

Seat No.: _____

Enrolment No. _____

GUJARAT TECHNOLOGICAL UNIVERSITY**PDDC-Semester –III (May-2012) Examination****Subject code: X30904****Subject Name: ELECTRICAL POWER****Date: 17/05/2012****Time: 02.30 pm – 05.00 pm****Total Marks: 70****Instructions:**

1. Attempt all questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.

- Q.1** (a) Explain different types of equipments used in substation. **07**
 (b) Explain schematic arrangement for Nuclear power station. **07**
- Q.2** (a) Name the place with reasons where the following conductors are used. **07**
 (i) All aluminum conductor (ii) ACSR conductor
 (ii) Stay wire (iv) GI wire
 (b) Explain the schematic arrangement of Hydro power station **07**
OR
 (b) Explain the schematic arrangement of Thermal power station. **07**
- Q.3** (a) Explain skin effect and proximity effect. **07**
 (b) State merits and demerits of solar energy conservation and utilization. **07**
OR
- Q.3** (a) Define and explain string efficiency. **07**
 (b) Compare (i) radial distribution system (ii) ring or loop distribution system **07**
 (iii) grid distribution system.
 Also state their applications.
- Q.4** (a) State the different types of conductors. Explain properties of good conductor material. **07**
 (b) State and explain different type of insulators. **07**
OR
- Q.4** (a) What are the advantages of Neutral Grounding? Explain the reactance grounding. **07**
 (b) Write short note on (i) Skin effect (ii) Effect of earth on capacitance of transmission line. **07**
- Q.5** (a) Explain combine cycle power plant. **07**
 (b) Compare over head and underground system for transmission of power. **07**
OR
- Q.5** (a) Explain Resonant Grounding and Voltage transformer earthing. **07**
 (b) State the Merits and demerits of wind energy . Also state the application of wind energy. **07**
