

SECOND SEMESTER B.Sc. **DEGREE EXAMINATION, MARCH 2012**

(CCSS)

Biotechnology—Complementary Course

BT2 C02—ENVIRONMENTAL BIOTECHNOLOGY

Time : Three Hours

Maximum : 30 Weightage

I. Objective Type Questions. Answer *all* questions.

A. Multiple Choice :

1 Primary treatment of wastewater may involve :

- (a) Activated sludge system.      (b) Tridding filter process.  
(c) Coagulation.                      (d) CSTR.

2 The catalyst used in the COD estimation of wastewater sample :

- (a) Mercuric sulphate.                (b) Potassium dichromate.  
(c) Silver sulphate.                    (d)  $H_2SO_4$ .

3 MPN determination comes under :

- (a) Presumptive test.                  (b) Confirmed test.  
(c) Completed test.                    (4) None of the above.

4 Chlorination involves the use of :

- (a) AgCl                                    (b) NaCl.  
(c) Bleaching powder.                (d) Chlorine gas.

B Fill in the blanks :

5 COD stands for \_\_\_\_\_

6 EPA stands for \_\_\_\_\_

7 APHA stands for \_\_\_\_\_

8 CSTR stands for \_\_\_\_\_

C. Name the following :-

9 A flocculent used in the primary treatment of the effluent.

10 Name any *two* methanogenic bacteria.11 Name any *one* anaerobic reactor system for wastewater treatment.

12 Name any bacteria that is involved in bioteaching.

(12 X  $\frac{1}{4}$  = 3 weightage)

Turn over

II. Short Answer Type Questions. Write briefly on :

- 13 Rotating biological contactor.
- 14 Stabilization pond.
- 15 Indicator organisms.
- 16 **BGLB** medium.
- 17 Chlorination derived byproducts.
- 18 **Bioethanol**.
- 19 **Biomagnification**.
- 20 **Biopesticides**.
- 21 Desalinization.

(9 x 1 = 9 weightage)

III. Short Essay or Paragraph Questions. Answer any *five* questions.

Write briefly on :

- 22 Total Dissolved Solids (**TDS**) and Total suspended solids.
- 23 Packed Bed Reactor.
- 24 **UASB**.
- 25 **Biogas** production.
- 26 Types of composting.
- 27 **Bioremediation**.
- 28 **Biofertilizers**.

(5 X 2 = 10 weightage)

IV. Essay Questions. Answer any *two* questions. Explain the following :

- 29 **Solidwaste** and its possible treatment strategies.
- 30 Biodegradation and its applications.
- 31 **Bioteaching** and the mechanism behind the process.

(2 X 4 = 8 weightage)