Paper Code: ENV-24C **Roll No.** | | | | | | | | | | |

M.Tech.
(SEM II) EVEN SEMESTER EXAMINATION, 2015-16
WATER POLLUTION

[Time: 3 hours] **[Total Marks: 100]**

Note:-Attempt all questions. All questions carry equal marks.

1. Attempt any two of the following:- **[10x2=20]**

   (a) Describe various water pollutants along with their major sources.
   (b) Briefly describe the disposal methods of treated wastewater. Enumerate important disposal quality standards.
   (c) Describe strategies of water pollution control.

2. Attempt any two of the following:- **[10x2=20]**

   (a) Describe BOD kinetics in rivers. Also explain effect of temperature on rate constant.
   (b) The DO of an unseeded sample of diluted waste having an initial DO of 7.0 mg/L is measured to be 2.0 mg/L after 5 days. The dilution factor is 0.028 and the reaction rate constant k is 0.22/day. Find 5-day BOD, ultimate carbonaceous BOD and remaining oxygen demand after 5 days.
   (c) What is COD? Why COD is always greater than BOD? Why BOD is determined at 27°C and for 3 days.

3. Attempt any two of the following:- **[10x2=20]**

   (a) Enumerate primary water quality criteria for different designated best use.
   (b) Explain various creditors and benefactors responsible for water pollution.
   (c) Explain self purification process for rivers.

4. Attempt any two of the following:- **[10x2=20]**

   (a) Describe various stages of water quality survey and zoning of a river.
   (b) Describe various methods of river water quality monitoring.
   (c) Give a note on status of pollution and pollution control strategies of river in your city.

5. Attempt any four of the following:- **[5x4=20]**

   (a) Describe thermal stratification in impounded water.
   (b) Describe oxygen sag curve.
   (c) Explain how water quality standards are developed?
   (d) Explain Eutrophication in surface water bodies.
   (e) Give a brief note on "The Water Act 1974".
   (f) Explain water quality index.