Model Question for PSU

Electrical – Mechanical

SET -10

1.The fuse wire made of ------
(a)Copper
(b)tungsten
(c)Lead -tin alloy
(d)Nichrome
2.The current capacity of a cell is measured in --------
(a)A
(b)Ah
(c)W
(d)Wh
3.The electric cell is a device to obtain---------
(a)Electrons
(b)Electric charge
(c)Electric energy from chemical energy
(d)Electric force
4.What carries current in an electrolyte?
(a)Electrons only
(b)-ve ions only
(c)+ve ions only
(d)Both +ve and -ve ions
5.The current capacity of the charged secondry cell does not depend on----------
(a)Rate of discharge
(b)Temperature
(c)Amount of active material
(d)Rate of charging
6.Who was the first to design storase cell ?
(a)Plante
(b)Galvani
(c)Edison
(d)Volta
7.The period of wave is_____
(a)The same as frequency
(b)Time required to complete one cycle
(c)Expressed in amperes
(d)None of the above
8.The form factor is the ratio of _____
(a)Peak value to r.m.s value
(b)r.m.s value to average value
(c)Avarage value to r.m.s value
(d)None of the above
9.Form factor for sine wave is_____
(a)1.414
(b)0.707
(c)1.11
(d)0.637
10. In a series resonant circuit,the impedence of the circuit is_____
(a)Minimum

(b)Maximum
(c)Zero
(d)None of the above
11.Capacitors for power factor correction are rated in_____
(a)kW
(b)kVA
(C)kV
(d)kVAR
12.In a circuit containing R,L and C, power loss can take place in_____
(a)C only
(b)L only
(c)R only
(d)All the above
13.The ratio of active power to apparent power is known as_____factor.
(a)Demand
(b)Load
(c)Power
(d)Form
14.Skin effect occurs when a conductor carries current at _____frequencies.
(a)Very low
(b)Low
(c)Medium
(d)High
15.The power factor of a D.C circuit is always_____.
(a)Less than unity
(b)Unity
(c)Greater than unity
(d)Zero
16.In an A.C circuit I sin *(fie)
is called_____.
(a)Active component
(b)Watless compnent
(c)Any of the above
(d)None of these
17.The power factor of incandescent bulb is_____.
(a)0.8 lagging
(b)0.8leading
(c) Unity
(d)Zero
18.The armature of D.C generator is laminated to_____
(a)Reduce of bulk
(b)Provide passage for cooling air
(c)Insulate the core
(d)Reduce eddy current loss
19.In D.C generated the pole shoes are fastened to the pole core by _____
(a)Rivets
(b)Counter sunk screws
(c)Brazing
(d)Welding
20.D.C generator generates_____
(a)A.C voltage in armature
(b)D.C in the armature
(c)A.C superimposed over D.C
(d)None of the above
21.An exciter for a turbo generator is a_____
(a)Separately excited generator

(b)Shunt generator
(c)Series generator
(d)Compound generator
22.If the speed of a D.C shunt motor is increased the back e.m.f of the motor will be _____
(a)Decrease
(b) Increase
(c) Remain same
(d) Zero
23.By locking at which part of the motor it can be easily confirmed thet a particular motor is D.C motor ?
(a)Frame
(b) shaft
(c)Commutator
(d) Stator
24.In the D.C motor the iron losses occur in _____
(a)The field
(b) The armature
(c) The brushes
(d) The commutator
25. Which of the following can be used for controling the speed of a D.C motor ?
(a)Thermistor
(b) Transistor
(c) Thyraton
(d) Thyristor
26.carbon arc lamp s are commonly used in_____
(a)Domestic lighting
(b)Street lighting
(c)Cinema projectors
(d)Photography
27.Candela is the unit of_____
(a)Luminous flux
(b)Luminous intensity
(c) Wave length
(d)None of the above
28.The illumination level in houses is in the range_____
(a)10-20 lumen/m squire
(b)30-50 lumen/m squire
(c)40-75 lumen/m squire
(d)100-140 lumen/ m squire
29.Luminous efficiency of a flourescent tube is_____
(a)5-10 lumen/watt
(b)15-20 lumen/watt
(c)30-40 lumen/watt
(d)60-65 lumen/watt
30.Which of the following is not a standard wattage of a incandescent lamps in india ?
(a)15W
(b)25W
(c)40W
(d)50W

31. A tube of force is
a.force exeretd by a steel tube
b.fictions tube of electric lines of force over a surface
c.force exerted by a tube of water

d.None of these
32.If a dielectric is placed in an electric field , then field strenght
a.increases
b.decreases
c.remains unlatered
d.becomes zeor
33.Inductance per unit length for a solenoid near its centre compared to its eand is
a.Less
b.Greater
c.Same
d.Uncertain
34.Unit of electric field strength E is
a.volts/metre
b.newton/coulomb
c.joule/coulomb.metre
d.all of these
35. The elecrric charges
a.are conserved
b.are quantised
c.Exist in pairs
d.all of these
36.Abody can be charged when it is
a.An insulator
b.held in hand
c.charge in humbid enviroment
d.all of these
37. The phase velocity of an electromagnetic wave propagating in a hollow metallic rectangular waveguide in the TE10 mode is

A) equal to its group velocity
B) less than the velocity of light in free space
C) equal to the velocity of light in free space
D) greater than the velocity of light in free space

Answer : (D)

38. The Q - meter works on the principle of

A) mutual inductance
B) self inductance
C) series resonance
D) parallel resonance

Answer : (C)

39. Which type of wiring gives more mechanical and fire protection?

1. Casing capping
2. Batten wiring
3. Conduct wiring
4. Cleat wiring

Answer: 1

40. The function of a choke used with fluorescent tube working on a.c. is
    1. to produce high voltage kick to start the tube
    2. to limit the magnitude of discharge current of the tube while running
    3. Both of these
    4. None of these

Answer: 2

41. Flexible conduits are used in preference to right conduits
    1. for giving supply to motor to allow for belt tension adjustment
    2. for giving supply to vibrating machinery
    3. for runs full of obstructions, bends and turns
    4. for all of these situations

Answer: 4

42. If earth wire of smaller size is used
    1. it will melt
    2. it will spoil the insulation
    3. it will produce heavy voltage drop in the earth wire
    4. None of these

Answer: 1

43. Type of wiring used for godowns, workshops and public buildings is
    1. casing and capping
    2. batten wiring
    3. conduct wiring
    4. cleat wiring

Answer: 3

44. Production to motor from overload is given by
    1. earthing 2. starter
    3. fuses 4. All of these

Answer: 3

45. The main function of a switch is to safely
    1. Break the circuit
    2. Make the circuit
    3. Make and break the circuit
    4. Regulate the current flow in the circuit

Answer: 3

46. In house wiring employing looping in and looping out system, neutral is looped in and out from
    1. ceiling rose
    2. lamp holder
    3. socket
    4. All of these

Answer: 4

47. Electrical fires should only be extinguished by the use of
    1. water
    2. carbon tetra chloride fire extinguisher
    3. foam type fire extinguisher
    4. Anyone of these

Answer: 4

48. Heavy current in dc circuits can be measured with the aid of
    1. CT in line
    2. shunt resistance in series with meter
    3. shunt resistance in parallel with meter
    4. None of these

Answer: 3

49. Hysteresis and eddy current errors will be least in
    1. M.I. instruments
    2. Dynamometer instrument
    3. M.C. Instruments
    4. All of these

Answer: 2

50. In a pure resistive circuit,
    1. current is in phase with the voltage by 90 degree
    2. current logs behind the voltage by 90 degree
    3. current leads the voltage by 90 degree
    4. current can lead or log the voltage by 90 degree

Answer: 1

51. By heating a conducting material, the conductivity of the material
    1. Increases 2. Decreases 3. Remains the same 4. May increase or decrease

Answer: 1

52. In an N-Type semiconductor the minority carriers are
    1. electrons 2. holes 3. free electrons 4. None of these

Answer: 2

53. The relative permeability for a superconductor is
    1. infinity 2. zero 3. unity 4. positive

Answer: 3

54. Universal Motor is used in
    1. A.C 2. D.C 3. AC and DC 4. None of these

Answer: 3

55. Synchronous Motor is
    1. Self Started 2. To start using another motor 3. Squirrel eage type 4. None of These

    Answer: 2

56. In India, the domestic supply of voltage is
    1. 250-300V 2. 110-220V 3. 220-230V 4. 400-420V

Answer: 3

57. The supply frequency in India is
    1. 50Hz 2. 40Hz 3. 25Hz 4. 60Hz

Answer: 1

58. Which winding in a transformer has more number of turns?
    1. Primary winding
    2. Secondary winding
    3. High voltage winding
    4. Low voltage winding

Answer: 3

59. Iron core of power transformer is laminated
    1. to reduce copper losses
    2. to reduce hysteresis losses
    3. to reduce eddy current losses
    4. Both (1) and (3)

Answer: 2

60. In a transformer, hysteresis losses can be reduced
    1. by reducing the thickness of the iron core laminations
    2. by controlling silicon content of the steel laminations
    3. by reducing the load on the transformer
    4. None of these

Answer: 1

61. Why Lubrication is done
    1. To Increase the speed 2. To Prevent Friction between the Mating Parts
    3. To avoid heat 4. None of These

Answer: 2

62. The Height of switch board fixed is usually
    1) 3 Meters 2) 9 Meters 3) 1.5 Meters 4) 0.25 Meters

Answer : 3

63. In a ceiling fan employing capacitor run motor
    1. primary winding surrounds the secondary winding
    2. secondary winding surrounds the primary winding
    3. Both are usual arrangements
    4. None of them are usual Arrangements

Answer: 3

64. The zenor diode will regulate so long as it is kept in
    1. forward conduction
    2. idle conduction
    3. reverse conduction
    4. None of these

Answer: 1

65. In radio communication the medium of communication is
    1. antenna 2. radar 3. space 4. satellite

Answer: 2

66. The sound is characterized by __ and amplitude
    1. velocity 2. pitch 3. frequency 4. medium

Answer: 2

67. The LED light is mainly emitted because
    1. diode emits light when heated
    2. recombination of charge takes place
    3. it follows the heating laws
    4. None of these

Answer: 2

68. Generally bridge rectifiers are preferred because
    1. they require less input
    2. they require big size of transformer
    3. they require less peak inverse voltage
    4. None of these

Answer: 3

69. The common base configuration amplifier is used
    1. in low frequency circuitry
    2. in very high frequency circuitry
    3. in medium frequently
    4. None of these

Answer: 2

71. The FET can be used as

1. capacitor 2. inductor 3. variable resistance 4. None of these
Answer: 3

72. The force which controls the deflecting force is known as

1. controlling force
2. deflecting force
3. damping force
4. None of these

Answer: 3

73. The moving coil type instruments are best suited for

1. dc Measurements
2. ac Measurements
3. ac/dc measurements
4. power factor measurements

Answer: 2

74. The scale of hot wire instrument is

1. even
2. uneven
3. crowded in the beginning
4. crowded in the end

Answer: 3

75. The ----Cells convert light falling directly in to electric current

1. Photo Voltaic 2. Photo 3. Vacuum 4. gas filled
Answer: 1

76. As the current flows, the ------is setup around coil

1. Magnetic flux
2. Electric flux
3. Resonance
4. Amplitude

Answer: 1

89. Filter circuits are constructed by means of

a. Diode
b. Resistors
c.Transformers
d. Capacitor and inductors

Ans. D

90. Resistance of the diode is decreased when

a. Forward biased
b. Reverse biased
c. Both forward and reverse biased
d.Either a or b

Ans. A

91. In earlier time is used for voltage regulation.

a. Diode b. Transistors c. Vacuum tubes and glow bulbs d. SMPS
Ans. C

92. is the equipment used during power failure.

a. Rectifier b. Voltage regulators c. UPS d. SMPS
Ans. C

93. Peak factor of the sine wave is equal to

(a) 0.901 (b) 1.414 (c) 1.1 (d) 1.11
Ans :b

94. The frequency of DC current

(a) Equal to voltage magnitude
(b) 0
© Double of AC frequency
(d) 50 HZ
Ans : b

95. The current flowing in a purely inductive circuit of 30 mH on application of 230 V, 50 Hz single phase supply is 24.4 A. If the frequency of the applied voltage is increased to 100 Hz the current flowing in the same circuit will be

(a) 24.4 A (b) 48.8 A (c) 12.2 A (d) 6.1 A
Ans : c

96. Find the total resistance when two 3 Ohm resistances are connected in parallel.
(a) 1.11 ohms (b) 1.5 ohms (c) 0.707 ohms (d) 1.23 ohms
Ans : b

97. Voltage drop in a resistance given by
(a) mmf/reluctance (b) IR (c) I/R (d) VI
Ans : b

98. Off-line converter, SMPS has

a. AC input and dc output b .DC input and dc output c. AC input and ac output d. None
Ans. A

99. The amplitude of current of full wave rectified sinusoidal wave is 80 A, its average value will be
(a) 25.44A (b) 80A (c) 40A (d) 56.56A
Ans : a

100.Find the total current supplied to the lamp rated 100w .when supply voltage is 200 v.
(a) 1.75A (b) 2A (c) 0.5A (d) 1A (e)
Ans : c