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H.V.P.Mandal's College of Engineering & Technology, Amravati
Department of Mechanical Engineering

Academic Session: 2019-20   Semesters: IV
Unit- I ,II ,III, IV ,V,VI   Date: 22/12/2020
Subject Name: Energy Conversion-I   Subject Code:
Max Marks:

Note: Solve any 2 Questions out of 4 Question.
All question Carry equal marks

Ques 01

a) Draw and define the phase change terminology on p-v diagram **(3Marks)**
b) Draw the layout of a modern steam power plant? **(3Marks)**
c) What is overfeed stokers? **(1Marks)**
d) Draw the p-v and T-s diagram for Rankine cycle **(1Marks)**
e) Classify the steam turbine **(1Marks)**
f) Enumerate the different losses in a steam turbine **(1Marks)**

Ques 02

a) Define Dryness fraction of steam and volume of superheated steam? **(3Marks)**
b) Write difference between fire tube and water tube boiler **(3Marks)**
c) What is underfeed stokers? **(1Marks)**
d) What is Cogeneration of plant **(1Marks)**
e) What is Bleeding **(1Marks)**
f) What are the methods of governing a steam turbine **(1Marks)**

Ques 03

a) Define external work and internal energy of steam? **(3Marks)**
b) Explain with neat sketch Fluidised bed combustion boiler **(3Marks)**
c) Describe briefly with sketch Cyclone burner **(1Marks)**
d) What is the functions of condenser **(1Marks)**
e) Why Compounding is necessary **(1Marks)**
f) Draw velocity diagram for impulse turbine   **(1Marks)**

Ques 04

a) Draw the diagram for separating calorimeter? **(3Marks)**
b) Draw and explain Lamont boiler   **(3Marks)**
c) Enumerate different heat losses which occur in a boiler plant **(1Marks)**
d) Explain Vacuum Efficiency **(1Marks)**
e) What is compounding of steam turbine   **(1Marks)**
f) Draw combined inlet and outlet velocity diagram   **(1Marks)**