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Sr. No. 002517

December 2023

**B.Tech (CIVIL) (Reappear) 5th Semester
Environmental Engineering and Management (PCC-CE306R)**

Time: 3 Hrs.

Max. Marks: 75

- Instructions:**
1. It is compulsory to answer all the questions (1.5 marks each) of Part -A in short.
 2. Answer any four questions from Part -B in detail.
 3. Different sub-parts of a question are to be attempted adjacent to each other.

PART -A

Q.1 Briefly answer the following questions:

- (a) Differentiate between coagulation and flocculation. (1½)
- (b) What is the need for disinfection during the wastewater treatment process? (1½)
- (c) Define sullage. (1½)
- (d) Enlist various National River cleaning plans. (1½)
- (e) How do automobile engines contribute to urban air pollution? (1½)
- (f) Differentiate between aerobic and anaerobic treatment systems of wastewater. (1½)
- (g) Enlist various effects of improper waste disposal on the environment. (1½)
- (h) What kind of devices are used for measurement of noise level, explain briefly? (1½)
- (i) What are the specific plumbing considerations for high-rise buildings? (1½)
- (j) How color-coding bins help in safe disposal of biomedical waste? (1½)

PART -B

- Q.2
- (a) Write short note on MINAS. (5)
 - (b) Explain the different water quality requirements for various beneficial uses. (5)
 - (c) What is the need for planned water supply schemes? (5)
- Q.3
- (a) What are the different factors which need to be considered during designing of W/S system, explain briefly? (7½)
 - (b) Give a detailed account of various advanced treatment techniques used for wastewater treatment. (7½)
- Q.4
- (a) Briefly explain about the various issues encountered during maintenance of sewers. Also enlist the methods employed to resolve the issues. (7½)

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- (b) Briefly explain about pollutants generated from improper disposal of sewage. (7½)
- Q.5 (a) Give a detailed account of different techniques used for sampling of gaseous pollutants. (7½)
- (b) Briefly explain about the engineering devices to control particulate pollutants from industries. (7½)
- Q.6 (a) What noise indices are used for measurement of noise level? (5)
- (b) Enlist about various control measure of noise pollution. (5)
- (c) Write brief note on collection of municipal solid waste in India. (5)
- Q.7 Write short note on the followings: (5 x 3 = 15)
- i) Integrated Solid Waste Management
 - ii) Brake Pressure Tanks
 - iii) Role of Govt. authorities in controlling pollution

PART-B