

R09

Code: 9A02403

B.Tech II Year II Semester (R09) Supplementary Examinations December/January 2015/2016

GENERATION OF ELECTRIC POWER

(Electrical & Electronics Engineering)

Time: 3 hours

Max. Marks: 70

Answer any FIVE questions

All questions carry equal marks

- 1 (a) Why the future of nuclear power generation is considered to be bright?
(b) Why nuclear power plants are considered to be base plants?
- 2 How solar air collectors are classified? What are the main applications of a drier?
- 3 Write short notes on:
 - (a) Automatic combustion control system.
 - (b) Ash disposal system.
 - (c) Turbo-alternators.
 - (d) Thermal power station control.
- 4 What is the basic principle of wind energy conversion? Derive the expression for power developed due to wind.
- 5 What are the techniques suggested for maintaining the biogas production? Explain.
- 6 (a) What are the advantages and limitations of wave energy conversion?
(b) Discuss the origin of Tides.
- 7 (a) Define the following terms for generating station:
 - (i) Load factor. (ii) Utilization factor. (iii) Load curves.
(b) Load factor of a consumer is 35% and the monthly consumption is 504 kWh. If the rate of electricity is Rs 180 per kW maximum demand plus Rs 20 per kWh, find:
 - (i) The monthly bill and the average cost per kWh.
 - (ii) The overall cost per kWh if the consumption is increased by 25% with the same load factor.
 - (iii) The overall cost per kWh if the consumption remains same and load factor is increased to 45%.
- 8 Classify the types of consumers who consume electricity into different groups. Mention the type of tariff used for each category.
