

Code: CE5T2

III B.Tech - I Semester – Regular Examinations – December 2016

ENVIRONMENTAL ENGINEERING - I
(CIVIL ENGINEERING)

Duration: 3 hours

Max. Marks: 70

PART – A

Answer *all* the questions. All questions carry equal marks

11x 2 = 22 M

1.

- a) Define Environmental Engineering.
- b) What is the difference between centrifugal and reciprocating pump?
- c) What are chemical characteristics of water?
- d) Define discrete particle settling.
- e) What is Brownian diffusion?
- f) Define residual chlorine.
- g) What is ion exchange capacity?
- h) What are the functions of distribution reservoirs?
- i) Define valve. Mention different types of valves that we used in distribution system.
- j) What is one pipe and two pipe systems?
- k) Write any one empirical formula for the estimation of fire demand.

PART – B

Answer any **THREE** questions. All questions carry equal marks. 3 x 16 = 48 M

2. a) Explain about the factors that effecting percapita demand. 8 M
- b) Explain in detail about selection of pumps. 8 M
3. a) Explain in detail about water Borne diseases. 8 M
- b) Explain how optimum dosage of coagulant is measured. 8 M
4. a) What are the operational troubles in rapid gravity filters? 8 M
- b) What are different methods of disinfection and explain about them? 8 M
5. a) Explain in detail about demineralization process. 8 M
- b) Explain in detail about different layout networks. 8 M
6. a) With a neat diagram explain the working and applications of check valve. 8 M
- b) Write about different pipe materials and fittings. 8 M