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**6th Sem / MECHANICAL ENGINEERING**  
**Subject : POWER PLANT ENGINEERING**

Time : 3 Hrs.

M.M. : 60

**SECTION-A**

**Note:** Multiple choice questions. All questions are compulsory  $(6 \times 1 = 6)$

- Q.1** Which of the following is equal to the maximum demand? **(Co1)**
- a) The ratio of area under curve to the total area of rectangle
  - b) The ratio of area under curve and number of hours
  - c) The peak of the load curve
  - d) The area under the curve
- Q.2** Moderator in nuclear plants is used to **(CO4)**
- a) reduce temperature
  - b) extract heat from nuclear reaction
  - c) Control the reaction
  - d) cause collision with the fast-moving neutrons to reduce their speed

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- Q.3** Which type of turbine is used in a hydro power plant? **(CO4)**
- a) Gas turbine
  - b) Reaction turbine
  - c) Steam turbine
  - d) Wind turbine
- Q.4** What is MPPT in solar power plants ? **(CO5)**
- a) Maximum Power Point Tracker
  - b) Minimum Power Point Tracker
  - c) Main Power Plant Terminal
  - d) Mechanical Power Plant Transformer
- Q.5** Which of the following is related to nuclear power plants ? **(CO4)**
- a) Solar cell
  - b) Nuclear fission
  - c) Wind turbine
  - d) Diesel engine
- Q.6** Which of the following power plants uses a combustion chamber? **(CO2)**
- a) Hydro power plant
  - b) Gas turbine power plant
  - c) Solar power plant
  - d) Wind power plant

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## **SECTION-B**

**Note:** Objective/ Completion type questions. All questions are compulsory. (6x1=6)

- Q.7 Define demand factor. (CO1)
- Q.8 Name any two types of nuclear fuels used in nuclear power plant. (CO4)
- Q.9 Name one type of coal-burning method used in thermal power plants. (CO3)
- Q.10 Name one component of a gas turbine . (CO4)
- Q.11 Write full form of WECS . (CO5)
- Q.12 Name types of nuclear reaction used in nuclear power plant. (CO4)

## **SECTION-C**

**Note:** Short answer type questions. Attempt any eight questions out of ten questions. (8x4=32)

- Q.13 Explain the various factor affecting the operation of power plant. (CO1)
- Q.14 Write the disadvantages of nuclear power plant. (CO4)
- Q.15 Explain electrostatic precipitation system. (CO3)
- Q.16 Write the advantages of gas turbine power plant. (CO4)

Q.17 What are the factor affecting distribution of wind energy. (CO5)

Q.18 Describe the classification of Hydro-electric power plant. (CO2)

Q.19 Explain the greenhouse effect . Discuss its control. (CO6)

Q.20 Explain Maximum power point tracker in solar power plant. (CO5)

Q.21 Compare solar power plant with conventional power plant. (CO5)

Q.22 Explain pumped storage plant. (CO2)

## **SECTION-D**

**Note:** Long answer type questions. Attempt any two questions out of three questions. (2x8=16)

Q.23 Explain the construction and working of pressurized water reactor with neat diagram. (CO4)

Q.24 Explain the general layout and working of thermal power plant (CO3)

Q.25 Explain nuclear waste disposal methods and the effects of nuclear radiation, along with methods to reduce pollution from nuclear power plants. (CO6)