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Total No. of Pages : 02

Total No. of Questions : 09

B.Tech.(CE) (2011 Onwards) (Sem.-6)

ENVIRONMENT ENGINEERING – II

Subject Code : BTCE-606

Paper ID : [A2293]

Time : 3 Hrs.

Max. Marks : 60

INSTRUCTIONS TO CANDIDATES :

1. **SECTION-A** is **COMPULSORY** consisting of **TEN** questions carrying **TWO** marks each.
2. **SECTION-B** contains **FIVE** questions carrying **FIVE** marks each and students have to attempt any **FOUR** questions.
3. **SECTION-C** contains **THREE** questions carrying **TEN** marks each and students have to attempt any **TWO** questions.

SECTION-A**1. Write briefly :**

- a) What is design period?
- b) How do you express the strength of sewage?
- c) What is the principle of clarification process?
- d) Why ventilation of sewer is important?
- e) What is meant by relative stability?
- f) List any four objective of slug digestion.
- g) Draw oxygen sag curve.
- h) What is grit chamber?
- i) Enlist the name of joints used in pipeline.
- j) Give the composition of biogas fuel.

SECTION-B

2. What is the purpose of aeration process? Discuss the various types of aerators with sketches.
3. Differentiate between Septic tank and Imhoff tank.
4. Design a circular trickling filter unit for treating 4 million liter of sewage per day having 5 day BOD of 16-0mg/l.
5. What is the function of grit chamber? What are the major design criteria governing the design of grit chamber?
6. Derive the equation for Stokes equation for settling velocity.

SECTION-C

7. Design an Imhoff tank to treat sewage from small town with 25000 populations. The rate of sewage may be assumed as 150 lped. Make suitable assumptions wherever needed. Draw neat sketch.
8. What are inverted siphons? Where they are used? Sketch and explain.
9. Write note on :
 - a) Disinfection
 - b) Polishing
 - c) Stabilization Pond