(3 Hours)   [Total Marks: 80]

N.B. : (1) Question No.1 is compulsory.

(2) Attempt any three from remaining questions.

(3) Figures to right indicate full marks.

1. (a) State the advantage of pumped storage plant.   5
   (b) Explain nuclear fission and fusion.   5
   (c) Explain load curve and load duration curve.   5
   (d) Explain Rankie cycle.   5

2. (a) Explain the working of PV cell with neat diagram.   10
   (b) Explain working of liquid metal fast breeder reactor with   10
        diagram.

3. (a) State advantage and disadvantage of gas turbine power   10
        plant.
   (b) Explain pressurized water reactor (PWR) mention its   10
        advantages and disadvantages.

4. (a) Explain horizontal and vertical axis wind turbine.   10
   (b) With neat labeled diagram explain the working of fuel cell. 10

5. (a) Explain fluidized bed combustion process.   10
   (b) What are the advantages and disadvantages of wind energy   10
        and hence explain the factor which governs the selection of
        site for wind turbine power system.

6. (a) The maximum demand of power station is 96000KW. It   10
        has to supply the load as

Time(hrs)	0-6	6-8	8-12	12-14	14-18	18-22	22-24
Load(MW)	48	60	72	60	84	96	48

        a) Draw load curve and load duration curve
        b) Calculate load factor
   (b) Explain induced drought and forced drought fans in   10
        thermal power plant.

****