

**R09****Code: 9A01603**

B.Tech III Year II Semester (R09) Supplementary Examinations December/January 2015/2016

**ENVIRONMENTAL ENGINEERING - I**

(Civil Engineering)

Time: 3 hours

Max. Marks: 70

Answer any FIVE questions  
All questions carry equal marks

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- 1 (a) Mention various types of intakes. Explain the differences between wet and dry intake towers.  
(b) Write a short note on water born diseases.
- 2 (a) Explain different types of settling. Derive Stock's law.  
(b) Mention the various techniques used in water treatment.
- 3 (a) Explain the working principle of rapid gravity filters with neat sketch.  
(b) Explain the back washing process of the rapid sand filter.
- 4 (a) Explain dead end system and grid iron system of distribution networks.  
(b) Explain the methods of distribution.
- 5 (a) Explain zone of decomposition.  
(b) Write the various factors affecting self purification process.
- 6 (a) Mention the different sewer appurtenances and explain any two.  
(b) Write the flow diagram of sewage treatment plant.
- 7 (a) Write the differences between conventional and high rate trickling filter.  
(b) Merits and demerits of trickling filters write in brief.
- 8 (a) Design the dimension of a septic tank for a small colony 150 persons provided with an assured water supply from the municipal head works at a rate of lit/day. Assume necessary data.  
(b) Explain any one method of disposal of the effluent from the septic tank.

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