

No. of Printed Pages : 03

Roll No.

781

B. Tech. EXAMINATION, May 2017

(Seventh Semester)

(Old Scheme) (Re-appear Only)

(CE)

CE-401

ENVIRONMENTAL ENGINEERING-II

Time : 3 Hours]

[Maximum Marks : 100

Before answering the question-paper candidates should ensure that they have been supplied to correct and complete question-paper. No complaint, in this regard, will be entertained after the examination.

Note : Attempt any *Five* questions. Assume any data if missing in the question paper.

1. (a) Write the procedure for layout and construction of sewer. **10**

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- (b) A rectangular sewer with width 2.0 times its depth is hydraulically equivalent to a circular one. Find the relation between the width of rectangular sewer and the diameter of the circular sewer. **10**
2. (a) Differentiate between DO and BOD. **10**
- (b) The BOD of a sewage incubated for one day at 30°C has been found to be 250 mg/l. What will be the 5 day 20°C BOD. Assume $K = 0.12$ (base 10) at 20°C. **10**
3. (a) Determine the size of a high rate trickling filter for the following data : **10**
- (i) Sewage flow = 4.5 Mld
- (ii) Recirculation ratio = 1.5
- (iii) BOD of raw sewage = 300 mg/l
- (iv) BOD removal in primary tank = 30%
- (v) Final effluent BOD desired = 30 mg/l.
- (b) Write the various methods of sludge disposal. **10**

4. (a) Discuss the working of Primary sedimentation clarifier. **10**
- (b) How to remove nutrients from the wastewater ? Discuss. **10**
5. (a) Write various techniques to reuse the wastewater. **10**
- (b) Discuss self-purification of stream. **10**
6. (a) Design a septic tank for 200 Persons. **10**
- (b) What is principle of stabilization ponds ? Explain. **10**
7. (a) Write all type of fixtures can be used in an Industrial building. **10**
- (b) Draw a neat sketch for three storied building. **10**
8. (a) Write the EIA in India. **10**
- (b) What is the concept of sustainable development in India ? **10**