

Unit Test 2

BHARATI VIDYAPEETH INSTITUTE OF TECHNOLOGY

Course: - Mechanical Engg. Group

Course Code: - ME4G

Semester: - IV

Subject: - TEN

Duration: - 1 Hour

Max Marks: - 25

Chapter 4

1. What is Mach number 3M
2. What are the objectives of compounding of steam turbine? Why it is necessary? 4M
3. What is boiler draught? Why it is necessary? 4M
4. What is bleeding of steam turbine? 4M
5. Differentiate between reaction and impulse turbine 4M
6. Describe working of air preheater with sketch. 4M
7. Explain various types of nozzle. 4M
8. Explain with neat sketch throttle governing of steam turbine. 8M

Chapter 5

1. Write sources of air leakage in condenser. 3M
2. Differentiate between surface and jet condenser. 4M
3. The vacuum efficiency of condenser is 96%, the temperature of condensate is 40°C, if the barometer reads 752 mm of Hg. Find vacuum gauge reading of condenser. 4M
4. Give the classification of condenser 4M
5. State the Dalton's law of partial pressure. 4M
6. Explain with neat sketch of evaporative condenser 8M

Chapter 6

1. What are applications of heat exchanger? 3M
2. Classify heat exchanger 3M
3. Define thermal conductivity. 3M
4. Explain with neat sketch shell and tube heat exchanger. 4M
5. Explain absorptivity, reflectivity and transmissivity? 4M
6. Explain perfect black body with neat sketch. 4M
7. State and explain Fourier's law of heat conduction. 4M
8. Estimate the rate of heat transfer through 20 m long stainless steel pipe having internal diameter 5cm & external diameter 6cm. The inner & outer surface temperatures are 1000°C & 700°C. The thermal conductivity of stainless steel is 1.6 W/mK 4M