

[illegible]

Total number of questions:06

**Paper ID:**

**Max Marks: 60**

- All questions are compulsory
- Assume any missing data

## All COs

- What is the effect of load factor on unit generation cost?
- Explain the term present worth.
- Define utilization factor.
- How is diversity helpful in reducing cost?
- State the components on which annual fixed cost depends.
- Name the various stack emission.
- What is operating reserve?
- What is the significance of no spill rule curve?
- Explain the term entrainment and entrainment.
- Differentiate between topping and bottoming cycle.

## CO1

CO1

CO3

CO3

$$C_1 = 561 + 7.92P_1 + 0.001562P_1^2 \text{ Rs./hr.}$$

$$C_2 = 310 + 7.85P_2 + 0.00194P_2^2 \text{ Rs./hr.}$$

Obtain the cost characteristics of the composite unit for a total demand  $P_T$ .

- Q. 4. What are the different types of load? Explain and draw the Chronological load curve and load duration curve. C02
- OR
- Briefly explain the long term and short term load forecasting. C02
- Q. 5. Explain the various sources of energy and organization of power sector in India. C01
- OR
- What are the environmental impacts of hydro power plant? C01
- Q. 6. What is coordination equation and iterative procedure to solve coordination equations in steam plants? C01
- OR
- What advantages accrue from operating a hydro and thermal plant in coordination? C01