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BIEE-029

DIPLOMA IN ELECTRICAL ENGINEERING (DELVI)/ADVANCED LEVEL CERTIFICATE COURSE IN ELECTRICAL ENGINEERING (ACELVI)

01072

Term-End Examination

December, 2011

BIEE-029 : POWER GENERATION SYSTEM

Time : 2 hours *Maximum Marks : 70*

Note : *Question number 1 is* ***compulsory.*** *Attempt any* ***four*** *questions from the remaining questions. All the questions carry* ***equal*** *marks.*

1. (a) Which of the following plants will have the highest capital cost ? **2x7=14**

(i) Nuclear power plant

(ii) Diesel power plant

(iii) Thermal power plant

(iv) None of these

(b) In which place induced draft fans are located in the cooling tower ?

(i) The top

(ii) The bottom

(iii) In the middle

(iv) Can be any where in the cooling tower

(c) For a thermal power plant, which is not the fixed cost ?

(i) Interest on capital

(ii) Peak load plant

(iii) Cost of fuel

(iv) All of these

(d) The pH value of water used for boiler is _____.

(e) The cheapest plant in operation and maintenance is :

(i) Thermal power

(ii) Hydropower

(iii) Nuclear power

(iv) Diesel power

(f) The overall thermal efficiency of a thermal power plant lies in the range :

(i) 25% to 30% (ii) 35% to 40%

(iii) 45% to 60% (iv) 65% to 80%

(g) For meeting the changing load of the system ,the control rod adjusted is :

(i) safety rod

(ii) shim rod

(iii) regulating rod

(iv) none of the above

2. (a) Briefly describe the main parts and working of steam power station. 7

(b) Why pulverised fuel is preferred ? 7

3. (a) Write the differences between conventional and Non - Conventional source of energy. 7

(b) What are the factors of selection of the site for hydro - electric station ? 7

4. (a) Describe briefly the Photo Voltaic cell. 7

(b) Describe the main parts and working of windmills. 7

5. (a) Briefly describe the various methods for obtaining energy from Biomass. 7

(b) What are the difference between Geo - thermal and Tidal energy ? 7

6. (a) Describe the operating principle of fuel cell. 7

(b) Briefly describe the flow diagram and their operation for power generation. 7

7. Write short note on : **3.5x4=14**

(a) MHD

(b) Full cell

(c) Solar Cooker

(d) Geo - thermal energy