

C 82165

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Name.....

Reg. No.....

**SECOND SEMESTER B.Sc. DEGREE [SUPPLEMENTARY/IMPROVEMENT]
EXAMINATION, APRIL/MAY 2015**

(UG—CCSS)

Complementary Course—Biotechnology

BT 2C 02—ENVIRONMENTAL BIOTECHNOLOGY

Time : Three Hours

Maximum : 30 Weightage

I. Objective type questions. Answer *all* questions :

A. Name the following :-

- 1 An ~~organochlorine~~ pesticide.
- 2 Virus used as ~~biopesticide~~.
- 3 Anaerobic reactor.
- 4 A ~~biofilm~~ reactor.

B. Match the following :-

- | | |
|---------------------------------------|---|
| 5 Indicator organisms | (i) <i>Rhizobium</i> sp. |
| 6 Methanogens | (ii) Rhizopus sp. |
| 7 Lignocellulosic degrader | (iii) Methanogenium sp. |
| 8 Free-living nitrogen fixers | (iv) <i>Phanerochaete chrysosporium</i> . |
| | (v) <i>Azotobacter</i> sp. |
| | (vi) Faecal streptococci. |

C. True or False :

- 9 Microbial production of methane is more expensive than natural gas.
- 10 The percolating filter reactor, is an important means of degrading dilute organic liquid waste.
- 11 The large ~~Dano~~ process is not a useful composting process for wet organic waste.
- 12 ~~RBCs~~ do not have a high ~~BOD~~ removal efficiency.

(12 x ¼ = 3 weightage)

II. Short answer type questions. Answer any *five* questions :

- 13 Indicator organisms.
- 14 Trickling filters.
- 15 Sulfur oxidizing bacteria.
- 16 ~~Biofilms~~.

Turn over

- 17 Free-living nitrogen fixers.
- 18 Viruses for pest control.
- 19 **Methanogens.**
- 20 Hydrocarbon degradation.
- 21 **Xenobiotics.**

(9 x 1 = 9 weightage)

III. Short Essay *or* paragraph questions. Answer any *five* questions :

- 22 **Bio-control** of insect pests.
- 23 Microbial leaching of ores.
- 24 **Biofouling.**
- 25 Activated sludge.
- 26 Phosphate **solublizers.**
- 27 **Biogas.**
- 28 **Mycorrhizae.**

(5 x 2 = 10 wei;

IV. Essay questions. Answer any *two* out of three :

- 29 **Biopesticides** and **biofertilizers.**
- 30 Ethanol from biomass.
- 31 Reactors in anaerobic waste water treatment.

(2 x 4 = 8 weightage)