

C 1026

(Pages : 2)

Name.....

Reg. No.....



**EIGHTH SEMESTER B.TECH. (ENGINEERING) [09 SCHEME] DEGREE
EXAMINATION, APRIL 2016**

CE 09 801—ENVIRONMENTAL ENGINEERING—II

Time : Three Hours

Maximum : 70 Marks

Part A

*Answer all the questions.
Each question carries 2 marks.*

1. What is self cleaning velocity ?
2. What is meant by sludge ?
3. Where is inverted Siphons provided ?
4. What is the use of grit chambers ?
5. What is refuse ?

(5 × 2 = 10 marks)

Part B

*Answer any four questions.
Each question carries 5 marks.*

6. (a) What are the different hydraulic elements and the relation between them. Which governs the discharge through a sewer ?
- (b) Distinguish between intercepting sewer and outfall sewer.
- (c) What is the function of primary settling tanks employed at sewage treatment works ? How does this tank differ from settling tank employed at waste works ?
- (d) Sketch a sludge digestion tank of modern rate of design and mention its components.
- (e) What are the pre-processes for solid waste ? Describe.
- (f) Give the characteristics and composition of raw sewage.

(4 × 5 = 20 marks)

Part C

Answer all questions.

7. (a) What is a partially combined system of sewerage ? Why is it considered most suitable for Indian Countries ?

Or

- (b) Write a note on the flushing of town sewers. Sketch and describe the working of an automatic flushing tank for a town sewer.

Turn over

8. (a) Sketch and describe working of a standard Trickling filter for purification of sewage. What preliminary treatment should sewage undergo before it can be treated by the filter and why? Describe the biological changes that take place in the filter bed.

Or

- (b) How industrial waste water changes with domestic waste water by character and how it is different in treatment?
9. (a) Compare the two methods of sewage disposal by dilution and by irrigation, mention their merits and demerits. State the conditions under which one is more suitable to the other.

Or

- (b) What are the characteristics of sludge? Describe sludge conditioning and elutriation.
10. (a) Describe methods of disposal of municipal solid waste and when these methods are suitable for management of waste?

Or

- (b) How will you characterize solid waste and describe the merits of processing of solid waste?

(4 × 10 = 40 marks)