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**PARUL UNIVERSITY**  
**PARUL INSTITUTE OF APPLIED SCIENCES**  
**MID SEMESTER INTERNAL EXAMINATION, SEPTEMBER 2018**  
**B. Sc. Semester V Biotechnology**

**Paper Code: 11102303**

**Date: 07 / 09 /2018**

**Maximum Marks: 40**

**Instructions:**

**Environmental Biotechnology**

**Time: 1hr 30 mins**

1. All questions are compulsory and options are given in first and second question only.
  2. Numbers to the right of question indicate the marks of respective question.
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- Q. 1** Attempt any one question of the following. (08)  
(i) Explain nitrogen cycle with appropriate figures.  
(ii) Discuss various plant and animal test assays.
- Q. 2** Attempt any three questions of the following. (12)  
(i) Explain bioscrubbers with appropriate figures.  
(ii) Write a note on vermitechnology.  
(iii) Discuss cause, effects and mitigation of global warming.  
(iv) Differentiate between food chain and food web.  
(v) Write a note on biosensors used in pollution abatement.
- Q. 3** Do as directed. Attempt all five questions. (05)  
(i) Define Kyoto protocol.  
(ii) Define biomagnification.  
(iii) Define sustainable development.  
(iv) Give an example of an environmental disaster due man made causes.  
(v) Define EMP.
- Q. 4** Write correct option in your answer sheet for following 15 multiple choice questions. (15)
- MCQ 1** Biotrickling filters can be used to remove \_\_\_\_\_  
(A) Xylene (B) Toluene  
(C) Hydrogen sulphide (D) All of the above
- MCQ 2** Acid rain can cause skin irritation  
(A) True (B) False
- MCQ 3** Ozone layer depletion is caused due to \_\_\_\_\_  
(A) H (B) CO  
(C) CFC (D) N
- MCQ 4** Algal bloom is an indication of \_\_\_\_\_  
(A) Eutrophication (B) Photosynthesis  
(C) Biomagnification (D) All of the above
- MCQ 5** Malthusian theory was revised in  
(A) 1777 (B) 1658  
(C) 1803 (D) 1798
- MCQ 6** Amount of organic substance in a material cycle is \_\_\_\_\_ component

- (A) abiotic (B) biotic  
(C) biome (D) ecosystem
- MCQ 7 Insufficient P in the atmosphere leads to  
(A) Low plant yield (B) Soil enrichment  
(C) No P cycle (D) None of the above
- MCQ 8 Which of these is not used to form a biobed  
(A) Humus (B) Bark  
(C) Peat (D) Leaves
- MCQ 9 Which is a chemical means of deodourisation?  
(A) Catalytic oxidation (B) Heat  
(C) Washing (D) All of the above
- MCQ 10 Bhopal gas tragedy was in  
(A) 1978 (B) 1983  
(C) 1984 (D) 1999
- MCQ 11 The method for pollution monitoring that involves observation of growth rate and productivity is known as \_\_\_\_\_ rating  
(A) Metabolic (B) Genotoxic  
(C) Visual (D) All of the above
- MCQ 12 Which is not a green house gas?  
(A) CO<sub>2</sub> (B) Water vapor  
(C) Methane (D) None of the above
- MCQ 13 \_\_\_\_\_ % solar energy is absorbed in the atmosphere  
(A) 50 (B) 62  
(C) 57 (D) 48
- MCQ 14 In a bioreactor aeration is necessary  
(A) True (B) False  
(C) Depends on the organism (D) Insufficient data
- MCQ 15 Coliform test is used to detect \_\_\_\_\_ in \_\_\_\_\_  
(A) Fecal matter; water (B) Fecal matter; potable water  
(C) Dead fishes; water (D) Dead fishes; potable water

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