**Government Engineering College, Bhuj**

**Mechanical Engineering Department**

**Subject code: 151906 Subject Name: Conventional Power Engineering**

***Assignment for 5th Semester (Electrical, Environment)***

***Term: Odd semester (Year 2012-13)***

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| **Q-1:** | Describe the significance of load curves in planning and determining the sizes of Units in power plants. Define base load, intermediate load and peak loads, with load curves. |
| **Q-2:** | A power plant has following annual factors: (i) Utilization Factor = 0. 60, (ii ) Capacity factor = 0.50, (iii) Load factor =0.70It has peak load of 20000 kW.Find: (i) Annual energy generation, (ii) Reserve capacity, and (iii) Time period the plant was utilized in the year. |
| **Q-3:** | Explain the factors affecting economic of generation and distribution ofPower. |
| **Q-4:** | Define following terms:(I) Load factor, Plant capacity factor, Plant use factor, Demand factor.(II) A power station supplies the following loads to the consumers:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Time in Hr | 0-6 | 6-10 | 10-12 | 12-16 | 16-20 | 20-22 | 22-24 |
| Load in MW | 30 | 70 | 90 | 60 | 100 | 80 | 60 |

Draw the load curve and estimate the load factor of the plant. |
| **Q-5:** | With neat sketch explain the principal components of Nuclear reactor |
| **Q-6:** | What is the difference between fission and fusion process? Explain Nuclear fission chain reaction. |
| **Q-7:** | Describe CANDU type nuclear reactor with the help of suitable diagram. Give names of various nuclear fuels used in nuclear power plants. |
| **Q-8:** | Explain Boiling Water Reactor (BWR) with its advantages and disadvantages. |
| **Q-9:** | Explain Pressurized Water Reactor (PWR) with its advantages and disadvantages. |
| **Q-10:** | What do you understand by thermal shielding? |
| **Q-11:** | Suppose you are Minister for Power in the Government of Gujarat. Discuss your plans to increase electric power generation in the State, taking into account the resources available within the State. |