SE - RCE - Sem. III - CBSGS

CNPG . 03/12/15

QP Code : **5153**

(3 Hours) [Total Marks : 80

N.B. : (1) Question No.1 is **compulsory**.
(2) Attempt any **three** from the **remaining** questions.
(3) **Figures** to the **right** indicate **full** marks.

1. (a) Define following terms :— **5**
   (i) Load factor
   (ii) Maximum demand
   (iii) Diversity factor
   (iv) Demand factor
   (v) Plant capacity factor
   (b) Explain in brief Load curve and Load duration curve. **5**
   (c) Explain advantages of Solar Energy. **5**
   (d) Explain nuclear fission and fusion. **5**

2. (a) Explain advantages and disadvantages of Diesel power plant. **10**
   (b) Explain fluidized bed combustion. **10**

3. (a) Draw the layout of thermal power plant. **10**
   (b) The maximum demand on power station is 200 MW. If supply following load. **10**

Time (hrs)	0–6	6–8	8–10	10–14	14–18	18-22	22–24
Load (MW)	70	110	150	100	175	180	80

   (i) Draw Load curve and load duration curve.
   (ii) Calculate load factor.

4. (a) Explain effects of fluctuating load on operation and design of power plant. **10**
   (b) Explain PWR reactor used in nuclear power plant. **10**

5. (a) Draw and explain dayout of diesel power plant. **10**
   (b) What are advantages and disadvantages of hydro power plant ? **10**

6. (a) Explain vertical axis and Horizontal axis wind power plant. **10**
   (b) Describe operation of solar pond with layout. **10**

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