

Code: 9A02403

B.Tech II Year II Semester (R09) Supplementary Examinations May/June 2017

**GENERATION OF ELECTRIC POWER**

(Electrical &amp; Electronics Engineering)

Time: 3 hours

Max. Marks: 70

Answer any FIVE questions  
All questions carry equal marks

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- 1 What are the classifications of the nuclear reactors? Describe briefly.
- 2 Explain the following:
  - (a) Solar distillation.
  - (b) Solar drying.
  - (c) Solar cooling.
- 3 What are the types of fuels used in thermal power plant? Briefly discuss.
- 4 What are the advantages and disadvantages of wind energy? What are the environmental factors associated with wind energy?
- 5
  - (a) How biomass conversion takes place?
  - (b) What is the difference between biomass and biogas?
- 6
  - (a) Draw a neat diagram of float-type wave energy conversion system and explain its working. List out the advantages and limitations of the system.
  - (b) List out the advantages of wave energy conversion systems.
- 7 Define the load factor and maximum demand. Explain how the load factor affects the cost of energy generated.
- 8 An industrial load can be supplied from the following alternative tariffs :
  - (i) High voltage supply at Rs. 65 per kW annum plus 3 paise per kWh
  - (ii) Low voltage supply at Rs. 65 per kW per annum plus 3.3 paise per kWhThe high voltage equipment costs Rs. 50 per kW and the losses can be taken as 3%. Interest and depreciation charges are 15% per annum. If there are 40 working weeks in a year, find working hours per week above which high voltage supply is cheaper

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