



Reg. No. :

Name :

**Eighth Semester B.Tech. Degree Examination, April/May 2012
(2008 Scheme)**

08.803 : ENVIRONMENTAL ENGINEERING – II (C)

Time : 3 Hours

Max. Marks : 100

PART – A

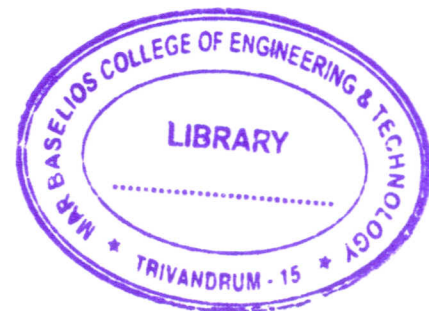
Answer **all** questions :

1. What are the different systems of sewerage ?
2. What are the various zones of self purification ?
3. Explain the working of a skimming tank.
4. Write the theory of 'Activated Sludge Process'.
5. Differentiate contact bed and inter mittent sand filters.
6. Write a note on an 'absorption field'.
7. Calculate the sludge volume index for a mixed liquor with 3000 mg/litre. Suspended solids having a settled volume of 100 mg/li. Indicate whether sludge volume index is good or poor.
8. List out the plumbing fixtures used in a house drainage system. **(8x5=40 Marks)**

**PART – B
Module – I**

Answer **any one** question from **each** Module.

9. a) Explain the physical and chemical characteristics of sewage. **10**
b) Write notes (with sketches) on :
1) Flushing devices **10** 2) Manholes
- OR
10. a) Derive an expression for BOD reaction. **10**



P.T.O.



- b) In a BOD determination 6 ml of sewage is mixed with 294 ml of dilution water containing 8.2mg/litre of Do. After incubation the DO content of the mixture is 5.5 mg/litre. Calculate the BOD of the sewage. Assume initial DO of the sewage is zero. 10

Module – II

11. a) Design a screen chamber for treating one million litres of sewage per day. Assume suitable data. 10
- b) Explain with a neat sketch the working of a primary sedimentation tank. 10

OR

12. Design a septic tank for 200 users. Water allowance is 120 l/head/day. Detention time may be taken as 8 hrs. Draw a neat dimensioned sketch for the design. 20

Module – III

13. Design an oxidation pond for treating sewage from a hot climatic residential colony with 6000 persons contributing sewage at 110 lit/ Capita/ day. The 5 day BOD of the sewage is 250 mg/ litre (With sketches). 20

OR

14. With a neat sketch explain the parts and working of a sludge digestion tank. 20
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