DR. BABASAHEB AMBEDKAR TECHNOLOGICAL UNIVERSITY, LONERE – RAIGAD -402 103

Winter Semester Examination – December - 2019

Branch: B. Tech. (Engineering & Technology)

Sem.:- I

Subject:-Energy & Environment Engineering (EEE1205)

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 | Enumerate the various systems and components used in steam power plant. Explain feed water and ash handling circuit in these power plants. | 6 | EEE1205-2 | BT2 |
| 1 b | What is a nuclear chain reaction? Explain how electricity is generated from a nuclear reactor? | • | EEE1205-1/3 | BT1 BT2 |
| 2a | What is Bio-mass? Write the percentage composition of Bio-gas. What are the environmental and health benefits of Biogas utilization? | 6 | EEE1205-2 | BT2 |
| 26 | How the Wind mills are classified? Sketch the diagram of a HAWT, and explain the function of its main components. | 6 | EEE1205-2 | BT1 BT2 |
| 3a | What is energy efficiency? How do you conserve the energy in industry? Write the suitable measures. | 6 | EEE1205-1 | BT1 |
| 3 6 | What is the role of Energy manager in industry? Explain the concept of star rating of appliances in connection with energy conservation. | 6 | EEE1205-1 | BT1 BT2 |
| 4a | What are the major sources of outdoor pollution? What effects does air pollution have on Health of animals and plants and materials. | | EEE1205-1 | BT2 |
| 46 | What are the major indoor pollutants? | 6 | EEE1205-4 | BT1 |

| | Where do the following indoor pollutants come from? How can you prevent or control indoor pollutants? | | | BT2 |
|----|---|---|-----------|------------|
| 5a | Give a broad classification of water pollutants. What is the significance of BOD and COD? | 6 | EEE1205-4 | BT2 |
| 5b | What is noise pollution? How to control it? What are its effects? | 6 | EEE1205-4 | BT1 BT2 |
| 6 | Solve any Four of the following | | | |
| a | Give classification of hydroelectric power plants and brief about the concept of mini and hydel power plants. | 3 | EEE1205-2 | BT2 |
| b | List at least four positive and negative effects each for the OTEC System. | 3 | EEE1205-2 | BT2 |
| C | What is marble cancer? How is Taj Mahal turning yellow? | 3 | EEE1205-4 | BT1 |
| d | How oil spills and sediments degrade the water quality? Explain. | 3 | EEE1205-4 | BT1 |
| C | Define solar energy. What are the applications of solar energy? | 3 | EEE1205-4 | BT1 BT2 |
| f | What is radioactive pollution? What are its effects? | 3 | EEE1205-2 | BT2 |

| Paper End | |
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