

VOP
Written Test for MFOP: JTA (Electrical)

30th Dec, 2014

Registration No:


- 1) Which of the following is not the part of squirrel cage induction motor
 - A) Winding
 - B) Shaft
 - C) Commutator
 - D) Bearing
- 2) 1 Horse Power(H.P) is approximately equal to
 - A) 600 Watts
 - B) 60 Watts
 - C) 750 Watts
 - D) 700 Kilo Watts
- 3) A resistance wire of 5 Ohms is further drawn so that the diameter reduces to one fifth of its original diameter. The resistance of the drawn wire will be
 - A) 10hm
 - B) 5 Ohm
 - C) 25 Ohm
 - D) 125 Ohm
- 4) Two waves of the same frequency have opposite phases when the phase angle between them is
 - A) Zero degree
 - B) 90 degrees
 - C) 180 degrees
 - D) 360 degrees
- 5) Electric heater wires are generally made of
 - A) carbon
 - B) steel
 - C) copper
 - D) nichrome
- 6) The RMS value and mean value is same in case of
 - A) sine wave
 - B) square wave
 - C) triangular wave
 - D) half wave rectified sine wave
- 7) The unit of inductance is
 - A) Henry
 - B) Farad
 - C) Ohms
 - D) Ampere

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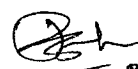
- 8) In electrical works "XLPE" relates to
- A) Switch
 - B) Lamp
 - C) Earthing
 - D) Cable
- 9) If alternating current of 50Hz flows in a circuit, the current becomes zero ----- times in 1 second
- A) 50 times
 - B) 25 times
 - C) 100 times
 - D) 200 times
- 10) A synchronous motor working on leading power factor and not driving mechanical load is known as
- A) condenser
 - B) synchronous condenser
 - C) inverter
 - D) converter
- 11) The armature of a D.C. machine is laminated to reduce
- A) Eddy current loss
 - B) Hysteresis loss
 - C) Copper loss
 - D) Frictional loss
- 12) Which of the following instrument is used for measurement of earth resistance
- A) Multi meter
 - B) Megger
 - C) Voltmeter
 - D) Wattmeter
- 13) Which of the following is Electrolytic conductor
- A) Copper
 - B) Sulphuric acid
 - C) Aluminium
 - D) Air
- 14) Maximum earth resistance of HT premises shall be limited to
- A) 10 Ohm
 - B) 100 Ohm
 - C) 1 Ohm
 - D) 50 Ohm
- 15) The armature of a D.C generator is laminated to
- A) Reduce the size
 - B) Provide passage for cooling air
 - c) Insulate the core
 - D) Reduce eddy current loss

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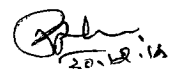
- 16) The unit for measurement of capacitance is
A) Ohm
B) Farad
C) Ampere
D) Volt
- 17) The r.m.s value of alternating current is
A) 0.637 of max:value
B) 0.707 of max: value
C) 0.5 of max: value
D) The maximum value itself
- 18) The 3 windings of 3-phase induction motor should be installed at a distance of
A) 90 electrical degrees
B) 120 electrical degrees
C) 360electrical degrees
D) 60 electrical degrees
- 19) Which of the following motors does not have commutator
A) Repulsion motor
B) Induction motor
C) D.C.shunt motor
D) A.C. series motor
- 20) The purpose of providing dummy coils in generator is to---
A) Reduce flux density
B) Enhance flux density
C) amplify voltage
D) provide mechanical balance for rotor
- 21)When an electron is removed from an atom it becomes
A) a neutron
B) a proton
C) a positive ion
D) a negative ion
- 22) The ampere hour capacity of a lead acid battery depends on
A) Density of electrolyte
B) Size of container
C) Number of plates
D) All the above
- 23) For a sine wave with peak value "I" the r.m.s value is
A) 0.818 I
B) 0.707 I
C) 0.5 I
D) 1.414 I

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- 24) Dielectric constant for air is taken as
- A) Zero
 - B) 1
 - C) 100
 - D) Infinite
- 25) Electronic component which blocks direct current and allow alternating current to pass is
- A) Inductance
 - B) Resistance
 - C) Capacitance
 - D) conductance
- 26) Which of the following motor will give relatively high starting torque
- A) Shaded pole motor
 - B) Capacitor run motor
 - C) Split phase motor
 - D) Capacitor start motor
- 27) In a transformer which of the following does not change
- A) Voltage
 - B) Current
 - C) Frequency
 - D) All the above
- 28) The hum in transformer is developed in
- A) Core
 - B) Winding
 - C) Cooling oil
 - D) Tank
- 29) Contamination of transformer oil is due to
- A) Decomposition of oil
 - B) Heating
 - C) Moisture
 - D) All of above
- 30) Which of the following is variable loss in a transformer
- A) Eddy current loss
 - B) Copper loss
 - C) Hysteresis loss
 - A) Capacitive loss
- 31) Connected load is
- A) The rating in kW of installed electrical load
 - B) Maximum load put on at any time
 - C) Part of load always remain ON
 - D) Average load during a period

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- 32) Which of the following offers nearly unity power factor
- A) Arc lamp
 - B) Induction motor
 - C) Tube light
 - D) GLS Lamp
- 33) Induction motor has relatively high power factor at
- A) No load
 - B) 25% load
 - C) rated r.p.m
 - D) Near full load
- 34).Power factor is given by
- A).KWH/KW
 - B) Active power/Reactive power
 - C) Reactive power/Active power
 - D) KW/KWh
- 35) Oil switches are used for
- A) Circuits of low voltages
 - B) Circuits of low currents
 - C) Circuits of high voltages and large currents
 - D) All circuits
- 36) A fuse operates on what effect of electric current
- A) Magnetic effect
 - B) Electrostatic effect
 - C) Heating effect
 - D) Photoelectric effect
- 37) A fuse wire is never inserted in
- A) Phase line
 - B) Positive of DC circuit
 - C) Negative of DC circuit
 - D) Neutral wire
- 38) The filament of an electric bulb is made of
- A) Steel
 - B) Copper
 - C) Tungsten
 - D) Carbon

- 39) Line Amps = $\frac{\text{H.P} \times 746}{1.732 \times \text{.....} \times \text{Efficiency} \times \text{Pf}}$
- A) Line volts
 - B) 1000
 - C) Phase Volts
 - D) 100

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- 40) $KW = KVA \times \dots\dots\dots$
- A) 1.732
 - B) Line Volts
 - C) Power Factor
 - D) 1000
- 41) If two waves have the frequency of 1000 Hz and one is at the maximum value when the other is at zero, the phase angle between them is
- A) 0 degrees
 - B) 90 degrees
 - C) 120 degrees
 - D) 180 degrees
- 42) The value of dielectric constant for vacuum is taken as
- A) Zero
 - B) 1
 - C) 100
 - D) Infinite
- 43) A capacitor in a circuit became hot and ultimately exploded due to wrong connections. Which type of capacitor it could be
- A) Electrolytic capacitor
 - B) Paper capacitor
 - C) Ceramic capacitor
 - D) Any of the above
- 44) Typical opening time of an ACB (Air Circuit Breaker) is approximately
- A) 40 Seconds
 - B) 60 Seconds
 - C) 40 Milli seconds
 - D) 120 Minutes
- 45) For an Air Circuit Breaker (ACB) "In" stands for
- A) Incoming voltage
 - B) Short circuit current
 - C) Internal resistance
 - D) Rated current
- 46) How can three resistances of values 2 Ohms, 3 Ohms and 6 Ohms be connected to produce an effective resistance of 4 Ohms
- A) All the 3 resistances parallel
 - B) 6 Ohm, 3 Ohm parallel and 2 Ohm series to that
 - C) All the 3 resistances in series
 - D) 6 Ohm, 2 Ohm parallel and 3 Ohm series to that
- 47) The ampere hour capacity of lead acid battery depends on
- A) density of electrolyte
 - B) size of container

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- C) number of plates
- D) all the above


- 48) A capacitor opposes
- A) change in current
 - B) change in voltage
 - C) both change in current and voltage
 - D) none of the above

- 49) The relative permeability of air is
- A) 0
 - B) 1
 - C) infinite
 - D) 100

- 50) In a D.C machine , the number of commutator segments is equal to
- A) number of conductors
 - B) twice the number of poles
 - C) number of coils
 - D) twice the number of coils

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