

## CHI TIẾT CÂU A B Đ THI

Tên B Đ Thi: qn

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Câu 1: A rotary switch called a .....

- A. Stator.
-  B. Commutator.
- C. Armature.
- D. Rotor.

Câu 2: ..... is the symbol of single pole switch and pilot light.

- A. S.
- B.  $S_{be}$ .
- C.  $S_T$ .
-  D.  $S_p$ .

Câu 3: If you use a 100 Watt water pump 5 hours a day, so how many watts or kilowatt – hours of electrical energy do you have?

- A. 50 Kilowatts – hours.
-  B. 500 Watts – hours.
- C. 500 Watts of power.
- D. 5 Kilowatts – hours.

Câu 4: The AC voltage generated by .....

-  A. A synchronous generator.
- B. Magnetic field.
- C. A Direct current generator.
- D. Magnetomotive force.

Câu 5: ..... is the symbol of double pole switch.

- A.  $S_p$ .
- B.  $S_{DM}$ .
- C. S.
-  D.  $S_2$ .

Câu 6: ..... is one of the two principal components of an electro-mechanical machine-a motor or generator.

- A. Commutator.
-  B. Armature.
- C. Stator.

D. Rotor.

Câu 7: A contactor is an electrical device used for controlling ..... flow.

A. Voltage.

B. Current.

 C. Power.

D. Atom.

Câu 8: To stepper motor, the time delay between each step determines .....

 A. The speed of motor.

B. The voltage of motor.

C. The current of motor.

D. The torque of motor.

Câu 9: Which the following statement is true?

A. Depending upon the design of the machine, rotor serve as the commutator.

B. Depending upon the design of the machine, stator serve as the commutator.

C. Depending upon the design of the machine, rotor serve as the commutator and stator serve as the armature.

 D. Depending upon the design of the machine, not only rotor but also stator serve as the armature.

Câu 10: A coreless DC motor is a specialized form of a .....

 A. Brush DC motor.

B. Brushless motor.

C. AC motor.

D. Linear motor.

Câu 11: ..... is the symbol of single pole switch with thermal overload protection.

 A.  $S_T$ .

B.  $S_P$ .

C.  $S_{be}$ .

D.  $S_{DM}$ .

Câu 12: The slip of the AC motor is calculated by .....

A.  $S = (N_s + N_r) / N_s$ .

 B.  $S = (N_s - N_r) / N_s$ .

C.  $S = (N_s + N_r) N_s$ .

D.  $S = (N_s - N_r) N_s$ .

Câu 13: ..... produces a linear force along its length.

A. Coreless motor.

B. Brushless motor.

 C. Linear motor.

D. AC motor.

Câu 14: How many volts are there in 2.7 kV?

A. 27 Volts.

B. 270 Volts.

 C. 2700 Volts.

D. 27000 Volts.

Câu 15: The diagram of a motor is to be connected to the supply via a contactor is called .....

A. Auxiliary circuit.

 B. Main circuit.

C. Control circuit.

D. Source circuit.

Câu 16: ..... can be thought of informally as "rotational force".

A. Rotor.

B. Force.

C. Armature

 D. Torque.

Câu 17: ..... is an electro-dynamic instrument for measuring the electric power.

 A. Watt meter.

B. Volt meter.

C. Ohm meter.

D. Current meter.

Câu 18: Which device has the functions of an Residual Current Device and Miniature Circuit Breaker ?

A. Circuit Breaker.

B. Vacuum Circuit Breaker.

C. Air Circuit Breaker.

 D. Residual Circuit Breaker Over.

Câu 19: DC generator contains four ratings .....

A. Voltage, Current, Power and Slip rings.

B. Voltage, Current, Speed and Slip rings.

 C. Voltage, Speed, Power and Current.

D. Speed, Current, Power and Slip rings.

Câu 20: In split phase motor, ..... is used to disconnect the starting winding when the motor reaches approximately 75% of rated speed.

A. Limited switch.

B. Float switch.

C. Deep Switch.

 D. Centrifugal switch.

Câu 21: ..... is designed to provide a current in its secondary, which is accurately proportional to the current flowing in its primary.

A. Pulse transformer.

 B. Current transformer.

C. Audio transformer.

D. Voltage transformer.

Câu 22: The classic DC motor has a rotating armature in the form of an electromagnet with .....

A. Six poles.

B. Four poles.

 C. Two poles.

D. Three poles.

Câu 23: The capacitor is utilized in a series with .....

 A. The starting winding.

B. Excited winding.

C. The running winding.

D. Rotor winding.

Câu 24: Main circuit is known as .....

A. Auxiliary circuit.

B. Main circuit.

 C. Power Circuit.

D. Source circuit.

Câu 25: ..... is a solid-state semiconductor device with four layers of alternating N and P- type material.

A. Diode.

 B. Thyristor.

C. Fuse.

D. Relay.

Câu 26: Electricity is measured in units of power called .....

A. Voltages.

 B. Watts.

C. Teslas.

D. Amperes.

Câu 27: Earth leakage circuit breaker ( ELCB ) detects .....

 A. Earth current.

B. Fault and over-current protection.

- C. Current imbalance.
- D. Overload or short circuit protection.

Câu 28: If you use a 100 Watt water pump 3 hours a day, so how many watts or kilowatt – hours of electrical energy do you have?

- A. 30 Kilowatts – hours.
-  B. 300 Watts – hours.
- C. 30 Watts – hours.
- D. 3 Kilowatts – hours.

Câu 29: Which devices are types of circuit protection devices?

- A. The fuse, the circuit breaker and the contactor.
- B. The fuse, the relay and the residual current device.
-  C. The fuse, the circuit breaker and the residual current device.
- D. The fuse, the relay and the contactor.

Câu 30: Steppers can be used "open-loop" without the need for expensive ..... to check their position.

- A. Inverters.
- B. Coders.
-  C. Encoders.
- D. Decoders.

Câu 31: Transformers alone are able to .... ..

-  A. Transfer energy from one circuit to another.
- B. Convert DC to AC or vice versa.
- C. Change the voltage or current of DC.
- D. Change the AC supply frequency.

Câu 32: ..... is the symbol of four way switch.

- A.  $S_2$ .
- B. S.
- C.  $S_3$ .
-  D.  $S_4$ .

Câu 33: The unit of work is.....

-  A. Joule.
- B. Volt.
- C. Ohm.
- D. Watt.

Câu 34: ..... is the symbol of three way switch.

- A. S.
- B.  $S_2$ .



- C.  $S_3$ .
- D.  $S_4$ .

Câu 35: FCO refers to .....

- A. Fuse Cut Operation.
- B. Fuse Cut Overload.



- C. Fuse Cut Out.
- D. Fuse Cut Off.

Câu 36: RPM refers to .....

- A. Round per minute.



- B. Round per minute or revolution per minute.
- C. Revolution per minute or round per mile.
- D. Round per minute or round per mile.

Câu 37: ..... is a device for changing the course (or flow) of a circuit.

- A. Relay.
- B. Circuit Breaker.



- C. Switch.
- D. Generator.

Câu 38: To limit the starting inrush current, we decrease voltage starting using .....



- A. Series inductors or star – delta starting.
- B. Series inductors or delta – star starting.
- C. Diode or star - delta starting.
- D. Thyristors or delta – star starting

Câu 39: To stepper motor, each step is controlled by energizing.....of the coils inside the motor.



- A. One or more.
- B. One only.
- C. Two only.
- D. Three only.

Câu 40: ..... is a device that produces electrical energy from a mechanical energy source.

- A. Relay.
- B. Circuit Breaker.
- C. Switch.



- D. Generator.

Câu 41: Potential transformer is also called.....

- A. Current transformer.
- B. Pulse transformer.

-  C. Voltage transformer.
- D. RF transformer.

Câu 42: To AC generator, Conductors rotate through .....

- A. Magnetomotive force.
- B. Electromotive force.
-  C. Magnetic field.
- D. Electromagnetic.

Câu 43: To limit the starting inrush current, we decrease voltage starting using .....

- A. Diode or series inductors.
- B. Diode or delta – star starting.
- C. Auxiliary resistance or delta – star starting.
-  D. Auxiliary resistance or thyristor.

Câu 44: RMS refers to.....

- A. Remote Manipulator System.
- B. Rate-Monotonic Scheduling.
-  C. Root Mean Square.
- D. Record Management Services.

Câu 45: Transistorized inverters with variable frequency drive can now be used for .....

- A. Voltage control.
- B. Power control.
- C. Current.Control.
-  D. Speed control.

Câu 46: The operation of permanent split capacitor motor is similarly to the .....

-  A. Capacitor start motor.
- B. Split phase motor.
- C. Single phase AC synchronous motor.
- D. Single phase AC asynchronous motor.

Câu 47: A simple transformer consists of two electrical conductors called the primary winding and the .....

- A. Start winding.
- B. Main winding.
-  C. Secondary winding.
- D. Run winding.

Câu 48: Residual Current Breaker with Over-current protection ( RCBO ) detects .....

- A. Earth current.
- B. Current imbalance.

-  C. Fault and over-current protection.
- D. Overload or short circuit protection.

Câu 49: The winding and centrifugal switch arrangement of capacitor –start motor is very similar to that used in .....

- A. Synchronous motor.
- B. Linear motor.
- C. Step motor.
-  D. Split phase motor.

Câu 50: VFD refers to .....

- A. Variable Frequency Dimmer.
- B. Variable Frequency Detection.
- C. Variable Frequency Detector.
-  D. Variable Frequency Drive.

Câu 51: A generator has many turns of wire wound into the slots of .....

- A. Ferrite core.
-  B. Rotor.
- C. E core.
- D. I core.

Câu 52: Electricity is the flow of.....

-  A. Electrons.
- B. Nucleus.
- C. Protons.
- D. Atoms.

Câu 53: The power rating is based on the mechanical limitations of the device:

-  A. The mechanical limitations of the device and thermal limits of conductors, bearings.
- B. Thermal limits of conductors, bearings, current and slip rings.
- C. The size of conductor, bearings, current and slip rings.
- D. The mechanical limitations of the device, current and slip rings.

Câu 54: In split phase motor, the startup winding is designed with a higher .....than the running winding.

-  A. Resistance.
- B. Voltage.
- C. Current.
- D. Power.

Câu 55: How much power does a circuit taking .25 A from a 12 V supply use?

- A. .48 W.
- B. 48 W.

C. 300 W

 D. 3 W.

Câu 56: The ..... is made up of copper segments.

 A. Commutator.

B. Armature.

C. Rotor.

D. Stator.

Câu 57: ..... is a transformer that optimized for transmitting rectangular electrical pulse.

A. Current transformer.

 B. Pulse transformer.

C. RF transformer.

D. Voltage transformer.

Câu 58: RCD refers to .....

 A. Residual Current Device.

B. Residual Current Detection.

C. Residual Current Detector.

D. Residual Current Drive.

Câu 59: ..... is instrument for measuring the differences of potential between different points of an electrical circuit.

A. Watt meter.

 B. Volt meter.

C. Ohm meter.

D. Current meter.

Câu 60: In split phase motor, the lower L/R ratio creates a small phase shift, not more than about .....

A. 45 derees.

 B. 30 degrees.

C. 10 degrees.

D. 15 degrees.

Câu 61: To AC generator, a current flow through the field coil of the rotor creates .....

A. Magnetomotive force.

B. Electromotive force.

C. Electromagnetic.

 D. Magnetic field.

Câu 62: If you use a 200 Watt water pump 4 hours a day, so how many watts or kilowatt – hours of electrical energy do you have?

 A. .8 Kilowatts – hours.

- B. 8 Kilowatts – hours.
- C. 80 Kilowatt – hours.
- D. 80 Watts – hours.

Câu 63: The fielding DC motor will be placed in series ( series wound ) with the armature winding to get .....

- A. A high torque, high speed motor.
-  B. A high torque, low speed motor.
- C. A low torque, high speed motor.
- D. A low torque, low speed motor.

Câu 64: ..... is system for controlling the rotational speed of an alternating current (AC) electric motor by controlling the frequency of the electrical power supplied to the motor.

- A. Encoder.
- B. Generator.
- C. Inverter.
-  D. Variable frequency drive.

Câu 65: The magnitude of AC voltage is generated by the generator depends on .....

-  A. Speed of rotor and the field strength.
- B. Speed of rotor and Electromagnetic.
- C. Speed of rotor and magnetomotive force.
- D. Speed of rotor and magnetic field.

Câu 66: A basic DC generator has four basic parts .....

- A. A magnetic field, a single conductor, slip rings and spring.
-  B. A magnetic field, a single conductor, a commutator and brushes.
- C. A single conductor, a commutator, slip rings and spring.
- D. A single conductor, a commutator, slip rings and brushes.

Câu 67: ..... has the rotor will rotate in synchronism with the rotating magnetic field.

-  A. Synchronous motor.
- B. Asynchronous motor.
- C. Step motor.
- D. Linear motor.

Câu 68: ..... refers to the rotating part of a machine such as a motor, generator, alternator, pump, or helicopter.

-  A. Rotor.
- B. Force.
- C. Stator.
- D. Torque.

Câu 69: ..... are materials that contain movable charges of electricity.

- A. Brushes.

- B. Ferrites.
-  C. Conductors.
- D. Slip rings.

Câu 70: To DC generator, voltage rating of a machine is based on .....

- A. The size of the conductor and insulation type.
- B. Thermal limits of conductor and mechanical limitations.
-  C. Insulation type and design of machine.
- D. The limit for the field current and design of machine.

Câu 71: A typical four – pole motor running on 50 Hz might have a name plate rating of 1725 RPM at full load. Calculate the synchronous speed of motor.

- A. 750 RPM.
- B. 1000 RPM.
- C. 1200 RPM.
-  D. 1500 RPM.

Câu 72: A simple transformer consists of two electrical conductors called the secondary winding and the .....

- A. Start winding.
- B. Auxiliary winding.
-  C. Primary winding.
- D. Main winding.

Câu 73: ..... is the symbol of boiler emergency switch.

- A.  $S_T$ .
-  B.  $S_{be}$ .
- C.  $S_p$ .
- D.  $S_{DM}$ .

Câu 74: ..... which rotates exactly at the supply frequency

-  A. Synchronous motor.
- B. Asynchronous motor.
- C. Linear motor.
- D. Step motor.

Câu 75: If you use a 200 Watt water pump 2 hours a day, so how many watts or kilowatt – hours of electrical energy do you have?

- A. 40 Kilowatts – hours.
-  B. .4 Kilowatts – hours.
- C. .4 Kilowatts of power.
- D. 40 Watts – hours.

Câu 76: The shaded pole motor has low starting .....

-  A. Torque.
- B. Voltage.
- C. Power.
- D. Frequency.

Câu 77: ..... is the symbol of single pole switch.

- A.  $S_2$ .
- B.  $S_3$ .
-  C. S.
- D.  $S_p$ .

Câu 78: Circuit Breaker protects an electrical circuit from damage caused by .....

- A. Over-voltage.
- B. Over-heat.
-  C. Over-load.
- D. Current imbalance.

Câu 79: There are four internal losses that contribute to lower efficiency of a DC generator:

-  A. Copper, Hysteresis, Eddy-current and Mechanical losses.
- B. Copper, Voltage, Eddy-current and Mechanical losses.
- C. Copper, Hysteresis, Eddy-current and Voltage losses.
- D. Hysteresis, Voltage, Eddy-current and Volatge losses.

Câu 80: To limit the starting inrush current, we decrease voltage starting using .....

- A. Series inductors or delta – star starting.
-  B. Thyristors or star – delta starting.
- C. Thyristors or delta – star starting.
- D. Diode or star - delta starting.

Câu 81: ..... is an electrical switch that opens and closes under control of another electrical circuit.

-  A. Relay.
- B. Circuit Breaker.
- C. Switch.
- D. Generator.

Câu 82: The circuit of motor control is called .....

-  A. Auxiliary circuit.
- B. Main circuit.
- C. Source circuit.
- D. Power circuit.

Câu 83: What is the resistance of a circuit that takes a current of .5 A when the voltage to the circuit is 40V?



- A. 80 Ohm.
- B. 8 Ohm.
- C. 20 Ohm.
- D. 200 Ohm.

Câu 84: Which the following statement is true?



- A. The operation of MCCB is thermal or thermal magnetic.
- B. The operation of MCB is electronic.
- C. The operation of MCB is electronic or thermal.
- D. The operation of MCCB is electronic or thermal.

Câu 85: In split phase motor, ..... is wound with a smaller wire size having higher electrical resistance than the main winding.



- A. Starting winding.
- B. Secondary winding.
- C. Running winding.
- D. Primary winding.

Câu 86: ..... is an automatically operated electrical switch, which is designed to protect an electrical circuit from damage caused by overload or short circuit.



- A. Circuit Breaker.
- B. Relay.
- C. Switch.
- D. Generator.

Câu 87: A simple transformer consists of two electrical conductors called the primary winding and the .....



- A. Secondary winding.
- B. Auxiliary winding.
- C. Start winding.
- D. Main winding.

Câu 88: What is the current in a .22 kV, 40 W lamp?



- A. 5.5 A.
- B. .18 A.
- C. 181 A.
- D. 8.8 A.

Câu 89: The fielding DC motor will be placed in series and parallel ( compound wound ) with the armature winding to get .....



- A. For balance.
- B. A high torque, high speed motor.
- C. A high torque, low speed motor.

D. A low torque, high speed motor.

Câu 90: ..... is an electrical device that transfers energy from one circuit to another purely by magnetic coupling.



A. Transformer.

B. Transistor.

C. Circuit breaker.

D. Thyristor.

Câu 91: ..... is the symbol of single pole dimmer switch.



A.  $S_{DM}$ .

B. S.

C.  $S_2$ .

D.  $S_p$ .

Câu 92: Midway between ordinary DC motors and stepper motors lies the realm of the .....



A. Brushless DC motor.

B. Coreless motor.

C. Linear motor.

D. AC motor.

Câu 93: Which device has the function of detecting current imbalance?

A. Circuit Breaker.



B. Residual Current Device.

C. Miniature Circuit Breaker.

D. Earth Leakage Circuit Breaker.

Câu 94: A typical four – pole motor running on 60 Hz might have a name plate rating of 1725 RPM at full load. Calculate the synchronous speed of motor.

A. 900 RPM.



B. 1800 RPM.

C. 1725 RPM.

D. 700 RPM.

Câu 95: The speed of the DC motor is proportional to the .....

A. Frequency.

B. Power.

C. Current.



D. Voltage.

Câu 96: The trip mechanism used in most circuit breakers is .....

A. The mechanical type.

B. The magnetic type.

- C. The thermal type.
-  D. The thermal – magnetic type.

Câu 97: ..... is a method of making an electrical connection through a rotating assembly.

- A. Spring.
- B. Centrifugal switch.
- C. Brushes.

 D. Slip ring.

Câu 98: To limit the starting inrush current, we decrease voltage starting using .....

- A. Auxiliary resistance or diode.
- B. Auxiliary resistance or delta – star starting.

 C. Auxiliary resistance or star – delta starting.

D. Series inductors or delta – star starting.

Câu 99: Which the following statement is false?

- A. Linear motor produces a linear force along its length.
- B. A coreless DC motor is a specialized form of a brush DC motor.
- C. Midway between ordinary DC motors and stepper motors lies the realm of the brushless DC motor.

 D. Closely related in design to three phase AC asynchronous motor are stepper motor.

Câu 100: .....interrupts the arc in a vacuum bottle.

- A. Miniature circuit breaker.
- B. Air circuit breaker.
- C. Circuit breaker.

 D. Vacuum circuit breaker.

Câu 101: Which device does not provide over current protection?

- A. Circuit Breaker.
- B. Miniature Circuit Breaker.

 C. Residual Current Device.

D. Residual Circuit Breaker Over.

Câu 102: What happens to the current in a circuit when the voltage to the circuit is increased?

A. Nothing happens.

 B. Rising.

C. Decreasing.

D. Changing.

Câu 103: The nucleus contains positively charged particles called.....

- A. Nucleus.
- B. Electrons.

-  C. Protons.
- D. Atoms.

Câu 104: ..... is the symbol of three way switch dimmer switch.

-  A.  $S_{DM3}$ .
- B.  $S_{DM}$ .
- C.  $S_T$ .
- D.  $S_P$ .

Câu 105: The ratings normally given to a fuse are .....

- A. Voltage rating, current rating, power rating.
- B. Voltage rating, current rating.
-  C. Voltage rating, current rating, and category of duty.
- D. Voltage rating, category of duty.

Câu 106: What is the measurement unit for power?

-  A. Watt.
- B. Volt.
- C. Ohm.
- D. Ampere.

Câu 107: Power circuit is known as .....

- A. Auxiliary circuit.
-  B. Main circuit.
- C. Control Circuit.
- D. Source circuit.

Câu 108: The fielding DC motor will be placed in parallel ( shunt wound ) with the armature winding to get .....

- A. A high torque, high speed motor.
-  B. A low torque, high speed motor.
- C. A high torque, low speed motor.
- D. For balance.

Câu 109: A stepper motor is a special kind of motor that moves in individual steps which are usually .....each

- A. .5 degrees.
-  B. .9 degrees.
- C. 2 degrees.
- D. 3 degrees.

Câu 110: Which device has the function of detecting earth current?

- A. Circuit Breaker.
- B. Relay.



- C. Earth Leakage Circuit Breaker.
- D. Miniature Circuit Breaker.

Câu 111: AC refers to .....



- A. Acetate.
- B. Alternating current.
- C. Actinium.
- D. Attocoulomb.

Câu 112: Which the following statement is false?



- A. Transformer may be classified by Voltage class.
- B. Transformer may be classified by frequency range.
- C. Transformer may be classified by Current class.
- D. Transformer may be classified by power level.

Câu 113: The direction of a wound field DC motor can be changed by .....



- A. control voltage.
- B. change power.
- C. reverse the field.
- D. Control Current.

Câu 114: RCCB is known as .....



- A. Residual Current Device.
- B. Residual Current Detection.
- C. Residual Current Detector.
- D. Residual Current Drive.

Câu 115: The torque of the DC motor is proportional to the .....



- A. Frequency.
- B. Power.
- C. Current.
- D. Voltage.

Câu 116: ..... is an electrical switch that periodically reverses the current in an electric motor or electrical generator.



- A. Commutator.
- B. Armature.
- C. Float switch.
- D. Deep switch.

Câu 117: ..... is designed to provide a current in its secondary which is accurately proportional to the current flowing in its primary



- A. Current transformer.

- B. Voltage transformer.
- C. RF transformer.
- D. Pulse transformer.

Câu 118: Which the following statement is true?

- A. A coreless DC motor is a specialized form of a linear motor.
- B. A coreless DC motor is a specialized form of a brushless DC motor.
-  C. A coreless DC motor is a specialized form of a brush DC motor.
- D. A coreless DC motor is a specialized form of a AC motor.