Name: **Enrolment No:**	UPES

UNIVERSITY OF PETROLEUM AND ENERGY STUDIES
End Semester Examination, September/ October 2018

Programme Name: B.Sc. (Chemistry, Physics and Maths) **Semester : I**
Course Name : Environmental Science **Time : 03 Hrs**
Course Code : MPLE812 **Max. Marks : 100**
Nos. of page(s) :
Instructions: Please attempt all questions from Section "A", Section "B" and Section "C"

SECTION A : 20 Marks

Q.1.	Define following terms a) Rainwater Harvesting b) Watershed Management	**4**	**CO1**
Q.2.	What is the difference between point sources and non point sources of water pollution?	**4**	**CO3**
Q.3.	What are the concept and principles of sustainable development ?	**4**	**CO2**
Q.4.	Define the term biodiversity. Explain the different types of biodiversity .	**4**	**CO1**
Q.5	What is noise pollution? What are the various effects of noise pollution on human being?	**4**	**CO3**

SECTION B : 40 Marks

Note : Student are required to attempt all questions from Section "B" however internal choice is given among Q. 9 and Q.10 student may attempt any one question i.e Q.10 or Q.11

Q.6.	Define air pollution. What are the various sources of air pollutions? Explain the impacts of NOx, SOx and CO and SPM on human being.	**8**	**CO3**
Q.7.	To maintain hygienic conditions in the rural and urban environment, there is an urgent need for effective solid waste management. Explain any four methods which are used for the disposal of solid waste pollution.	**8**	**CO3**
Q.8.	Write any eight measures which are used for promoting sustainable development.	**8**	**CO2**
Q.9.	What is solid waste management ? Explain any three methods which are used for the disposal of solid waste.	**8**	**CO3**
Q.10.	What is soil pollution? Explain various causes and effects of soil pollution. Or	**8**	**CO3**
Q.11.	Explain various sources and effects of Nuclear pollution.	**8**	**CO3**

SECTION-C (40 Marks) **Note : Question No. 12 is compulsory and student may attempt any one question i.e either Q.13 or Q.14**			
Q.12	Describe various principle and functions of air pollution control equipment which are used to control particulate matter and gaseous pollutants from industrial emission with well labelled diagram.	**20**	**CO3**
Q13	**India** is one of the world's 'mega diversity' countries. At the ecosystem level, **India** is also well-endowed, with ten distinct biogeographic zones. It also contains two of the world's 25 **biodiversity** hotspots, because of their extraordinarily high levels of species-richness and endemicity, and threatened **status**. Explain the values of biodiversity . Describe the various causes which are responsible for the depletion of biodiversity ? Or	**20**	**CO1**
Q.14	When effluents / waste water is discharged into a water bodies i.e. river, lake and sea, a number of process occur like physical, chemical and biological characteristics of water change which causes loss of organism and deterioration of water quality. Describe the various units of Primary, Secondary and Tertiary treatment of Effluent Treatment Plant with the help of well labeled diagram to treat waste water.	**20**	**CO3**

Note: - Pl. start your question paper from next page

Name: **Enrolment No:**	UPES

UNIVERSITY OF PETROLEUM AND ENERGY STUDIES

Mid Semester Examination, September/ October 2018

Programme Name: B.Sc. (Chemistry, Physics and Maths) **Semester : I**

Course Name : Environmental Science **Time : 03 Hrs**

Course Code : MPLE812 **Max. Marks : 100**

Nos. of page(s) :

Instructions: Please attempt all questions from Section "A", Section "B" and Section "C"

SECTION A : 20 Marks

Q 1	What do you mean by Hot-Spot Biodiversity? Explain in-situ conservation of biodiversity.	**4**	**CO1**
Q.2.	What are primary and secondary air pollutant?	**4**	**CO2**
Q.3.	Define following terms ? (2 x 2 = 4) a) Point sources of water pollution b) Endemic Biodiversity	**4**	**CO3**
Q.4.	What is sustainable development? Explain two principles of sustainability.	**4**	**CO2**
Q.5.	What are the abiotic and abiotic component of forest ecosystem?	**4**	

SECTION B : 40 Marks

Note : Student are required to attempt all questions from Section "B" however internal choice is given among Q. 10 and Q.11 student may attempt any one question i.e Q.10 or Q.11

Q . 6.	To maintain hygienic conditions in the rural and urban environment, there is an urgent need for effective solid waste management. Explain any four methods which are used for the disposal of solid waste pollution.	**8**	**CO3**
Q.7.	What is water pollution ? Explain various sources and classification of water pollution. Identify various impact of water pollution on human being and on environment.	**8**	**CO3**
Q.8.	Explain the various measures which are used for conservation of biodiversity?	**8**	**CO1**
Q.9.	Define Sustainable development. What are the various concept and principles of sustainable development?	**8**	**CO2**
Q.10	Define noise pollution. What are the effects of noise pollution on human being. Write various measures by which we can control noise pollution. Or	**8**	**CO3**

Q.11	What is indoor and out door air pollution? Explain the impacts of SPM and NOx on human being and on plants.	**8**	**CO3**
SECTION-C (40Marks) **Note : Question No. 12 is compulsory and student may attempt any one question i.e either Q.13 or Q.14**			
Q.12.	Describe the various units of physical, chemical, biological and sludge treatment of Effluent Treatment Plant with the help of well labeled diagram to treat waste water generated from industries.	**20**	**CO3**
Q.13	Air pollutants are substances, causing damage to man, animal, plant, building or materials. Define the term Air Pollution. Enumerate the various treatment processes for controlling particulate and gaseous contaminants in industry Or	**20**	**CO3**
Q.14	What is biodiversity? State Productive and consumptive use of biodiversity? List the reason responsible for depletion of Biodiversity. Explain the various method used for the conservation of Biodiversity.	**20**	**CO1**