

Roll No.

CE-703 (GS)

B.E. VII Semester

Examination, November 2018

Grading System (GS)

Environmental Engineering - II

Time : Three Hours

Maximum Marks : 70

Note: i) Attempt any five questions.

ii) All questions carry equal marks.

iii) Assume missing data suitably, if any.

1. a) Enlist different sewer appurtenances and explain with sketch the functioning of "Inverted Siphon".
b) Discuss and compare merits and demerits of separate system with combined system of sewerage.
2. a) Explain :
i) BOD ii) COD
iii) TOC iv) THOD
b) What is sewage farming? What are its advantages over the method of disposal of sewage by dilution? What precautions must be taken in its operation to prevent health hazards?
3. a) Write a detailed note on "Self Purification of stream" discussing functions of different zones.
b) Discuss the role of micro-organism in biological treatment of waste water.

4. a) Compare in detail "Activated Sludge Process" with "Tricking Filter".
b) Design a septic tank for ten users using Fixture Unit Approach and draw the sketch.
5. a) Write short notes on "Sludge digestion" and "Sludge thickening".
b) What do you understand by recirculation of sludge? Why is it practised? Draw the line diagram showing recirculation in "AS" process.
6. a) Write short notes on:
i) Ultra filtration
ii) Adsorption by activated carbon
b) Discuss classification, composition, collection and disposal of municipal solid waste.
7. a) Discuss in brief biological and chemical methods of removal of Nitrogen from waste water.
b) Explain various methods of collection and disposal of Dry refuse, Sullage and Excreta waste in rural areas.
8. Write short notes on any four of the following:
a) Construction and Maintenance of sewer
b) Population equivalent
c) Oxygen Sag Curve
d) Grit chamber
e) Stabilization pond
f) Imhoff tank
