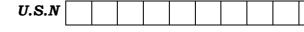
P.E.S. College of Engineering, Mandya - 571 401



(An Autonomous Institution affiliated to VTU, Belgaum)

Eighth Semester, B.E. - Mechanical Engineering **Semester End Examination; June - 2016 Power Plant Engineering**

Time: 3 hrs Max. Marks: 100

Note: Answer any FIVE full questions, selecting at least TWO full questions from each part.

PART - A

1. a	Explain with neat sketch power generation by wind mills.	10
b.	With a neat sketch explain Ocean Thermal Energy Conversion (OTEC).	10
2 a.	Write a note on : (i) Catchment area (ii) storage and pondage (iv) Hydrographs.	12
b.	Explain briefly medium head power plants with neat sketch.	8
3 a.	With a neat sketch explain central or Bin system of feed the pulverised fuel.	10
b.	Explain with a neat sketch spreader stoker.	10
4 a.	Explain with a neat sketch Benson boiler.	10
b.	Differentiate between ; (i) Natural and forced draught system	6
	(ii) Induced and balanced draught system.	0
c.	Calculate the height of chimney required to produce a draught equivalent to 1.7 cm of water if	
	the gas temp is 270°C and ambient temp is 22°C and min. amount of air per kg of fuel in	4
	17 kg.	
PART - B		
5 a.	With a neat sketch explain any one type of ash handling system.	10
b.	Write a note on cooling towers.	5
c.	Write the advantages and disadvantages of super-heaters and reheaters.	5
6 a.	Sketch a schematic arrangement of a diesel power plant and label the parts.	8
b.	List the advantages of gas turbine power plant.	6
c.	With a neat sketch explain open cycle gas turbine plant.	6
7 a.	List the essential parts of nuclear reactor and explain any two parts.	10
b.	Differentiate between fission and fusion reactions	6
c.	Write a note on nuclear fuels.	4
8 a.	Explain with neat sketch pressurized water Reactor (PWR). List the advantages and	1.4
	disadvantages.	14
b.	Write a note on radioactive waste disposal.	6