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## EE/EX-503(A)-CBGS

### B.Tech. V Semester

## Choice Based Grading System (CBGS)

### Electrical Power Generation and Economy

Time : Three Hours

Maximum Marks : 70

**Note:** i) Attempt any five questions.

ii) All questions carry equal marks.

iii) In case of any doubt or dispute the English version question should be treated as final.

1. a) Mention the different sources of Electrical power generation and discuss their relative merits and demerits. 7
- b) Discuss the various factors which affect the location of site of a hydro power station. 7
2. a) Draw a typical layout of a steam plant. Explain the main features of the layout. 7

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- b) Discuss briefly the function of the following equipment in a steam station 7
- i) Condenser
  - ii) Cooling towers
  - iii) Feed water heater
  - iv) Economiser
3. a) How can wind energy can be converted into Electrical energy? 7
- b) What is Solar cell? Explain its principle with diagram 7
4. a) How is Geothermal energy used for generation of electrical power? Write its advantages and disadvantages. 7
- b) Explain Bio-mass energy conversion? 7
5. a) Describe the main components of Nuclear power plant. 7

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- b) Discuss briefly the radioactive pollution of environment by nuclear power plant. 7
6. a) Discuss the different types of tariffs used for charging the consumers of electrical energy. 7
- b) What are Non-conventional energy sources? Describe briefly. 7
7. a) Differentiate between fixed and operating costs of power plants. List the items which constitute the fixed and operating costs. 7
- b) Discuss the role of load factor on the cost of electrical energy. 7
8. Write short notes (any two) 2×7=14
- a) Peak load pricing
  - b) Magneto-Hydro dynamic system
  - c) Waste disposal in Nuclear power plant
  - d) Fuel cells

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