

Name:

Enrolment No:



**UNIVERSITY OF PETROLEUM AND ENERGY STUDIES**

**End Semester Examination, December 2019**

**Course: Planning and Management of Utilities & Services**

**Semester: V**

**Programme: B Plan**

**Course Code: SPCC 3002**

**Time: 03 hrs.**

**Max. Marks: 100**

**Instructions:NA**

**SECTION A**

S. No.		Marks	CO
Q 1	What are the objectives of providing drinking water supply and sewerage scheme in a town?	4	CO1
Q 2	What is: a. Fire-fighting Demand for a city b. Peak Factor in a drinking water supply	4	CO1
Q 3	What is the importance of recycling & reuse of treated sewage effluent?	4	CO1
Q 4	What is rain garden and what are its advantages?	4	CO1
Q 5	What is the importance of self-cleansing velocity in a sewerage system?	4	CO1

**SECTION B**

Q 6	What are the sources of water for a drinking water supply schemes? Please elaborate about each type of source.	10	CO1
Q 7	What is Unaccounted for Water (UFW) and what are the methods to reduce UFW?	10	CO1
Q 8	What is rain water harvesting and what are the benefits of rain water harvesting?	10	CO2
Q 9	What are the duties/ role of different Garbage Generators as prescribed in the Solid Waste Management Rules, 2016? OR	10	CO2

	Explain the stages of planning of wastewater management and treatment system.		
<b>SECTION-C</b>			
Q 10	What are the components and design considerations for Planning a Drinking Water Supply System for a town?	<b>20</b>	<b>CO1</b>
Q 11	How a Solid Waste Management Plan for a city like Dehradun can be prepared? Please elaborate steps required to be taken in the Plan so that land requirement for the sanitary landfill site is minimum.  OR  What are the basic design considerations for Planning a Sewerage System for a city? Please elaborate.	<b>20</b>	<b>CO2</b>