



**NAVACHANA
UNIVERSITY**
a UGC recognized University

School: School of Science
Program/s: Msc Lifescience
Year: 2nd **Semester:** 3rd
Examination: End Semester Examination
Examination year: December-2021

Course Code: LS251 **Course Name:** Environment Biotechnology
Date: 01/12/2021
Time: 08:30 am to 10:30 am

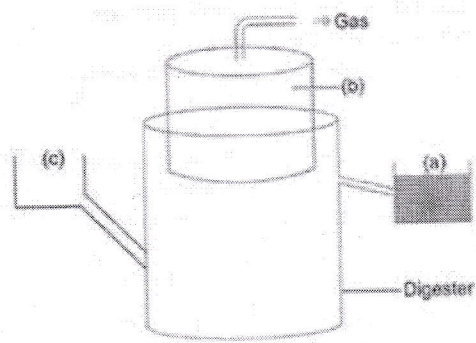
Total Marks: 40
Total Pages: 3

Instructions:

- Write each answer on a new page.
- Use of a calculator is permitted/not permitted.
- *COs=Course Outcome mapping. # BTL=Bloom's Taxonomy Level mapping

Q. No	Details	Marks	COs*	BTL #
Q1	<ul style="list-style-type: none"> • Multiple Choice Questions: (10 Questions*1 mark) 1. BOD is: <ul style="list-style-type: none"> a. Biological Oxygen Demand b. Biochemical Oxygen Demand c. Biological Oxygenation Demand d. Biochemical Oxygenation Demand 2. Of the following options, which one is not categorized based on origin of Waste water: <ul style="list-style-type: none"> a. Domestic Waste b. Industrial Waste c. Medical Waste d. Biodegradable Waste 3. Which of the following are the characteristics of physical impurities? <ul style="list-style-type: none"> a. Cloudiness b. Smell c. Colour d. Temperature e. All of the above 4. Which is the first stage of Purification? <ul style="list-style-type: none"> a. Mechanical b. Biological c. Removal of biogenic compounds d. Water renovation 5. How much time does Glass Bottles take to degrade? <ul style="list-style-type: none"> a. 5 years b. 1000 years c. Millions-Billions of years d. Undetermined 6. The waste is untreated, uncovered and not segregated in which type of disposal? <ul style="list-style-type: none"> a. Open dumps b. Landfills 	10	CO1,2,3,4,5,6	BT1 BT2

	<p>c. Sanitary Landfills d. Pyrolysis</p> <p>7. What is the correct sequence of Activated Sludge Process? a. Primary Effluent, Aeration tank, Final Clarifier, Secondary Effluent b. Primary Effluent, Secondary effluent, Aeration tank, Final clarifier c. Aeration Tank, Primary Effluent, Secondary effluent, Final Clarifier d. Primary Effluent, Final Clarifier, Aeration Tank, Secondary effluent</p> <p>8. What is the main Disinfectant used in general? a. Sodium b. Chlorine c. Manganese d. Hydrogen</p> <p>9. Anaerobic Sludge Treatment cannot be used as? a. Fertilizer b. Storing c. Incineration d. Food for Animals</p> <p>10. Which filtration technique is not used for final treatment process? a. Ultrafiltration b. Nanofiltration c. Microfiltration d. Reverse Osmosis Technique</p>													
Q2	<p>• Short Answer Questions: (6 Questions*2 marks)</p> <p>1. Give some examples of Industrial Solid Waste. 2. Define Composting. 3. Difference between Landfills and Sanitary Landfills. 4. Difference between Plastic and Bioplastics. 5. Explain Disinfection. 6. Difference between Sewage and Solid Waste.</p>	12	CO1,2,3,4,5, 6	BT1 BT2										
Q3	<p>• Answer in Brief: (2 Questions*4 marks)</p> <p>1. Fill the table:</p> <table border="1" data-bbox="327 1227 1093 1393"> <thead> <tr> <th>Litter Type</th> <th>Time of degradation</th> </tr> </thead> <tbody> <tr> <td>Cotton cloth</td> <td></td> </tr> <tr> <td>Plastic Bags</td> <td></td> </tr> <tr> <td>Wood</td> <td></td> </tr> <tr> <td>Tin cans</td> <td></td> </tr> </tbody> </table> <p>2. Give two examples of each of the following: A. Biological Laboratory Waste: B. Human Anatomical Waste: C. Sharps: D. Biohazardous waste:</p>	Litter Type	Time of degradation	Cotton cloth		Plastic Bags		Wood		Tin cans		8	CO1,2,3,4,5, 6	BT1 BT2
Litter Type	Time of degradation													
Cotton cloth														
Plastic Bags														
Wood														
Tin cans														
Q4	<p>• Long Answer Questions: (2 Questions*5 marks)</p> <p>1. Explain: (1 mark each) a. Biofriendly products b. Bioplastic c. Biodiesel d. Bioenergy e. Biopolymer</p> <p>2. Label the image:</p>	10	CO1,2,3,4,5, 6	BT1 BT2										



- | | |
|--------------------------------------|------|
| a. Label (a), (b) and (c)
marks) | (1.5 |
| b. What is the role of (b)
marks) | (1.5 |
| c. Explain (a) in detail.
marks) | (2 |

*****End of Question Paper*****