

BACHELOR OF TECHNOLOGY (C.B.C.S.) (2014 COURSE)
B.Tech.Sem - VI CIVIL : WINTER- 2022
SUBJECT : ENVIRONMENTAL ENGINEERING-I

Day : Friday

Time : 10:00 AM-01:00 PM

Date : 25-11-2022

W-13610-2022

Max. Marks : 60

N.B.:

- 1) All questions are **COMPULSORY**.
- 2) Figures to the right indicate **FULL** marks.
- 3) Answer to all sections should be written in the **SAME** answer book.

-
- Q.1** a) What are the different factors affecting water demand? Explain. (05)
b) Mention drinking water quality standards with its significance for the following: (05)
i) Total hardness ii) Nitrates iii) MPN
- OR**
- Q.1** a) Draw a flow sheet of water treatment plant. (05)
b) Explain the functions of each treatment unit of water treatment plant. (05)
- Q.2** a) Why is aeration used in water treatment plants? Is it more commonly used for ground water or surface water? Why? (05)
b) What is the necessity of using coagulants in sedimentation? Explain. (05)
- OR**
- Q.2** a) What is aeration? Explain cascade aeration with sketch. (05)
b) On what factors the dose of coagulants depend? How the optimum dose of coagulant is determined? (05)
- Q.3** a) What are different types of filters? Explain dual media filter. (05)
b) Explain with chemical reactions lime soda process of water softening. (05)
- OR**
- Q.3** a) What are different methods of disinfection of water? Explain chlorination. (05)
b) What are the health problems of excess fluorides and fewer fluorides in drinking water? Explain defluoridation. (05)
- Q.4** a) How are the air pollutants classified? Explain primary and secondary pollutants. (05)
b) Explain with sketch working of fabric filter. (05)
- OR**
- Q.4** a) What are ambient air quality standards and emission standards? Explain. (05)
b) What are the different methods of control of particulate matter? Explain any one method. (05)
- Q.5** a) What are the essential reasons for an analysis of the composition, characteristics and quantities of solid wastes? (05)
b) What are the factors to be considered while selecting a site for landfill? Explain. (05)
- OR**
- Q.5** a) What is the nature of MSW? Classify and explain the solid waste based on sources. (05)
b) What are Principles and Elements of Integrated Solid waste management? (05)
- Q.6** a) What is ISO 14000 and its series? Explain. (05)
b) What are the advantages of Environment audit? Explain. (05)
- OR**
- Q.6** a) What are the fundamentals of Environment management plan? (05)
b) Write a note on: Water act in India. (05)