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

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.

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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