

Roll No.

Total No. of Pages : 02

Total No. of Questions : 09

Bachelor of Science (Environmental Sciences) (Sem.-5)
ENVIRONMENTAL MONITORING AND TECHNIQUES

Subject Code : BSEN501-20

M.Code : 92588

Date of Examination : 21-12-22

Time : 3 Hrs.

Max. Marks : 60

INSTRUCTIONS TO CANDIDATES :

1. **SECTION-A is COMPULSORY** consisting of **TEN** questions carrying **TWO** marks each.
2. **SECTION-B** contains **FIVE** questions carrying **FIVE** marks each and students have to attempt any **FOUR** questions.
3. **SECTION-C** contains **THREE** questions carrying **TEN** marks each and students have to attempt any **TWO** questions.

SECTION-A

- 1. Write briefly :**
- What is meant by Global Environmental Monitoring System (GEMS)?
 - Name the different types of Environmental Monitoring.
 - List any four devices used for Environmental Monitoring.
 - What are Bio-indicators? Give two examples.
 - Differentiate between grab and composite sampling.
 - List any four sources of errors in Environmental analysis.
 - List any four considerations which define the sample amount.
 - What are the features of water sampling?
 - List any two methods in preservation of water samples for Environmental monitoring.
 - Write down the working principle of chromatography.

SECTION-B

2. Describe the concept and objectives of National Ambient Air Quality Monitoring Program (NAAQM).
3. How do you measure uncertainty in Environmental monitoring? Discuss the importance of uncertainty in Environmental data analysis.
4. How do you ensure '*representative sample*' in case of stack monitoring? Sketch and explain.
5. Differentiate between :
 - (a) Conductimetry and Colorimetry
 - (b) Titrimetry and Potentiometry.
6. Explain any two separation techniques in liquid - liquid extraction.

SECTION-C

7. Sketch and explain the working of sound level meter. Explain the procedure for measurement of ambient noise level.
8. Write the working principle of HPLC.
9. You are In-charge of establishing an environmental laboratory. List out the possible instruments/equipment you would recommend for environmental sampling and analysis. Give justification.

NOTE : Disclosure of Identity by writing Mobile No. or Making of passing request on any page of Answer Sheet will lead to UMC against the Student.