

Unit 3 MCQ Solution

MCQ

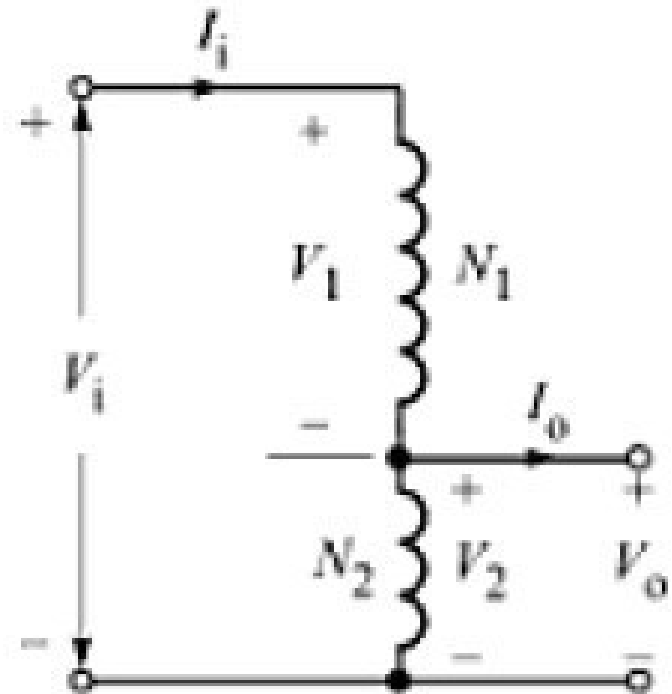
Which of the following is the main advantage of an auto-transformer over a two-winding transformer?

- A. Hysteresis losses are reduced
- B. Saving in winding material**
- C. Copper losses are negligible
- D. Eddy losses are totally eliminated

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What is the turn ratio of the given transformer?

- A. N_2/N_1
- B. $N_2/(N_1+N_2)$
- C. N_1/N_2
- D. $N_1/(N_1+N_2)$



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The primary winding of a C.T. has _____

- A. a larger number of turns
- B. no turns at all
- C. intermediate number of turns
- D. a few turns**

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The secondary winding of a P.T. has _____

- A. a larger number of turns
- B. no turns at all
- C. intermediate number of turns
- D. a few turns**

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The secondary winding of which of the following transformers is always kept closed?

- A. Current transformer**
- B. Voltage transformer
- C. Power transformer
- D. Step down transformer

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If the supply frequency of a transformer increases, the secondary output voltage of the transformer

- A. Increase
- B. Decrease
- C. Remain the same**
- D. Any of the above

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Lamination of the transformer core is made of

- A. Cast Iron
- B. Silicon Steel**
- C. Aluminum
- D. Cast Steel

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A transformer

- A. Changes ac to dc
- B. Changes dc to ac
- C. Steps up or down dc voltages
- D. Steps up or down ac voltages**

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Primary winding of a transformer

- A. Is always a low voltage winding
- B. Is always a high voltage winding
- C. Could either be a low voltage or high voltage winding**
- D. None of the above

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When a 6 V battery is connected across the primary of a transformer with a turns ratio of 8, the secondary voltage is

- A. 0 V**
- B. 6 V
- C. 48 V
- D. 0.75 V

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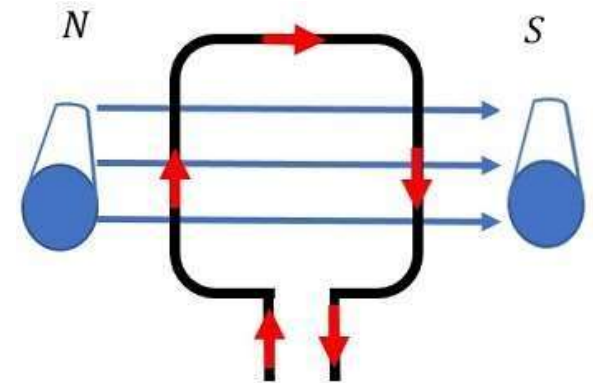
How many primary volts must be applied to a transformer with a turns ratio of 0.1 to obtain a secondary voltage of 9 V?

- A. 9 V
- B. 90 V**
- C. 900 V
- D. 0.9 V

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What rule is used to find the direction of magnetic force

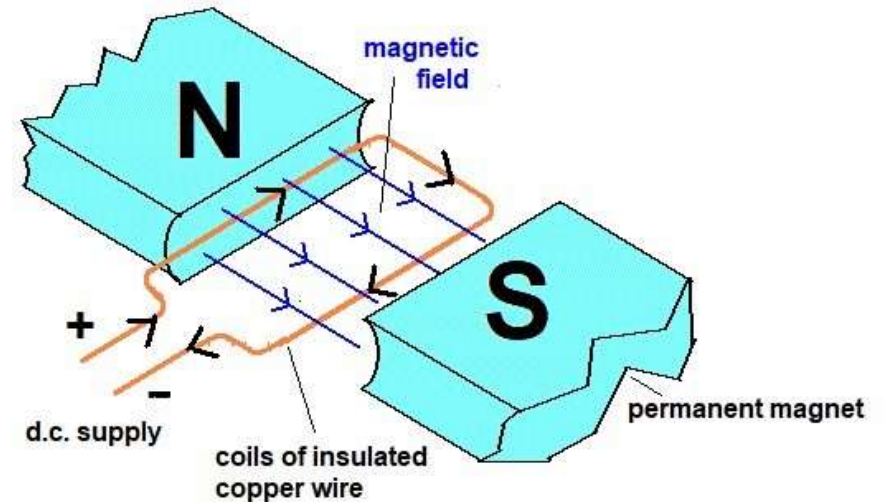
- A) right hand rule
- B) Left hand rule**
- C) Thumb rule
- D) None of above



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In the diagram, the current is moving clockwise around the coil, which way does the coil rotate

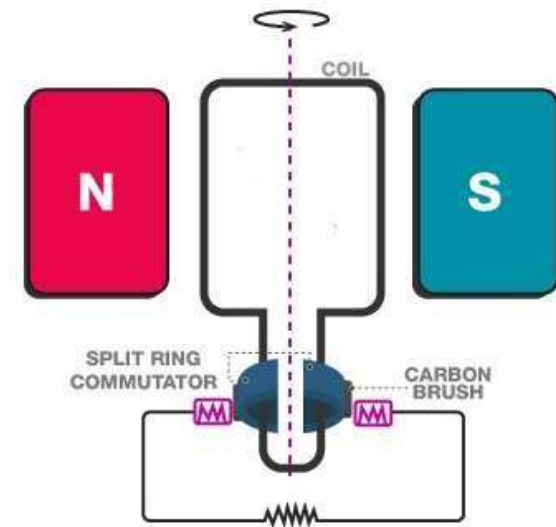
- A) Clockwise
- B) Anticlockwise**
- C) Whole coil move down
- D) Whole coil move up



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In the diagram, the coil is rotating in clockwise direction between the magnet, which way does the current follow around the coil

- A) **Clockwise**
- B) Anticlockwise
- C) In both direction
- D) None of above



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What will happen, with the increase in speed of a DC motor?

- A. Back emf increase but line current falls.**
- B. Back emf falls and line current increase.
- C. Both back emf as well as line current increase.
- D. Both back emf as well as line current fall.

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The current drawn by the armature of DC motor is directly proportional to ?

- A. Torque
- B. Speed
- C. The voltage across the terminals
- D. Cannot be determined

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What will happen if the back emf of a DC motor vanishes suddenly?

- A. The motor will stop
- B. The motor will continue to run
- C. The armature may burn**
- D. The motor will run noisy

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Direction of rotation of motor is determined by

- A. Faraday's law
- B. Lenz's law
- C. Coulomb's law
- D. Fleming's left-hand rule**

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The field of an induction motor rotor rotates relative to the stator at

- A. Rotor speed
- B. Synchronous speed**
- C. Slip speed
- D. Very low speed

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Starters are used in induction motor because

- A. Its starting torque is high
- B. It is run against heavy load
- C. It can not run in reverse direction
- D. Its starting current is five times or more than its rated current**

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The synchronous speed of an induction motor is defined as

- A. Natural speed at which a magnetic field rotates**
- B. The speed of a synchronous motor
- C. The speed of an induction motor at no load
- D. None of these

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Squirrel cage induction motor has

- A. Zero starting torque
- B. Very small starting torque**
- C. Medium starting torque
- D. Very high starting torque

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The speed of a three-phase cage-rotor induction motor depends on

- A. Number of pole alone
- B. Frequency of the supply alone
- C. Input voltage
- D. Number of poles and frequency of supply**

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In which of the following application DC series motor is used?

- A. Centrifugal Pump
- B. Motor Operation in DC and AC
- C. Water pump drive
- D. Starter for car**

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Nowadays DC motor is widely used in

- A. Electric Traction**
- B. Air compressor
- C. Centrifugal Pump
- D. Machine shop

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By looking at which particular part of the motor we can Identify a “DC motor”?

- A. Shaft
- B. Field winding
- C. Commutator**
- D. Armature winding

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Which of the following application requires high starting torque

- A. Air blower
- B. Elevator
- C. Locomotive**
- D. Centrifugal Pump

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Which D.C motor is preferred for machine tools?

- A. Series motor
- B. Cumulative compound motor
- C. Differentially compound motor
- D. Shunt motor**

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Which DC motor is preferred for crane and hoist?

- A. Series motor**
- B. Cumulative compound motor
- C. Shunt motor
- D. Differentially compound motor