?
- (A) No overload protection  
(B) Weak starting torque  
(C) Motor may stop if field current is reduced  
(D) High maintenance cost
51. What happens to the voltage applied to each winding of the motor during star connection?
- (A) Reduced by  $1/\sqrt{3}$  (B) Full line voltage  
(C) Reduced by  $1/3$  (D) Increased by 3 times

52. How does increasing rotor resistance affect starting torque?  
(A) Decreases starting torque (B) Increases starting torque  
(C) No change (D) Depends the load
53. Which color is typically used for the control circuit wiring?  
(A) Red (B) Green  
(C) Black (D) Blue
54. An auto-transformer starter is used for :  
(A) DC shunt motor (B) Single-phase motor  
(C) Squirrel cage induction motor (D) Universal motor
55. In a D.O.L. starter, the Normally Open auxiliary contact is used for :  
(A) Current limiting  
(B) Reducing voltage  
(C) Speed control  
(D) Maintaining self-hold or latching circuit
56. What type of current is used in phase sequence testing?  
(A) DC (B) AC  
(C) Both AC and DC (D) None
57. Phase sequence is checked before :  
(A) Installing a motor (B) Turning off a motor  
(C) Repairing a motor (D) All of the above
58. Which device in the panel controls the speed of an AC motor?  
(A) Contactor (B) Overload relay  
(C) Variable Frequency Drive (VFD) (D) Timer
59. Which device is used to isolate the motor control panel from power supply for maintenance?  
(A) Fuse (B) Isolator switch  
(C) Contactor (D) Overload relay
60. What does MCCB stand for in motor control panels?  
(A) Molded Case Circuit Breaker  
(B) Manual Circuit Control Breaker  
(C) Motor Control Circuit Breaker  
(D) Main Control Circuit Breaker

61. For power measurement, of three phase circuit by two wattmeter method, when the value of power factor less than 0.5 lagging?
- (A) Current coil of the wattmeter will become ineffective
  - (B) One of the wattmeter connections will have to be reversed
  - (C) High internal resistance
  - (D) One of the wattmeters will read zero
62. Deflecting torque of moving iron attraction type instrument is :
- (A) Inversely proportional to current
  - (B) The ability to withstand current
  - (C) Directly proportional to square of current
  - (D) Inversely proportional to square of current
63. Which type of winding is used in three phase shell type transformer?
- (A) Sandwich type winding
  - (B) Wave type winding
  - (C) Cylindrical type winding
  - (D) Circular type winding
64. A transformer is working at its maximum efficiency, as iron loss is 500 W, Its copper loss will be?
- (A) 100 W
  - (B) 300 W
  - (C) 500 W
  - (D) 250 W
65. Transformers are rated in :
- (A) KV
  - (B) KVAH
  - (C) KVA
  - (D) KW
66. Find the total output power of the transformer, Primary voltage is 240 V, Secondary voltage is 12 V, and secondary current 3 A?
- (A) 36 VA
  - (B) 4 VA
  - (C) 72 VA
  - (D) 18 VA
67. In a transformer 11KV/440V, 100KVA, is 435V at no load, 421V at 0.94 power factor under full load condition. Calculate the percentage voltage regulation of the transformer.
- (A) 332%
  - (B) 33.2%
  - (C) 0.332%
  - (D) 3.32%
68. Which is absolute Instrument?
- (A) Voltmeter
  - (B) Tangent Galvanometer
  - (C) Multimeter
  - (D) Energy meter
69. Which type of instrument is used air friction damping?
- (A) Moving iron instrument
  - (B) Dynamometer type instrument
  - (C) Moving coil instrument
  - (D) Induction type instrument

70. A 1 milli ampere meter has a coil resistance of 1000 ohms, what value of multiplier resistor is needed to measure 100 V?
- (A) 0.99 Ohm (B) 99 Ohm  
(C) 9900 Ohm (D) 99000 Ohm
71. The main function of the agitator in a washing machine is :
- (A) To heat the water (B) To rotate clothes during washing  
(C) To drain water from the tub (D) To control the spin speed
72. Which component controls the speed of a fan in electronic regulators?
- (A) Triac (B) Diode  
(C) Zener diode (D) Resistor
73. What is the function of a choke in a fluorescent lamp circuit?
- (A) To regulate current through the lamp  
(B) To supply high voltage for starting  
(C) To increase lamp brightness  
(D) Both (A) and (B)
74. Which lamp has the highest luminous efficacy?
- (A) Incandescent lamp (B) Fluorescent lamp  
(C) LED lamp (D) Mercury vapor lamp
75. According to the inverse square law, illumination on a surface is inversely proportional to :
- (A) Distance from the light source  
(B) Square of the distance from the light source  
(C) Cube of the distance from the light source  
(D) Angle of incidence
76. The emitter base junction of a given transistor is forward biased and Collector base Junction reverse biased. If the base current is increased then it's :
- (A) Collector current will increase (B) VCE will increase  
(C) Collector current will decrease (D) VCC will increase
77. Zener breakdown occurs in junctions which are :
- (A) lightly doped and narrow depletion layer  
(B) heavily doped and wide depletion layer  
(C) heavily doped and narrow depletion layer  
(D) lightly doped and wide depletion layer

78. The ripple frequency of a full-wave bridge rectifier is :  
(A) Equal to input frequency (B) Half of input frequency  
(C) Zero (D) Twice the input frequency
79. Compared to a silicon P-N diode, a Schottky diode exhibits :  
(A) Higher forward voltage and slower switching  
(B) Lower forward voltage and faster switching  
(C) Lower leakage current  
(D) Higher forward voltage and faster switching
80. The main advantage of the emitter-follower (CC) configuration is :  
(A) High voltage gain  
(B) High phase shift  
(C) High input impedance and low current gain  
(D) High current gain and low output impedance
81. What is the main constituent of Bio-gas?  
(A) Ethane (B) Ethanol  
(C) Methane (D) Methanol
82. Which of the power plant use conventional energy source to produce electricity?  
(A) Wind mill (B) Nuclear power station  
(C) Tidal power station (D) Solar power plant
83. Which equipment converts water into steam on steam power station?  
(A) Boiler (B) Furnace  
(C) Super heater (D) Economiser
84. Which equipment in steam power plant heats the feed water on its way to boiler by deriving heat from flue gases?  
(A) Air preheater (B) Prime mover  
(C) Economiser (D) Feed water pump
85. What is the primary function of condenser in steam power station?  
(A) Create a very low pressure at the exhaust of turbine.  
(B) Create a very high pressure at the exhaust of turbine  
(C) Pre heat the water to the boiler.  
(D) Purify the feed water.

86. Which type of turbines is used in high head hydroelectric power stations?  
(A) Francis turbine (B) Kaplan turbine  
(C) Reaction turbine (D) Pelton wheel turbine
87. What is the function of moderator in nuclear reactor?  
(A) Slows down the neutron  
(B) Absorbs neutron  
(C) Control the heat exchanger  
(D) Control the steam production
88. Which phenomenon is used in solar panels to produce electricity?  
(A) Piezo electric effect (B) Photovoltaic effect  
(C) Electrostatic effect (D) Electromagnetic effect
89. The main source of production of biogas is :  
(A) Animal excreta (B) Vegetable waste  
(C) Food waste (D) All of the above
90. What is the function of gear box in wind turbine?  
(A) It controls the excitation current  
(B) It converts rotor rotation in to high speed  
(C) It controls the amount of wind that hit blades  
(D) It controls internal supply unit
91. Which is the normal cable connected between distributors and consumer load terminal?  
(A) Feeders (B) Distributors  
(C) Service lines (D) None of these
92. What is called the difference in level between points of supports and the lowest point on the conductor in overhead lines?  
(A) Corona (B) Sag  
(C) Span (D) Tension
93. Which insulator is used for holding the line conductors of a overhead line on straight running of poles?  
(A) Pin insulator (B) Shackle insulator  
(C) Suspension insulator (D) Disc insulator
94. Which is disadvantage of DC Transmission?  
(A) Requires only two conductors  
(B) Less corona loss  
(C) No skin effect  
(D) Generation of high voltage is difficult

95. What is ACSR stands for?  
 (A) All Conductor Strain Reinforced  
 (B) Aluminium Covered Steel Reinforced  
 (C) Aluminium Conductor Strain Reinforced  
 (D) Aluminium Conductor Steel Reinforced
96. What is the span length of RCC poles used for distribution?  
 (A) 40 to 50 metres (B) 50 to 80 metres  
 (C) 60 to 100 metres (D) 100 to 300 metres
97. Which is used for connecting copper wire to aluminium conductor in the case of consumer service?  
 (A) Standard P.G. Clamp (B) Universal P.G. Clamp  
 (C) B.M.P.G. Clamp (D) U Bolt Clamp
98. Which of the following statement is/are correct about AC Electric power Transmission?  
 (i) Power can be generated at high voltages  
 (ii) Due to skin effect, less copper is required  
 (iii) Construction of AC transmission lines is more complicated as well as costly  
 (A) Only (i) (B) Only (i) & (ii)  
 (C) Only (iii) (D) Only (i) & (iii)
99. Which of the following statement is/are correct about Properties of a good line insulator?  
 (i) High mechanical strength  
 (ii) High relative permittivity  
 (iii) High ratio of puncture strength to flash over  
 (A) Only (ii) & (iii)  
 (B) Only (i) & (ii)  
 (C) All of the above (i), (ii) & (iii)  
 (D) Only (i) & (iii)
100. Which of the following statement is/are wrong about Suspension type insulator?  
 (i) If any one disc is damaged, the whole string does not become useless  
 (ii) Suspension type insulators are costlier than pin type insulators for voltage beyond 33 KV  
 (iii) Suspension arrangement provides greater flexibility  
 (A) Only (i)  
 (B) Only (ii)  
 (C) Only (iii)  
 (D) All of the above (i) (ii) & (iii)

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