

**BIRLA INSTITUTE OF TECHNOLOGY, MESRA, RANCHI
(MID SEMESTER EXAMINATION)**

**CLASS: BE
BRANCH: BIOTECHNOLOGY**

**SEMESTER: VII
SESSION : MO/2019**

SUBJECT : BT7021 BIOLOGICAL WASTE MANAGEMENT

TIME: 1.5 HOURS

FULL MARKS: 25

INSTRUCTIONS:

1. The total marks of the questions are 30.
 2. Candidates may attempt for all 30 marks.
 3. In those cases where the marks obtained exceed 25 marks, the excess will be ignored.
 4. Before attempting the question paper, be sure that you have got the correct question paper.
 5. The missing data, if any, may be assumed suitably.
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- Q1 (a) Define Sewage. Give the necessity for sewage treatment. [2]
(b) Discuss the physical characteristics of sewage. [3]
- Q2 (a) What do you mean by biological properties of waste water? [2]
(b) 100 ml of water sample contains 540 ppm of dissolved oxygen. After 5 days the dissolved oxygen value becomes 130ppm after the sample has been diluted to 120 ml calculate BOD of sample. [3]
- Q3 (a) What is the primary treatment of waste water? [2]
(b) Write a short note on sedimentation tanks. [3]
- Q4 (a) What is the effect of Fats, Oil and Grease in waste water? [2]
(b) What is a Grit chamber? With help of a neat diagram explain its working. [3]
- Q5 (a) Define lagoons. [2]
(b) Write a short note on trickling filters. [3]
- Q6 (a) What do you mean by secondary treatment of waste water? [2]
(b) Discuss about rotating biological contractors with the help of a diagram. [3]

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