7E1736

Roll No. _____ Total No. of Pages: 2

7E1736

B. Tech. VII - Sem. (Main) Exam., Feb.-March - 2021

OE -I Open Elective-I

7EE6-60.2 Power Generation Sources

Time: 2 Hours **[To be converted as per scheme]**

Max. Marks: 82

Min. Marks: 29

Instructions to Candidates:

Attempt all ten questions from Part A, four questions out of seven questions from Part B and two questions out of five from Part C.

Schematic diagrams must be shown wherever necessary. Any data you feel missing may suitably be assumed and stated clearly. Units of quantities used /calculated must be stated clearly.

Use of following supporting material is permitted during examination. (Mentioned in form No. 205)

1. NIL 2. NIL

PART – A

(Answer should be given up to 25 words only) **[10×2=20]**

All questions are compulsory

Q.1 Explain the application of hydro power plant.

Q.2 Explain some challenges with wind turbine plant.

Q.3 Describe the applications of PV system.

Q.4 Explain some example of hybrid system.

Q.5 Explain the application of gasification process.

Q.6 Explain the challenges associated with wave energy.

Q.7 Explain some advantages of renewable energy.

Q.8 What do you mean by sustainable development?

Q.9 Where is fast breeder deployed?

Q.10 Explain uses of boiler in thermal plant.

PART – B

(Analytical/Problem solving questions) **[4×8=32]**

Attempt any four questions

Q.1 Explain the world energy status and explain current energy scenario in India.

Q.2 By the help of block diagram explain working of closed cycle gas turbine plants.

Q.3 Explain the basic difference between nuclear fission and nuclear fusion.

Q.4 Explain the concept of solar pumping and describe its application.

Q.5 Explain wind energy conversion system and its site characteristics.

Q.6 Explain recent developments in biomass and energy farming.

Q.7 Explain open and closed OTEC cycles.

PART – C

(Descriptive/Analytical/Problem Solving/Design Questions) **[2×15=30]**

Attempt any two questions

Q.1 What is renewable energy sources, give its application and challenges, and also explain working of hybrid system?

Q.2 Design a renewable energy sources with its social and environmental aspects and utilization.

Q.3 Explain by help of diagram, how wind energy is converted into electrical energy also explain horizontal and vertical axis wind turbine?

Q.4 Explain the following –

(a) Solar Furnaces

(b) Solar Desalination

(c) Solar Dryers

Q.5 Explain the process of producing uses full power by biomass further, by help of a diagram explain family biogas plan.
