015/2025

1. Which of the following statement/s is/are correct regarding energy shells of an atom?
   (i) The valence shell of a carbon atom has 4 electrons.
   (ii) The valence shell of a copper atom has 1 electron.
   (iii) The valence shell of a aluminium atom has 3 electrons.
   (A) Only (i) and (ii)
   (B) Only (ii) and (iii)
   (C) Only (i)
   (D) (i), (ii) and (iii)

2. The voltage (V) can be derived from the following equation/s:
   (i) V = EMF – Voltage drop
   (ii) V = Current × Resistance
   (iii) V = Power / (Current × Power factor)
   (iv) V = Current / Resistance
   (A) Only (i) and (ii)
   (B) Only (ii) and (iii)
   (C) Only (i), (ii) and (iii)
   (D) (i), (ii), (iii) and (iv)

3. Match the following as per effect of electric current:
   (1) Chemical effect   (i) Battery charging
   (2) Heating effect   (ii) Neon Lamp
   (3) Gas Ionization effect (iii) tungsten filament lamp
   (A) (1)–(i), (2)–(ii), (3)–(iii)
   (B) (1)–(i), (2)–(iii), (3)–(ii)
   (C) (1)–(ii), (2)–(i), (3)–(iii)
   (D) (1)–(iii), (2)–(ii), (3)–(i)

4. Which of the following statement/s is/are correct regarding risk of fire during cable connections and termination?
   (i) The insulation is cut back too far
   (ii) The capacity of the plug is inadequate
   (iii) The connections are too tight
   (A) (i), (ii) and (iii)
   (B) Only (ii) and (iii)
   (C) Only (i)
   (D) Only (i) and (ii)

5. Which of the following statement/s is/are correct regarding voltage grading of cables?
   (i) Low voltage (L.V): from 0 to 250 volts
   (ii) Medium voltage (M.V): Exceeding 250 V but not exceeding 1500 V
   (iii) High voltage (H.V): Exceeding 1500 V but not exceeding 33000 V
   (A) Only (ii) and (iii)
   (B) (i), (ii) and (iii)
   (C) Only (i)
   (D) Only (i) and (ii)

6. Identify the correct statement/s about soldering:

(i)   Soldering always involves the use of pressure during the process.

(ii)   The melting point of lead-free solder is typically lower than that of lead-based solder.

(iii)   Flux is used to clean the surfaces and prevent oxidation during soldering.

(iv)   In soldering, components are bonded using a molten filler metal.

    (A)   Only (i) and (ii)

    (B)   Only (iii) and (iv)

    (C)   Only (i), (iii) and (iv)

    (D)   (i), (ii), (iii) and (iv)

7. Identify the correct statement/s about Kirchhoff's Voltage Law (KVL):

(i)   KVL states that the sum of currents entering a junction is zero.

(ii)   KVL applies to only DC circuits and not AC circuits.

(iii)   KVL states that the sum of all voltage drops around a closed loop equals zero.

(iv)   KVL is valid only for circuits containing resistors.

    (A)   Only (iii)

    (B)   Only (iii) and (iv)

    (C)   Only (ii), (iii) and (iv)

    (D)   (i), (ii), (iii) and (iv)

8. Identify the correct statement about the law of resistance:

    (A)   Resistance is directly proportional to the square of the current.

    (B)   Resistance of a conductor increases as its length decreases.

    (C)   Resistance depends on the material, length, and cross-sectional area of the conductor.

    (D)   Resistance does not change with temperature.

9. Identify the correct statement/s about the Wheatstone Bridge:

(i)   The bridge is balanced when no current flows through the galvanometer.

(ii)   The bridge is balanced when the ratio of resistances in one arm equals the ratio in the other arm.

(iii)   The Wheatstone Bridge is used to measure unknown resistances with high precision.

(iv)   The Wheatstone Bridge works based on Kirchhoff's Voltage and Current Laws.

    (A)   Only (i), (ii) and (iii)

    (B)   Only (ii) and (iii)

    (C)   Only (ii), (iii) and (iv)

    (D)   (i), (ii), (iii) and (iv)

10. Select the correct statement/s about the relationship between voltage, current, and resistance:

(i)   When resistance increases, the current increases if the voltage remains constant.

(ii)   Voltage is equal to the product of current and resistance.

(iii)   Current is inversely proportional to voltage at constant resistance.

(iv)   Ohm's Law shows that current increases with resistance at constant voltage

    (A)   Only (ii)

    (B)   Only (i) and (ii)

    (C)   Only (ii), (iii) and (iv)

    (D)   (i), (ii), (iii) and (iv)

11. Select the term, represents the technique used to control the corrosion of a metal surface by making it as the cathode of an electro chemical cell?

    (A) Electroplating   (B) Cathode Protection(CP)

    (C) Electro Chemical Equivalent (ECE)   (D) Ionization

12. According to Faraday's First law of electrolysis, The mass of ions liberated at any electrode during Electrolysis is —————

    (A) Proportional to Electro Chemical Equivalent

    (B) Proportional to the volume of electrolyte

    (C) Proportional to quantity of electricity passed through the electrolyte

    (D) Proportional to the density of electrolyte

13. What is the approximate value of the Electro Chemical Equivalent (ECE) of silver at mg/c (milligram per coulomb)?

    (A) 0.3043   (B) 3.07

    (C) 2.07   (D) None of these

14. Choose the rechargeable cell from the following:

    (A) Carbon - Zinc cell   (B) Nickel - Cadmium cell

    (C) Mercury cell   (D) Lithium primary cell

15. Which type of positive plate inside the Lead acid battery is made by pure Lead at the beginning and change to Lead peroxide by the process of repeated charging and discharging?

    (A) Faure plate   (B) Plante plate

    (C) Foam plate   (D) Sponge plate

16. When the cell is fully charged, it freely gives off hydrogen at cathode and oxygen at the anode, the process being known as:

    (A) Airing   (B) Foaming

    (C) Cranking   (D) Gassing

17. Which of the following inspection is **not** done before charging battery?

    (A) Weight of the electrolyte

    (B) Specific gravity of the electrolyte

    (C) Voltage of the each cell of the battery

    (D) Ampere-hour capacity of each cell

18. What type of charging method is used if the available supply is high voltage DC 220V, 110V etc?

    (A) Constant potential method   (B) Rectifier method

    (C) Constant current method   (D) Trickle charging method

19. Which one of the following is **not** a defect of Lead Acid Battery?
    (A) Hard sulphation   (B) Buckling of plates
    (C) Partial short   (D) Polarization

20. What is the main difference between Nickel - Iron cell and Nickel – Cadmium cell?
    (A) Type of negative plates   (B) Type of positive plates
    (C) Construction   (D) Type of separators

21. Which winding of a DC machine (Generator/Motor) carries alternating current only?
    (A) Interpole winding   (B) Series Field winding
    (C) Shunt Field winding   (D) Armature winding

22. Among the following, which one is **not** a part of DC Generator?
    (A) Interpole   (B) Pole shoe
    (C) End ring   (D) Armature

23. Why is the armature of the DC Generator made up of laminated high grade steel?
    (A) To reduce hysteresis loss and eddy current loss
    (B) To reduce hysteresis loss and fractional loss
    (C) To eddy current loss and fractional loss
    (D) Frictional loss and windage loss

24. The periphery of the armature divided by the number of poles of the DC Generator is called —————, ie the distance between two adjacent poles
    (A) Back pitch   (B) Pole pitch
    (C) Front pitch   (D) Coil span

25. Among the following, which condition is **not required** for the build up of voltage in a DC Generator (self Excitated)?
    (A) If excited at load, armature resistance should be high
    (B) Given the direction of rotation, shunt field coils should be correctly connected to the armature
    (C) Excited in open circuit its shunt field resistance should be less than the critical value
    (D) There must be some residual magnetism

26. Which type of DC generator shows rising voltage characteristics with an increase in load?
    (A) DC shunt Generator   (B) DC Over compound Generator
    (C) DC series Generator   (D) DC under compound Generator

27. How can you increase the speed of a DC shunt motor?
    (A) by increase flux   (B) by reduce flux
    (C) by increase armature current (D) by increase load

28. Which type of DC motor is used for driving constant speed line shafting?
   (A) DC series Motor
   (B) DC Cummulative compound Motor
   (C) DC differential compound Motor
   (D) DC shunt Motor

29. Which type of DC Motor starter has a protective resistor?
   (A) 2 – Point starter
   (B) 3 – Point starter
   (C) 4 – Point starter
   (D) Rotor Resistance starter

30. Fleming's Left hand rule is used :
   (A) To determine the direction of rotation of a three-phase squirrel cage induction Motor
   (B) To determine direction of rotation of DC Motor
   (C) To determine direction of rotation of synchronous Motor
   (D) To determine the direction of rotation of a three-phase slip-ring induction Motor

31. What is the purpose of the flexible cords in domestic wiring?
   (A) Concealed wiring
   (B) Permanent connection
   (C) Run cable through holes in ceiling
   (D) Connection transportable appliances

32. How many two way switches are required in godown wiring circuit to control four lamps?
   (A) 2
   (B) 3
   (C) 4
   (D) 5

33. Where the Iron Clad Double Pole (ICDP) main switch is used?
   (A) Large industrial installations
   (B) Control main or branch circuits
   (C) Single phase domestic installations
   (D) Three phase power circuit installations

34. What is the maximum permissible load for a power sub circuit as per I.E rules?
   (A) 800 Watt
   (B) 1500 Watt
   (C) 2000 Watt
   (D) 3000 Watt

35. What is the reason for supplying AC to the electrodes for measuring earth resistance?
   (A) Provide electrostatic shield
   (B) Protect the coils in the meter
   (C) Reduce the value of current in the meter
   (D) Avoid the effect of electrolytic emf interference

36. Which electrical accessory belongs to general classification of accessories?
    (A) Fuse
    (B) Ceiling roses
    (C) Intermediate switch
    (D) Pendent lamp holder

37. What is the expansion of ECC?
    (A) Earth Conductor Continuity
    (B) Earth Continuity Conductor
    (C) Earth Carrying Conductor
    (D) Earth Continuity Cable

38. Which material is coated in tungsten electrode of a fluorescent tube lamp?
    (A) Silver oxide
    (B) Phosphor powder
    (C) Fluorescent powder
    (D) Barium and strontium oxide

39. What is the function of leak transformer in high pressure sodium vapour lamp circuit?
    (A) Reduce the starting current
    (B) Reduce the working voltage
    (C) Increase the working voltage
    (D) Ignite the high voltage initially

40. Which is the cold cathode lamp?
    (A) Neon sign lamp
    (B) Halogen lamp
    (C) Fluorescent lamp
    (D) Mercury vapour lamp

41. From the given options choose the unit of magnetic flux :
    (A) volt/second   (B) volt second
    (C) volt/second^2 (D) volt^2 second

42. Magnetic lines of force coming from a magnet :
    (A) intersect at infinity
    (B) intersect within the magnet
    (C) cannot intersect at all
    (D) cancel at pole faces

43. The magnetic material used in permanent magnet is :
    (A) Iron   (B) Soft steel
    (C) Nickel   (D) Hardened steel

44. Which of the following rule is used to determine the direction of rotation of an electric motor?

- (A) Maxwell's cork screw rule
- (B) Lenz's law
- (C) Fleming's right hand rule
- (D) Fleming's left hand rule

45. The energy stored in the magnetic field of a solenoid of 100 cm long and $\dfrac{10}{\pi}$ cm diameter with 1000 turns of wire carrying a current of 10 A is :

- (A) 0.05 J
- (B) 0.015 J
- (C) 0.15 J
- (D) 0.5 J

46. Which of these cannot store energy?

- (A) Capacitor
- (B) Resistor
- (C) Inductor
- (D) LC Circuit

47. The permeability of a material is 0.997. It is a ————— material

- (A) Diamagnetic
- (B) Paramagnetic
- (C) Ferromagnetic
- (D) Anti Ferromagnetic

48. Five equal capacitors are connected in series, the resultant capacitance is 4 micro farad. When these capacitors are connected in parallel and charged to 400 volt d.c. the total energy stored is :

- (A) 16 J
- (B) 32 J
- (C) 4 J
- (D) 8 J

49. Two parallel wires separated by a distance d are carrying a current I in the same direction. The magnetic field along a line running parallel to these wires and midway between them :

- (A) Depends on I
- (B) Is zero
- (C) Depends on d
- (D) Depends upon the permeability of the medium between the wires

50. The area of hysteresis loop is a measure of :

- (A) Permeance
- (B) Magnetic flux
- (C) Permittivity
- (D) Energy loss per cycle

51. The average value of a sinusoidal alternating current in a circuit is found to be 10 Ampere, The maximum value of current is :

- (A) 7.85 A
- (B) 15.7 A
- (C) 31.4 A
- (D) 62.8 A

52. The value of each resistors in a delta network, that is equivalent to a star network consisting of three equal resistors of value R ohm is ——————— ohm

(A) $\dfrac{R}{3}$ (B) $3R^2$

(C) $\dfrac{R^2}{3}$ (D) $3R$

53. The flux through each turn of a 1000 turn coil is $\left(t^3 - 2t\right)$ milli Weber, where 't' is in seconds. Find the magnitude of induced emf at $t=2$ second :

(A) 1 V   (B) 10 V

(C) 10000 V   (D) 0.1 V

54. The north pole of a magnet is moved away from a metallic ring. Th induced current in the ring flows:
    (A) Counterclockwise
    (B) Clockwise
    (C) First clockwise then counterclockwise
    (D) First counterclockwise then clockwise

55. Which of the following incandescent lamp will have maximum resistance?
    (A) 100 watt bulb   (B) 50 watt bulb
    (C) 25 watt bulb   (D) 200 watt bulb

56. The principle of dynamically induced emf is utilized in a:
    (A) Choke   (B) Transformer
    (C) Generator   (D) Thermocouple

57. A lamp of 100 W at rated voltage of 200 V, is supplied by a source of 100 V. It will be equivalent to a lamp of :
    (A) 100 W   (B) 25 W
    (C) 200 W   (D) 50 W

58. For an alternating quantity, the form factor is defined as:

(A) $\dfrac{\text{RMS value}}{\text{Mean value}}$

(B) $\dfrac{\text{Mean value}}{\text{RMS value}}$

(C) $\dfrac{\text{RMS value}}{\text{Peak value}}$

(D) $\dfrac{\text{Peak value}}{\text{RMS value}}$

59. The instantanuous value of alternating current in a circuit is expressed as $i = 50\sin 360t$, where t is time in seconds. The frequency of the alternating current is:

(A) $\dfrac{2\pi}{360}\,\mathrm{Hz}$

(B) $\dfrac{360}{2\pi}\,\mathrm{Hz}$

(C) $50\,\mathrm{Hz}$

(D) $100\,\mathrm{Hz}$

60. Polar form $12 < 30°$ can be represented in rectangular form as:

(A) $6 + j6$

(B) $10.4 + j10.4$

(C) $6 + j10.4$

(D) $10.4 + j6$

61. When temperature increases, the energy gap in a semiconductor

(A) increases

(B) decreases

(C) does not change

(D) all of the above

62. The released light energy in a LED is depends on :

(A) the reverse biased junction

(B) the intensity of incident light

(C) usually it is made from Silicon material

(D) the recombination of holes and electrons

63. Peak Inverse Voltage of each diode in a center-tapped full-wave rectifier is :

(A) 2 Vm

(B) Vm/2

(C) Vm

(D) Vm/π

64. When does the zener diode begins to conduct in the reverse biased condition?

(A) After the barrier voltage cancelled

(B) Voltage across it reached zero voltage

(C) Voltage across it reached zener voltage

(D) Voltage across it reached knee voltage

65. What is the effect of pinch-off voltage in JFET?

(A) Reverse bias voltage becomes zero

(B) Drain current becomes zero

(C) Width of channel has maximum value

(D) No depletion region exists

66. Which is the three terminal, negative voltage regulator IC?

(A) IC 7905

(B) LM 317

(C) IC 7812

(D) LM 340

67. Which logic gate has the following truth table?

Inputs		Output
A	B	Y
0	0	0
0	1	0
1	0	0
1	1	1

    (A)   OR gate   (B)   NAND gate

    (C)   NOR gate   (D)   AND gate

68. What is the effect, if SCR is latched into conduction and gate pulse is removed?

    (A)   Current through SCR falls to zero

    (B)   Output voltage will be rise up

    (C)   Gate losses control over conduction

    (D)   Immediately rise the output current

69. In a full-wave bridge rectifier, the load current in each of the diode flows for :

    (A)   Complete cycle of the input AC signal

    (B)   Half-cycle of input AC signal

    (C)   More than half cycle of input AC signal

    (D)   Less than half cycle of input AC signal

70. What is the criteria to decide a material as conductor, semi conductor and insulator?

    (A)   Bonding structure of atom

    (B)   Atomic weight of an atom

    (C)   Atomic number of atom

    (D)   Valance electrons exists in an atom

71. Which of the following statement is/are correct regarding energy conversion in rotating electrical machines?

    (i)   During energy conversion, out of total input energy some energy is converted into required form, some energy is stored and rest is dissipated.

    (ii)   During energy conversion, out of total input energy some energy is converted into required form, and rest is dissipated.

    (iii)   Reaction of coupling field on the electrical or mechanical system is essential for energy conversion process.

    (A)   Only (i)   (B)   Only (i) and (iii)

    (C)   Only (ii) and (iii)   (D)   All of the above (i) (ii) and (iii)

72. Which of the following statement is/are true about the armature winding of an alternator?

(i) For a full pitched winding, coil span is 360° electrical.

(ii) Distributed winding diminishes armature reaction and armature reactance.

(iii) Star or delta connection suppress tripplen harmonics across the lines.

(A) Only (ii) and (iii) (B) Only (i) and (iii)

(C) Only (ii) (D) All of the above (i) (ii) and (iii)

73. Consider the following test results obtained to determine the regulation by EMF method, of a 2 kV single phase alternator delivering a current of 200 A at 0.8 pf leading.

Test results

Full load current of 200 A is produced on short circuit by a field excitation of 5 A and an emf of 600 V is produced on open circuit by same field current.

The value of synchronous impedance is :

(A) 3 Ω (B) 120 Ω

(C) 40 Ω (D) 10 Ω

74. If the excitation of an alternator changes during parallel operation, then it will affect :

(A) power factor and kW output

(B) power factor and kVAr output

(C) power factor, kVAr output and kW output

(D) kW output only

75. Find the odd one out :

(A) AC series motor (B) Universal motor

(C) Repulsion motor (D) Shaded pole motor

76. The speed of the rotor field with respect to the stator field of a 4 pole induction motor working on 50 Hz supply having 4 % slip is :

(A) 1500 rpm (B) 1440 rpm

(C) 0 rpm (D) 60 rpm

77. Which of the following statements is/are true about torque of an Induction motor?

(i) Maximum torque is directly proportional to square of stator voltage.

(ii) Maximum torque is independent of rotor circuit resistance.

(iii) The slip at which maximum torque occurs is independent of rotor circuit resistance.

(A) Only (i) (B) Only (i) and (iii)

(C) Only (i) and (ii) (D) All of the above (i), (ii) and (iii)

78. Choose the correct statement/s regarding single phasing of three phase induction motors.

   (A) The motor continues to run as a single phase induction motor provided that the load does not exceed 57.7% of the normal rating

   (B) The motor continues to operate with the same temperature rise as when carrying a rated load as a 3 phase induction motor

   (C) Both statements (A) and (B) are correct

   (D) Only statement (A) is correct

79. Which among the following starting methods is not used for a cage type induction motor?

   (A) Star Delta starting   (B) Auto transformer starting

   (C) Stator resistance starting   (D) Rotor resistance starting

80. Identify the odd one from the following methods of speed control of a three phase induction motor :

   (A) Variation of supply frequency

   (B) By injecting an emf in the rotor circuit

   (C) Variation of applied voltage

   (D) By changing the number of stator poles

81. Consider the following statements :

   (i) The efficiency of a transformer is same at the same load at 0.8 pf lag and 0.8 pf lead.

   (ii) Power transformers are designed to have maximum efficiency at or near full load.

   (iii) Distribution transformers are designed for lower iron losses.

   Identify the correct statements from the following options :

   (A) Only (ii) and (iii)   (B) Only (i) and (iii)

   (C) Only (i) and (ii)   (D) All of the above (i), (ii) and (iii)

82. The maximum efficiency of a 20 kVA, 2000/200 V transformer occurs at 80% of full load. Then the ratio of full load copper loss to iron loss is :

   (A) $\dfrac{25}{16}$ (B) $\dfrac{16}{25}$

   (C) $\dfrac{5}{4}$ (D) $\dfrac{4}{5}$

83. Identify the wrong statement/s from the options given below :

   (A) For a given output and voltage rating, core type transformer requires less iron but more conductor material as compared to shell type transformer

   (B) In a transformer with concentric windings, low voltage winding is placed near the core to reduce core loss

   (C) Both (A) and (B)

   (D) None of the above

84. For a Two winding transformer and Auto-transformer having same input, output and voltage ratio (k), the ratio of weight of conductor in two winding transformer to weight of conductor in Auto-transformer is

(A) $1 - k$　　　　　　　　　　　(B) k

(C) $\dfrac{1}{k}$　　　　　　　　　　　(D) $\dfrac{1}{1-k}$

85. The necessary condition for parallel operation of transformers is/are :

(A) Same polarity　　　　　　　(B) Same $\dfrac{x}{k}$ ratio

(C) Both (A) and (B)　　　　　　(D) None of the above

86. The ON Load tap changing circuit of a transformer is provided with an impedance :

(A) to minimise the harmonics

(B) for impedance matching

(C) to limit the short circuit current during tap changing

(D) to maintain same x/r ratio

87. Which of the following statements is/are true about instrument transformers?

(i) The burden of an instrument transformer refers to the load connected across the secondary winding.

(ii) The Current Transformer (CT) operates on short circuit condition as the load impedance on the secondary winding is very small.

(iii) The Potential Transformer (PT) behaves as an ordinary step down two winding transformer operating on short circuit condition.

(A) Only (ii) and (iii)　　　　　(B) Only (i) and (ii)

(C) Only (i) and (iii)　　　　　(D) All of the above (i), (ii) and (iii)

88. For an ideal transformer the values of permeability and reluctance respectively are :

    (A) ∞, 0   (B) 0, ∞

    (C) 0, 0   (D) ∞, ∞

89. Which of the following method/s are used to reduce leakage flux in a transformer?

    (A) By increasing height of window

    (B) By adopting shell type construction

    (C) By sandwiching primary and secondary windings

    (D) All of the above

90. If a 220 V dc supply is given to a 220/440 V. 50 Hz transformer, then the transformer will :

    (A) induces 440 V dc in secondary

    (B) induces less than 440 V dc in secondary

    (C) induces more than 440 V dc in secondary

    (D) burn its windings

91. In MI instruments, the necessary magnetic field is produced by ampere- turns of current carrying coil. This statement is applicable in :

    (i) Attraction and Induction type instruments

    (ii) Repulsion and Vibrating type Instruments

    (iii) Attraction and repulsion type instruments

    (iv) Dynamometer type instruments

    (A) Only (i)   (B) Only (ii)

    (C) Only (i) and (iv)   (D) Only (iii)

92. Substation is the assembly of apparatus used to change some Electrical characteristics such as :

    (i) Voltage

    (ii) AC to DC

    (iii) Frequency

    (iv) Active power

    (A) Only (i), (ii) and (iv)   (B) Only (ii) and (iv)

    (C) Only (i), (ii) and (iii)   (D) Only (iii) and (iv)

93. In Moving coil Instruments, deflecting torque (Td) is equal to :

(i) Force × Displacement

(ii) Force × Perpendicular Distance

(iii) NBI × Area

(iv) None of the above

(A) only (i) (B) only (ii)

(C) only (iii) (D) only (ii) and (iii)

94. The scales of Dynamometer type Wattmeter scales are more or less uniform, because :

(i) Deflection is proportional to True power

(ii) Deflection is proportional to active power

(iii) Deflection is proportional to product of True power × instantaneous Voltage

(iv) Deflection is proportional to average power

(A) Only (iv) (B) Only (i) and (ii)

(C) Only (i) and (iii) (D) Only (i)

95. In underground cable system, the properties of Insulating material include :

(i) High Dielectric strength

(ii) High mechanical strength

(iii) Low specific resistance

(iv) Non-inflammable

(A) Only (i), (ii) and (iv) (B) Only (ii)

(C) Only (ii) and (iii) (D) Only (iii) and (iv)

96. In single phase watt-hour meter, the ring placed over the center limp of shunt magnet is used for compensating phase errors because :

(i) The flux due to shunt magnet does not lag behind the voltage by 90 degrees exactly.

(ii) The flux due to series magnet does not lag behind the current by 90 degrees exactly.

(iii) The flux due to shunt and series magnet does not lag behind the voltage by 90 degrees exactly.

(iv) The flux due to shunt magnet does not lead behind the voltage by 90 degrees exactly.

(A) only (i) (B) only (ii)

(C) only (iii) (D) only (iv)

97. In short Transmission lines, the effect of line capacitance is neglecting in calculations because :

(i) Such lines have smaller lengths.

(ii) Such lines transmitting the power at relatively low voltages.

(iii) Such lines have smaller lengths and transmitting the power at relatively low voltages.

(iv) Such lines have less reactive power.

(A) only (i)   (B) only (i) and (ii)

(C) only (iii)   (D) only (iii) and (iv)

98. The load curve on the power station is defined as :

(i) Variation of curve with respect to max. demand

(ii) Variation of curve with respect to time

(iii) Variation of curve with respect to average load

(iv) Variation of curve with respect to connected load

(A) only (i)   (B) only (ii)

(C) only (iii)   (D) only (iv)

99. In the designing of electrical transmission line meets :

(i) Economic choice of Transmission voltage

(ii) Economic choice of Transmission power

(iii) Economic choice of supporting structures

(iv) Economic choice of conductor size

(A) Only (i), (ii) and (iii)   (B) Only (i) and (iv)

(C) Only (ii) and (iii)   (D) Only (ii) and (iv)

100. In Underground system the insulation resistance of a single core cable is :

(i) Directly proportional length

(ii) Inversely proportional to length

(iii) Directly proportional to area

(iv) Inversely proportional to area

(A) Only (i)   (B) Only (ii)

(C) Only (ii) and (iii)   (D) Only (ii) and (iv)

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SPACE FOR ROUGH WORK