

(3 Hours)

[Total Marks : 80

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

1. (a) Describe load curve and load duration curve. 5
(b) Describe the function of coal handling system and ash handling system 5
(c) Classify hydropower plant 5
(d) List the site selection points for wind power plant. 5
2. (a) Explain the effects of fluctuating load on operation of power plant. Also describe methods of meeting fluctuating load. 10
(b) Explain the operation of pumped storage plant. 10
3. (a) Draw the layout of thermal power plant 10
(b) Describe the operation of PWR 10
4. (a) Explain advantages and disadvantages of diesel power plant. 10
(b) Describe the methods of manufacturing of mono and poly crystalline PV cells. 10
5. (a) A generating station has following daily load cycle. 10

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|------------|-----|------|------|-------|-------|-------|-------|
| Time (Hrs) | 0-6 | 6-10 | 6-10 | 10-12 | 12-16 | 16-20 | 20-24 |
| Load (MW) | 40 | 40 | 50 | 60 | 50 | 70 | 40 |

Draw load curve and find:
i) Max demand ii) Units generated per day
iii) Average load iv) Load factor

(b) Explain operation of fluidized bed combustion. 10
6. (a) Explain operation of horizontal axis wind turbine (HAWT) 10
(b) Describe power generation by using biomass. 10