

THIRD SEMESTER B.Sc. DEGREE EXAMINATION, NOVEMBER 2012

(CCSS)

Biotechnology

BT 3C 02—ENVIRONMENTAL BIOTECHNOLOGY

Tim? : Three Hours

Maximum : 30 Weightage

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

A Match the following :

- | | |
|-------------------|-------------------|
| 1 Torrey canyon | Lead poisoning |
| 2 DDT | Detoxification |
| 3 PCB | Cadmium poisoning |
| 4 Metalothioneins | 2 chloronathlene |
| 5 Itai-Itai | Organochlorine |
| 6 Plumbism | Oil spill |

B State whether True *or* False :

- 7 The acidity of rain is \leq pH 5.7, it is called as Acid rain.
- 8 Eutrophication causes decreased algal blooms.
- 9 Biomagnification does not occur for Xenobiotics.
- 10 Pollutants like hydrocarbons are carcinogenic.
- 11 Increased UV-B radiation may lead to melanomas.
- 12 Sound intensity between 90-100 decibels is not critical for ear damage.
(12 x $\frac{1}{4}$ = 3 weightage)

H. Short answer type questions. Answer *all* nine questions.

- 13 Geiger-Müller counter.
- 14 PCBs.
- 15 DDT.
- 16 PAHs.
- 17 Biofouling.
- 18 Green house effect.
- 19 Acid rain.
- 20 Carbon credits.
- 21 Deforestation.

x 1 = 9 weightage)

Turn over

III. Short essay or paragraph questions. Answer any *five* from seven.

22 Oil slicks and their environmental effects.

23 Biosorption.

24 Hydrocarbon degradation.

25 Radioactive pollution.

26 Ozone depletion.

27 Mercury pollution.

28 Types of bioremediation.

(5 x 2 = 10 weightage)

IV. Essay questions. Answer any *two* from three.

29 Write briefly on air pollution and its control.

30 Discuss the removal of phosphorous from waste water.

31 Explain the role of microbes in degradation of petrochemical effluents.

(2 x 4 = 8 weightage)