

B.Sc.(Part-III)(With Credits)-Regular-Semester 2012 Sem V
B.Sc. 3519 - Environmental Science: Paper-I (Environmental Engineering)

P. Pages : 2

Time : Three Hours



GUG/W/16/3365

Max. Marks : 50

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- Notes : 1. All questions are compulsory and carry equal marks.
2. Illustrate the answer with suitable diagrams and examples.

1. Discuss in brief the various devices used for the collection of water sample. 10

OR

What are the determinant and indeterminant errors ? How errors can be minimized ? 10

2. Discuss in brief the operation and maintenance procedure of screens and grit chamber. 10

OR

Discuss the objectives, components and principles of environmental management. 10

3. a) Write a brief note on solid waste sampling. 2½

b) Calculate mean and mode for the following set of data: 11, 21, 31, 40, 50, 60, and 72. 2½

c) Describe operation start up procedure for a aeration tank. 2½

d) Explain the characteristics of a sound plan. 2½

OR

e) In what way the soil sample is preserved ? 2½

f) Explain applications of HPLC in environmental analysis. 2½

g) Describe maintenance procedure for clariflocculator. 2½

h) What are the need for management principles ? 2½

4. a) What are the objectives of water sampling ? 2½

b) Give the basic principle of titrimetry. 2½

c) How sludge drying bed can be operated ? 2½

d) Briefly explain the process of decision making. 2½

OR

- e) Give the site selection criteria for ambient air sampling. 2½
- f) Write basic principles of colorimetry. 2½
- g) How sludge age is determined ? 2½
- h) Mention various steps in planning. 2½
- 5. Answer in 2-3 lines any ten. 10**
- a) Write any two Indian standards drinking water specification (IS: 10500 : 2012).
- b) Give the full form of NAAQS.
- c) Define grab sample.
- d) What is median ?
- e) Define spectroscopy.
- f) Define error.
- g) How maintenance of flash mixture in waste water treatment is carried out?
- h) Give any two operation troubles in settling tank.
- i) Mention the problems encountered in ESP.
- j) What is CSR ?
- k) Define decision making.
- l) How planning can be made effective ?
