

JK Lakshmipat University Jaipur

INSTITUTE OF MANAGEMENT

End Term Examination, May 2023

B Tech, Semester II

Roll No.....

Course Code and Name: ES 1105
Energy and Environmental Studies

Time: 2:00 hours Max. Marks: 30

Instructions to students:

1. Do not write anything other than your roll number on question paper.
2. Assume suitable data wherever required and mention it clearly.
3. Writing appropriate units, nomenclature, and drawing neat sketches/schematics/ flow chart wherever, required are an integral part of the answer.

(Your answers should be in proportion to marks allocated for each question)

1. What is the difference between?
 - a. Clean Energy and Renewable Energy Sources
 - b. On grid and Off grid solar PV Plants
 - c. Turbine and Generator
 - d. Aerobic and Anaerobic digesters (4, CO 1)
2. Central and State government provide various subsidies on the Solar Power Panels, and it emerges as a best way to produce renewable energy. However, it has some limitations also. Write the major advantages/disadvantages of solar PV plants. (Any 3 for each and write 3-4 lines for each)? (4, CO 1)
3. In a hydroelectric power plant, the total head available is 20 m. With this head 10^6 cubic meter water produces 2500000-watt electricity in one month. What would be the total water requirement if all the requirement of electricity will be fulfilled by this hydro power plant?

Appliances	Wattage	Number	Operation Hours
Tube Light	40	4	10
Fan	100	4	15
Refrigerator	250	1	16
Motor	1500	1	1
Cooler	400	2	14

(4, CO 1)

4. What are the major challenges for forest, grassland and marine eco system? (6, CO 2)
5. Write a short note on "Clean Ganga or Namami Gange" project of central government? (It should contain origin of the project, requirement of the project, major initiatives, and future road map) (6, CO 2)
6. What is Acid rain? What are the major causes behind it? what are the major impact of Acid Rain on environment (at least 3). (6, CO 3)