

**UTTARAKHAND OPEN UNIVERSITY, HALDWANI (NAINITAL)****उत्तराखण्ड मुक्त विश्वविद्यालय हल्द्वानी (नैनीताल)****M.Sc. Environmental Science (MSCEN-13)****IIND YEAR ASSIGNMENT****Last Date of Submission 15 May****जमा करने की अन्तिम तिथि: 15 मई****Course Title: Water and Waste Water Treatment Technologies****Course Code: ES 553****Year: 2014-15****Maximum Marks: 40****Section 'A'**

Section 'A' contains 08 short answer type questions of 5 marks each. Learners are required to answers 4 questions only. Answers of short answer-type questions must be restricted to 250 words approximately.

Briefly discuss the following:

- 1- Explain the following briefly: Sea, Spring, Water, pH
- 2- Differentiate between:
 - a. Coagulation and flocculation
 - b. Gravity aerator and cascade type aerator
 - c. Sewage and sullage
- 3- Write short note on:
 - a. Sedimentation
 - b. Flocculator
 - c. Filtration
 - d. Wash water gutter
- 4- Describe characteristics of sewage.
- 5- Explain trickling filter and its application as pollution control device.
- 6- Describe anaerobic digestion of sludge.
- 7- What is a "Lagoon"? Explain aerated logon.
- 8- What is 3P programme? Describe barriers to pollution control.

Section 'B'

Section 'B' contains 04 long answer-type questions of 10 marks each. Learners are required to answers 02 questions only.

- 1- Describe environmental importance of water. Explain the sources and causes of impurities in water.
- 2- What is disinfection? Describe factors influencing disinfection.
- 3- Explain solid waste management in metropolices.
- 4- Write an essay on "Industrial audit".