

DR. BABASAHEB AMBEDKAR TECHNOLOGICAL UNIVERSITY, LONERE

Regular & Supplementary Semester Examination – Summer 2023

Course: B. Tech.

Branch: Group B

Semester: II

Subject Code & Name: BTES205/BTES205E Energy and Environment Engg.

Max Marks: 60

Date: 21/7/2023

Duration: 3 Hrs.

Instructions to the Students:

1. All the questions are compulsory.
2. The level of question/expected answer as per OBE or the Course Outcome (CO) on which the question is based is mentioned in () in front of the question.
3. Use of non-programmable scientific calculators is allowed.
4. Assume suitable data wherever necessary and mention it clearly.

	(Level/CO)	Marks
Q. 1 Solve any two of the following.		12
A) Explain the working of a Hydro electric power plant with neat diagram.	CO1	6
B) What is the nuclear chain reaction? Explain the importance of moderator and control rods in a nuclear reactor with respect to chain reaction	CO1	6
C) What are the fossil fuels used for generation of conventional power? Explain in detail Steam power plant.	CO1	6
Q.2 Solve Any Two of the following.		12
A) How the wind mills are classified? Sketch the diagram of HAWT, and explain the function of its main components.	CO2	6
B) What is Bio-mass? Write construction and working of bio-gas plant, with a neat diagram. Also write down the advantages of it.	CO2	6
C) Define solar energy. What is flat plate collector? Describe its components with suitable sketch.	CO2	6
Q. 3 Solve Any Two of the following.		12
A) What do you mean by energy conservation? Explain the measures to be taken to reduce the energy conservation in domestic activities. List any four measures.	CO2	6
B) What do you understand by maximum energy efficiency in context with energy conservation principle? Discuss with a suitable example.	CO1	6
C) Write down methods of energy conservation in electric furnaces.	CO2	6
Q.4 Solve Any Two of the following.		12
A) Define Air Pollution. Write down the different classification of air pollution sources.	CO3	6
B) Explain briefly effect of air pollution on human being and vegetation.	CO1	6
C) What is radioactive pollution? What are its effects? How we can control Radioactive Pollution?	CO3	6
Q. 5 Solve any two of the following.		12

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| A) What are the main causes of water pollution? How can water pollution be controlled? | CO3 | 6 |
| B) Explain the following terms:
a. Thermal pollution
b. Acid rain | CO3 | 6 |
| C) What are the various methods of safe disposal of solid wastes? | CO3 | 6 |

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