

UNIVERSITY OF PETROLEUM AND ENERGY STUDIES

End Semester Examination, December 2020

Course Name : Advance in Environmental Science Semester : III

Programme Name: M. Sc. Chemistry

Course Code: HSFS 8023

Time: 03 Hrs

Max. Marks: 100

Nos. of page(s):4

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

internal choice is given in question no. 11 and in question no. 12.

SECTION A

- 1. Each Question will carry 5 Marks
- 2. Instruction: Please attempt all questions.

SN	Questions	MM	СО
Q.1.	Fill in the Blanks :	5	CO1
	i) are salt-tolerant forest ecosystems found mainly in tropical and sub-tropical inter-tidal regions of the world.		
	ii)is defined as an orderly process of changes in community structure and function with time mediated through modifications in the physical environment and ultimately culminating in a stabilized ecosystem known as climax.		
	iii) forestry involves intensive plantation of trees on available land or on land not under agriculture with the aim of fulfilling the commercial demand ,without causing denudation of natural forests.		
	iv) is the process in which small droplet of oil which are bigger then dissolve molecules get incorporated into water in the form of dilute- oil water suspension.		
	v) The EIA is a widely used methodology, which would mainly use available data along with baseline Environmental data collected for one season (preferably winter), for evaluating all possible impacts on the components of Environment.		
Q.2.	Write T & F for the followings. i) The discipline of Process Safety Information involves studying how employees relate physically and psychologically with their working environment.	5	CO1
	payorany and populotogramy with their working environment.		

	ii) The Brutland Commission was created by the WHO in 1983 to reflect about ways to save		
	the human environment and natural resources and to prevent deterioration of economic and		
	social development.		
	iii) Strip farming is used on steeper slopes are converted into a series of broad terraces		
	which run across the contour.		
	iv) The developed countries acknowledge the responsibility that they bear in the		
	international pursuit of sustainable development in view of the pressures their societies place		
	on the global environment and of the technologies and financial resources they command.		
	v) Non point source of pollution occur when effluent or toxic material is directly discharged		
	into the water body.		
Q.3.	Write full from of the following abbreviations:	5	CO1
	i) CBD		
	ii) MAB		
	II) WAB		
	iii) LCA		
	;) POD % COD		
	iv) BOD & COD		
	v) OTEC		
Q.4	Choose the correct answer:	5	CO ₁
	i) The Air (Prevention and Control of Pollution) Act was passed in the year		
	a) 1980 b) 1981 c) 1982 d) 1983		
	ii) Which chemical acts as a catalyst and destroys Ozone layer?		
	a) Carbon b) Chlorine c) Sulphur d) Nitrogen		
	a) Carbon b) Chiorine c) Surphui d) Mitogen		
	iii) Suspended solids and floating materials are removed in which stage of waste water		
	treatment?		
	a) Primary b) Secondary c) Tertiary d) Biological treatment		
	a) Timary b) Secondary c) Termary a) Biological deathern		
	iv) Chlorosis and dwarfing in plants is caused due to		
	a) Sulphur dioxide b) Nitrogen dioxide c) Carbon monoxide d) Carbon dioxide		
	a, and a caron donate		
	v) Itai-Itai diseases caused by		
	a) Mercury b) Lead c) Cadmium e) Iron		
	a, Moreary 6, Dead 6, Cadillain 6, 11011		

Q.5.	Identify any five component of Process Safety Management which are used to prevent the accidental release of highly hazardous chemicals that could cause harm to employees and others.	5	CO2
Q.6.	Identify any five components which are used for the treatment of municipal solid waste management.	5	CO2
(Atte	SECTION B ($10 \times 5 = 50 \text{ Marks}$) empt all question from this section however internal choice is given Q.11 student may attended to the section.	tempt a	ny one
Q.7.	question. Describe all physical, chemical and biological parameters of water quality.	10	CO4
Q.8.	Describe various principle and functions of air pollution control equipment which are used to control particulate pollutants generated from industrial emission with well labelled diagram.	10	CO4
Q.9.	According to EIA notification 1994 under the environmental protection act 1986, the EIA process is mandatory for various development project for sustainable development. Evaluate various environmental components of EIA which you shall consider for taking Environmental clearance from Ministry of Environment and Forest and Climate Change.	10	CO5
Q.10	What are the various classification of natural resources.? Explain various causes which are responsible for degradation of natural resources.	10	CO3
Q.11	Explain details of environmental movement happened in India for the protection of environment and natural resources. Or	10	CO3
	What are biogeochemical cycles? Explain all the component of Nitrogen Cycle with suitable diagram.	10	CO3
	SECTION-C SECTION -C (2 x 20 = 20 Marks)		
Q.12	Evaluate various units of Physical, Chemical and Biological treatments of effluent Treatment Plant with the help of well labelled diagram.	20	CO5
	Or Explain working principle of generating electricity by geothermal energy, wind energy, tidal energy and hydro electric power plant with suitable schematic diagram. Explain	20	CO5

environmental limitations, advantages and environmental implications of renewable energy		
resources		
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