Con. 6443-13. **LJ-10316**

(3 Hours) **[Total Marks : 100**

N.B. : (1) Question No. **1** is **compulsory**.
(2) Solve any **four** out of remaining **six** questions.
(3) **Each** question is for **20** Marks.
(4) Assume suitable **data** if **necessary**.

Q1. (a) Compare conventional and non conventional sources of energy

(b) Explain various types of tariffs in brief

(c) Compare between nuclear fission and fusion

(d) Explain in brief (i) hydrograph (ii) flow duration curve

Q2. (a) Explain pressurized water reactor. Mention its advantages and disadvantages

(b) Explain in detail about fluidized bed combustion process

Q3. (a) Explain the pumped storage plant with neat sketch.

(b) The following data pertains to power plant of 120MW capacity

The capital cost =RS 1500/KW

Interest and depreciation =10% on capital

Annual running charge=Rs $20x10^6$

Profit to be gain=10% on capital

The energy consumed by the power plant auxiliaries =5% of generated

The annual load factor=0.6

The annual capacity factor=0.5

Calculate (i) reserve capacity (ii) cost of generation/KWH

Q4. (a) Explain the ash handling plant in steam power plant

(b) Explain the operation of diesel power plant with its neat diagram

Q5. (a) Discuss about compressor and combustion chamber of gas turbine power plant over diesel power plant and steam power plant

(b) Explain about the various methods of meeting fluctuating load

Q6. (a) write about the three main components of tidal power plant and explain in detail with a neat diagram about the single basin scheme.

(b) List the advantages of gas turbine power plant over the diesel power plant and steam power plant

Q7. (a) write a short note on :–

(i)Acid rain and acid snow

(ii) Solar active and passive collector

(b) Explain in detail the "structure of power industry"