

C 80542

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Name.....

Reg. No.....

**EIGHTH SEMESTER B.TECH. (09 SCHEME) (ENGINEERING)
DEGREE EXAMINATION, APRIL 2015**

CE 09 801—ENVIRONMENTAL ENGINEERING—II

Time : Three Hours

Maximum : 70 Marks

Part A

1. Define Soil pipe.
2. What are pipe fittings ?
3. What is detritus tank ?
4. What is sludge conditioning ?
5. When is incineration required ?

(5 × 2 = 10 marks)

Part B

Answer any four.

6. (a) What are the factors affecting storm water ?
- (b) What is BOD ? Discuss the significance of BOD.
- (c) Write short notes on oxidation pond.
- (d) Clearly differentiate between vent pipe and anti-siphonage pipe.
- (e) What do you understand by the terms self cleaning velocity and limiting velocity in sewers ?
- (f) What is mean by reuse and recycle of municipal solid waste ? How is the reuse concept applied to municipal solid waste ?

(4 × 5 = 20 marks)

Part C

7. (a) Draw a sketch of service connection from the street main to a residential building and state the function of each fitting shown.

Or

- (b) What is meant by economical diameter of a rising main ? Discuss the advantages and disadvantages of submersible pumps and centrifugal pumps.
8. (a) Design a circular settling unit for the primary treatment of sewage at 13.5 million litre per day. The detention period is to be about 2 hours and surface loading 45,000 litres per sq.m. of the tank per day.

Or

Turn over

- (b) Draw a sketch of a grease trap and describe the working. State where it is commonly used. How does a grease trap differ from a skimming tank ?
9. (a) Define sludge and describe changes which takes place when sludge undergoes digestion. What are the various factors controlling sludge digestion ?

Or

- (b) How does the self purification of a stream occur when it has been polluted by the discharge of waste on it ? Describe in detail the various stages of self purification, stating the characteristics of each stage.
10. (a) What are the characteristics of Indian solid waste ? How it differs from developed countries ?

Or

- (b) What is sanitary landfill ? Why we have to go in for sanitary landfill ? Describe the construction of sanitary landfill.

(4 × 10 = 40 marks)