# **Enrollment No.**

#### Kadi Sarva Vishwavidyalaya

## LDRP INSTITUTE OF TECHNOLOGY & RESEARCH, GANDHINAGAR.

#### B.E. 5<sup>th</sup> Semester

## **MID SEM EXAMINATION**

Date/Day: 23/08/14, Saturday **Branch**: Civil Engineering Subject Name: (CV502) Environmental Engineering I Max. Marks : 30 Time : 8:30 am to 10:00 am Instructions:1) All questions are compulsory 2) Figures to the **right** indicate full marks. 3) Indicate clearly, the options you attempt along with its respective question number. Q.1 Enlist different physical and chemical characteristics of water. [5] (a) Narrate the scope of Environmental Engineering. [5] (b) What do you mean by temporary and permanent hardness? Describe the method of Q.2 [5] (a) determination of total hardness in laboratory Narrate the factors affecting selection of sources of water (b) [5] Or Give importance of water treatment. [5] Q.2 (a) [5] Draw a neat sketch of typical layout of water treatment plant. (b) What is Intake? What point should be kept in mind while selecting site for intake and [5] Q.3 (a) which factors affects the design of intake structure? Design intake well for flow of 0.2 m<sup>3</sup>/sec. Take detention time 10 min. [5] (b) Or Explain the term alkalinity of water sample. Describe the laboratory procedure for [5] Q.3 (a) measurement of alkalinity. Find out the total individual alkalinity from the following laboratory record. Strength of [5] (b) titrate: N/40, volume of sample, phenolphthalein end point: 7.7ml, Methyl orange end

point: 15.4ml. Also estimate the pH value of sample.