

Name:

Enrolment No:



**UNIVERSITY OF PETROLEUM AND ENERGY STUDIES**

**End Semester Examination, December 2018**

**Course: Infrastructure Planning, Development & Management**

**Semester: VII**

**Programme: B Planning**

**Time: 03 hrs.**

**Max. Marks: 100**

**Instructions:**

**SECTION A**

S. No.		Marks	CO
Q 1	What are the disadvantages of intermittent water supply?	4	CO1
Q 2	What is Non-scouring velocity in drains /sewers?	4	CO1
Q 3	What the options are for re-cycle and re-use of treated sewage effluent?	4	CO1
Q 4	What is rain garden and what are its advantages?	4	CO1
Q 5	How firefighting demand of water is projected for a city?	4	CO1

**SECTION B**

Q 6	What are the issues in the development of regional infrastructure?	10	CO2
Q 7	What are the objectives of utilities and services planning and its implications for public health and environmental protection?	10	CO1
Q 8	What are the aerobic and un-aerobic methods of treatment of domestic waste water?	10	CO1
Q 9	Write notes on: a. Conventional energy sources b. Non-conventional energy sources	10	CO1

**SECTION-C**

Q 10	What is the Integrated Municipal Solid Waste Management hierarchy and steps involved for Development of Municipal Solid Waste Management Plan?	20	CO1
Q 11	What are the current initiatives of GOI for implementing the strategy of 'Power for All'? How power demand for a city is projected? OR	20	CO1

	What are the basic design considerations for planning of wastewater management and treatment system for a city? Please elaborate.		
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