

DR. BABASAHEB AMBEDKAR TECHNOLOGICAL UNIVERSITY, LONERE –

RAIGAD -402 103

Winter Semester Examination – December - 2019

Branch: B. Tech. Automobile

Sem.:- I

Subject:-Energy & Environment Engineering (CHE 106/CHE206) Marks: 60

Date:- 18/12/2019

Time:- 3 Hr.

Instructions to the Students

1. Solve Any Five of the following.
2. Each question carries 12 marks.
3. Illustrate your answers with neat sketches, diagram etc., wherever necessary.
4. If some part or parameter is noticed to be missing, you may appropriately Assume it and should mention it clearly

					(Marks)
Q.N.	Question	Marks	CO	BT	
1 a	Explain the process of nuclear fission with a neat sketch. What are the main components of nuclear power plants? Discuss the functioning of the plant with a suitable schematic.	6	EEE1205-2	BT2	
1 b	What are the fossil fuels used for generation of conventional power? Compare the Hydroelectric plants with the diesel power plant in respect of site requirement, initial cost, and fuel transportation, reliability, operating cost, simplicity and cleanliness.	6	EEE1205-1/3	BT1 BT2	
2a	How the Wind mills are classified? Sketch the diagram of a HAWT, and explain the function of its main components.	6	EEE1205-2	BT2	
2b	List the types of fuel cells. What are the main components of fuel cell? List some applications of fuel cells. Write the reaction taking place at the anode and cathode of a fuel cell.	6	EEE1205-2	BT1 BT2	
3a	What is energy conservation? How do you conserve the energy in transportation on road? Write the suitable measures.	6	EEE1205-1	BT1	
3 b	What is the role of Energy manager in industry? Explain the concept of star rating of appliances in connection with	6	EEE1205-1	BT1 BT2	

4a	energy conservation. What is particulate matter? What are the control measures to be taken to minimize the air pollution in respect of particulate matter? Write any three examples of natural air pollution.	6	EEE1205-1	BT2
4b	What are the health consequences of air pollution? What are the most polluted cities in the world? Discuss about "sick building syndrome"?	6	EEE1205-4	BT1 BT2
5a	Give a broad classification of water pollutants. Explain the terms BOD and COD in connection with water pollution. Describe how these terms are different with one another.	6	EEE1205-4	BT2
5b	What is noise pollution? Explain the causes and effects of noise pollution on human health	6	EEE1205-4	BT1 BT2
6	Solve any <b>Four</b> of the following			
a	Explain with a neat sketch the working of coal based power plant.	3	EEE1205-2	BT2
b	Explain in brief any two applications of wind energy requiring mechanical power.	3	EEE1205-2	BT2
c	What is the difference between primary and secondary air pollutants? What are some examples of each? Explain.	3	EEE1205-4	BT1
d	What are the main causes of water pollution? How can water pollution be controlled?	3	EEE1205-4	BT1
e	Define the term soil pollution. Explain in brief the sources of soil pollution.	3	EEE1205-4	BT1 BT2
f	Discuss the basic principle of operation of Magneto-Hydro dynamic Generator. Draw a simple sketch.	3	EEE1205-2	BT2

Paper End