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SIDDHARTH INSTITUTE OF ENGINEERING & TECHNOLOGY:: PUTTUR
(AUTONOMOUS)**M.Tech I Year II Semester Regular Examinations October-2020****STEAM ENGINEERING**

(Thermal Engineering)

Time: 3 hours

Max. Marks: 60

(Answer all Five Units 5 x 12 = 60 Marks)

UNIT-I

- 1 a How do you check the quality of feed water supplied to the Boiler? **6M**
 b Find the Enthalpy and Entropy of steam when the pressure is 2 MPa and Specific Volume 0.09 m³/Kg. **6M**

OR

- 2 a Differentiate between Fire tube boiler and Water Tube Boiler. **6M**
 b Write a brief note on IBR and Boiler standards. **6M**

UNIT-II

- 3 a List the properties of refractory materials. **6M**
 b Summarize the applications of refractory material. **6M**

OR

- 4 a Name the materials used in the Piping system of Boilers along with its functions. **6M**
 b What are basic requirements of piping system in Boilers? **6M**

UNIT-III

- 5 a Steam traps increase the efficiency of the distribution system. Justify. **6M**
 b Evaluate the benefits of condensate recovery system. **6M**

OR

- 6 a Describe the working of flash vessel with a neat sketch. **6M**
 b What is the importance of steam leakage in steam distribution system? **6M**

UNIT-IV

- 7 a Explain briefly on the parameters needed for measuring boiler efficiency. **6M**
 b Write short notes on Proximate and Ultimate analysis of coal. **6M**

OR

- 8 a Mention accessories of boiler. Explain super heater with neat sketch. **6M**
 b What are the factors affecting the boiler performance? **6M**

UNIT-V

- 9 a Write short notes on the importance of Control and Monitoring System of Boilers. **6M**
 b Process Instrumentation system is needed for controlling the Boiler. Justify. **6M**

OR

- 10 a How can you conserve the energy in Boilers? **6M**
 b Write a short note on Waste Minimization. **6M**

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