

M. Sc. (Biotechnology) Sem-III (2012 Course)(Choice Based Credit System) : SUMMER - 2019

SUBJECT : ENVIRONMENTAL BIOTECHNOLOGY

Day : Tuesday  
Date : 02/04/2019

S-2019-1412

Time : 10.00 AM TO 01.00 PM  
Max. Marks : 60

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**N.B.:**

- 1) Q.No.1 and Q.No.5 are **COMPULSORY**. Out of the remaining questions attempt **ANY TWO** questions from each section.
  - 2) Answers should be written in **SAME** answer book.
  - 3) Draw neat and labeled diagrams **WHEREVER** necessary.
  - 4) Figures to the right indicate **FULL** marks.
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**SECTION – I**

- Q.1** Attempt **ANY FIVE** of the following: [10]
- a) Explain sources of air pollution and their control.
  - b) What are the effects of noise pollution?
  - c) Write any four sources of soil pollution.
  - d) Differentiate potable and non-potable water.
  - e) What is biofilm? How it develop?
  - f) How can we detect the microorganisms in the environment?
- Q.2** Answer the following: [10]
- a) Discuss sewage water treatment systems.
  - b) What are biosensors? Explain their types and applications.
- Q.3** Explain the following: [10]
- a) What do you mean by Xenobiotic compounds? Mention the alternatives for their degradation.
  - b) Various gases responsible for global warming.
- Q.4** Write short notes on **ANY TWO** of the following: [10]
- a) Causes of acid rain and its effects.
  - b) Stabilization pond.
  - c) Microbes in wastewater treatment.

**SECTION – II**

- Q.5** Attempt the following: [10]
- a) Discuss the applications of GMO's in improving environment.
  - b) What is hazardous waste? Discuss their impact on human health.
- Q.6** Answer **ANY TWO** of the following: [10]
- a) Describe the process of reverse osmosis for desalination.
  - b) Discuss the merits and demerits of bioremediation.
  - c) What is meant by carbon credit? Discuss various methods of carbon crediting.
- Q.7** Write short note on the following: [10]
- a) Methane production.
  - b) Biostimulation.
- Q.8** Answer the following: [10]
- a) Write the significance of climate change process and mention various approaches for its prevention.
  - b) Discuss the significance of techno-economic feasibility of conversion of waste into energy.

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