





**(ENGLISH)**

[ TIME ALLOWED—3 HOURS ]

(MARKS—100)

**BASIC ELECTRICAL (THEORY-I)****Marks**

1. (a) Fill in the blanks :—

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(i) The unit of energy is .....

(ii) Insulation resistance is measured in .....

(iii) The voltmeter is connected in .....

(iv) ..... is same in series circuit.

(v) ..... is a type of secondary cell.

(b) Match the following :—

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**'A' Group****'B' Group**

(i) Voltmeter

(a) Current

(ii) Ohmmeter

(b) Voltage

(iii) Ammeter

(c) Resistance

(iv) Megger

(d) Watts

(v) Watt meter

(e) Insulation resistance.

(c) State *true* or *false* (any five) :—

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(i) Copper is good insulating material.

(ii) 3 point starter is used for DC series motor.

(iii) Single pole switch has three terminals.

(iv) Voltage is same in parallel circuit.

(v) CO<sub>2</sub> fire extinguisher is used for electrical fire.

(d) State the full forms :—

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(i) S.W.G.

(ii) C.T. and P.T.

(iii) E.M.F.

(iv) H.P.

(v) D.O.L.

[ Turn over

2. Attempt any *two* of the following :— 16
- (a) State any 8 safety precautions in Electrical workshop.
  - (b) Draw any four common electrical hand tools.
  - (c) State any two resuscitation and treatment for electric shock.
  - (d) State the qualities of good electrical conductor.
3. Attempt any *two* of the following :— 16
- (a) Explain the type of conductor.
  - (b) Draw diagram and explain standard wire gauge.
  - (c) Explain the qualities of good insulating materials.
  - (d) Explain the characteristics of series circuit.
4. Attempt any *two* of the following :— 16
- (a) Define :—
    - (i) Work      (ii) Power      (iii) Energy      (iv) Voltage.
  - (b) State and explain the Ohm's law.
  - (c) What is resistance and explain the types of resistance.
  - (d) What is the fuse ? Explain any two types of fuse.
5. Write notes on any *four* :— 16
- (a) Types of wiring
  - (b) Types of wires
  - (c) Drilling machine
  - (d) Soldering iron
  - (e) Lenz's law
  - (f) Function of capacitor.
6. Attempt any *two* of the following :— 16
- (a) Explain the types of cables.
  - (b) Draw any four electrical accessories.
  - (c) Explain the lead acid battery.
  - (d) Draw electrical symbol.
    - (i) Choke      (ii) Earthing      (iii) Cell      (iv) Fluorescent lamp.
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