

- [illegible]

(ENGLISH)

[TIME ALLOWED—3 HOURS]

(MARKS—100)

POWER GENERATION (THEORY-I)**Marks**

1. (a) Fill in the blanks :— 5
- (i) is a example of primary cell.
 - (ii) is a unit of energy.
 - (iii) The rating of lead acid battery in
 - (iv) Insulation resistance is measured by
 - (v) The DC series generator has terminals.
- (b) Match the pair :— 5
- | ‘A’ Group | ‘B’ Group |
|-----------------------|-------------------------------|
| (i) Tarapur | (a) Diesel Power Station |
| (ii) Parli Vaijnath | (b) Hydro Power Station |
| (iii) Koyna | (c) Nuclear Power Station |
| (iv) Uran | (d) Gas Turbine Power Station |
| (v) Brahmapuram Kochi | (e) Thermal Power Station. |
- (c) State *true* or *false* :— 5
- (i) In a series Circuit voltage is same.
 - (ii) The unit of energy is KWH.
 - (iii) The rating of battery in ampere watt hour.
 - (iv) Generator is convert mechanical energy into electrical energy.
 - (v) 1 HP =746 Watts in a metric system.
- (d) State Full forms :— 5
- (i) HP
 - (ii) CTS
 - (iii) P V C
 - (iv) EMF
 - (v) DOR.
2. Attempt (any *two*) :— 16
- (a) Explain the characteristics of series circuit.
 - (b) Define : (1) Work (2) Power (3) Energy (4) Voltage.
 - (c) Differentiate between primary cell and secondary cell.
 - (d) Explain the lead acid battery with constructional diagram.
3. Answer the following any *two* questions :— 16
- (a) Explain the working principle of alternator.
 - (b) Compare magnetic circuit with electric circuit.
 - (c) Define self induction and mutual induction.
 - (d) Explain DC shunt generator with circuit diagram.

[Turn over

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Marks

4. Answer in shorts :— 16
- (a) What are the advantages of diesel power generating station.
 - (b) Explain the Faraday's law of electromagnetic induction.
 - (c) Explain the working of thermal power station.
 - (d) Explain the disadvantages of nuclear power station.
5. Write short notes (any *four*) :— 16
- (a) Armature reaction
 - (b) Damping winding
 - (c) Gas turbine
 - (d) Mercury arc rectifier
 - (e) Megger
 - (f) Ohm's law.
6. Answer the following questions. :— 16
- (a) Draw the flowchart diagram of hydropower station.
 - (b) Explain the types of turbines.
 - (c) Explain the solar power station.
 - (d) Explain the parts of generator.
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