

# C.U.SHAH UNIVERSITY

## Winter Examination-2015

**Subject Name:** Environmental Engineering

**Subject Code:** 4TE05ENE1 **Branch:** Civil Engineering

**Semester:** 5<sup>th</sup> **Date:** 9/12/2015 **Time:** 2:30To5:30 **Marks :** 70

**Instructions:**

- (1) Use of Programmable calculator & any other electronic instrument is prohibited.
- (2) Instructions written on main answer book are strictly to be obeyed.
- (3) Draw neat diagrams and figures (if necessary) at right places.
- (4) Assume suitable data if needed.

<b>Q-1</b>	<b>Attempt the following questions:</b>	<b>(14)</b>
	a) Define environment engineering.	01
	b) Define demographic trend.	01
	c) Explain radial well.	01
	d) Define P <sub>H</sub> .	01
	e) Define air pollution.	01
	f) Define pollutants.	01
	g) Explain primary and secondary air pollutants.	01
	h) Differentiate the sound and noise.	01
	i) At which level does sound become hazardous noise pollution?	01
	j) Define refuse.	01
	k) Define garbage.	01
	l) Define putrefaction.	01
	m) Define flocculation process in brief.	01
	n) Define population equivalent.	01
	<b>Attempt any four questions from Q-2 to Q-8</b>	
<b>Q-2</b>	<b>Attempt all questions</b>	<b>(14)</b>
	a) Explain major air pollutants.	07
	b) Explain collection and conveyance of municipal solid waste.	07
<b>Q-3</b>	<b>Attempt all questions</b>	<b>(14)</b>
	a) Explain classification of air pollutants.	07
	b) Explain the process of water treatment plant with its layout.	07
<b>Q-4</b>	<b>Attempt all questions</b>	<b>(14)</b>
	a) State the roles of microbes in the environment.	06
	b) Explain the methods used for the population forecasting in brief.	06
	c) Discuss the sound intensity and wavelength of sound.	02



- Q-5**      **Attempt all questions**      **(14)**
- a) Enlist different physical and chemical characteristics of water and discuss in Brief.      06
- b) Which devices are used to control the emission of particulate pollutants? Explain gravitational settling tank.      06
- c) Which are the factors affecting air pollution?      02
- Q-6**      **Attempt all questions**      **(14)**
- a) Classify and explain renewable and non-renewable energy sources.      06
- b) Explain Organometallic Compounds in the Environment.      04
- c) What are adverse effects of pesticides?      04
- Q-7**      **Attempt all questions**      **(14)**
- a) The following data have been noted from the census department.      05
- | Year | Population |
|------|------------|
| 1950 | 80,000     |
| 1960 | 1,55,000   |
| 1970 | 2,50,000   |
| 1980 | 4,78,000   |
| 1990 | 8,53,000   |
| 2000 | 9,80,000   |
- Calculate probable population in the year 2030 using Incremental increase method.
- b) Explain composting method in brief.      05
- c) Explain the waste water from dairy industry.      04
- Q-8**      **Attempt all questions**      **(14)**
- a) Explain the characteristics of sound.      05
- b) Explain cyclone separators with its advantages and disadvantages.      05
- c) Give objectives of water treatment process.      04

