

OBJECTIVES:

- To study the nature and facts about environment.
- To finding and implementing scientific, technological, economic and political solutions to environmental problems.
- To study the interrelationship between living organism and environment.
- To appreciate the importance of environment by assessing its impact on the human world; envision the surrounding environment, its functions and its value.
- To study the dynamic processes and understand the features of the earth's interior and surface.
- To study the integrated themes and biodiversity, natural resources, pollution control and waste management.

UNIT I ENVIRONMENT, ECOSYSTEMS AND BIODIVERSITY 14

Definition, scope and importance of environment - need for public awareness - concept of an ecosystem - structure and function of an ecosystem - producers, consumers and decomposers - energy flow in the ecosystem - ecological succession - food chains, food webs and ecological pyramids - Introduction, types, characteristic features, structure and function of the (a) forest ecosystem (b) grassland ecosystem (c) desert ecosystem (d) aquatic ecosystems (ponds, streams, lakes, rivers, oceans, estuaries) - Introduction to biodiversity definition: genetic, species and ecosystem diversity - biogeographical classification of India - value of biodiversity: consumptive use, productive use, social, ethical, aesthetic and option values - Biodiversity at global, national and local levels - India as a mega-diversity nation - hot-spots of biodiversity - threats to biodiversity: habitat loss, poaching of wildlife, man-wildlife conflicts - endangered and endemic species of India - conservation of biodiversity: In-situ and ex-situ conservation of biodiversity. Field study of common plants, insects, birds; Field study of simple ecosystems - pond, river, hill slopes, etc.

UNIT II ENVIRONMENTAL POLLUTION 8

Definition - causes, effects and control measures of: (a) Air pollution (b) Water pollution (c) Soil pollution (d) Marine pollution (e) Noise pollution (f) Thermal pollution (g) Nuclear hazards - solid waste management: causes, effects and control measures of municipal solid wastes - role of an individual in prevention of pollution - pollution case studies - disaster management: floods, earthquake, cyclone and landslides. Field study of local polluted site - Urban / Rural / Industrial / Agricultural.

UNIT III NATURAL RESOURCES 10

Forest resources: Use and over-exploitation, deforestation, case studies- timber extraction, mining, dams and their effects on forests and tribal people - Water resources: Use and over- utilization of surface and ground water, floods, drought, conflicts over water, dams-benefits and problems - Mineral resources: Use and exploitation, environmental effects of extracting and using mineral resources, case studies - Food resources: World food problems, changes caused by agriculture and overgrazing, effects of modern agriculture, fertilizer-pesticide problems, water logging, salinity, case studies - Energy resources: Growing energy needs, renewable and non renewable energy sources, use of alternate energy sources. case studies - Land resources: Land as a resource, land degradation, man induced landslides, soil erosion and desertification - role of an individual in conservation of natural resources - Equitable use of resources for sustainable lifestyles. Field study of local area to document environmental assets - river / forest / grassland / hill / mountain.

UNIT IV SOCIAL ISSUES AND THE ENVIRONMENT 7

From unsustainable to sustainable development - urban problems related to energy - water conservation, rain water harvesting, watershed management - resettlement and rehabilitation of people; its problems and concerns, case studies - role of non-governmental organization- environmental ethics: Issues and possible solutions - climate change, global warming, acid rain, ozone layer depletion, nuclear accidents and holocaust, case studies. -

wasteland reclamation - consumerism and waste products - environment production act - Air (Prevention and Control of Pollution) act - Water (Prevention and control of Pollution) act - Wildlife protection act - Forest conservation act - enforcement machinery involved in environmental legislation- central and state pollution control boards- Public awareness.

UNIT V HUMAN POPULATION AND THE ENVIRONMENT

6

Population growth, variation among nations - population explosion - family welfare programme - environment and human health - human rights - value education - HIV / AIDS - women and child welfare - role of information technology in environment and human health - Case studies.

TOTAL: 45 PERIODS

OUTCOMES:

- Environmental Pollution or problems cannot be solved by mere laws. Public participation is an important aspect which serves the environmental Protection. One will obtain knowledge on the following after completing the course.
- Public awareness of environmental is at infant stage.
- Ignorance and incomplete knowledge has lead to misconceptions
- Development and improvement in std. of living has lead to serious environmental disasters

TEXT BOOKS:

1. Benny Joseph, 'Environmental Science and Engineering', Tata McGraw-Hill, New Delhi, 2006.
2. Gilbert M.Masters, 'Introduction to Environmental Engineering and Science', 2nd edition, Pearson Education, 2004.

REFERENCES :

1. Dharmendra S. Sengar, 'Environmental law', Prentice hall of India PVT LTD, New Delhi, 2007.
2. Erach Bharucha, "Textbook of Environmental Studies", Universities Press(I) PVT, LTD, Hyderabad, 2015.
3. Rajagopalan, R, 'Environmental Studies-From Crisis to Cure', Oxford University Press, 2005.
4. G. Tyler Miller and Scott E. Spoolman, "Environmental Science", Cengage Learning India PVT, LTD, Delhi, 2014.



NEHRU INSTITUTE OF ENGINEERING AND TECHNOLOGY

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Hello | |
2021 October 11, Monday, 03:31 PM

College:

Course:

Batch:

Class:

View:

Subject:

College: Nehru Institute of Engineering and Technology | Course: B Tech Computer Science and Business Systems | Year: 2020 | Class: A | Subject: GE8291 - ENVIRONMENTAL SCIENCE & ENGINEERING

Unit	Topic to be covered	No of Hours required	Scheduled Completion Date	Reference Book/weblink/eContent	Topic completed on (Date)	Methodology used	Expected Outcomes
	Definition, scope and importance of environment – need for public awareness - concept of an ecosystem	1	2021-04-12	1. Dharmendra S. Sengar, 'Environmental law', Prentice hall of India PVT LTD, New Delhi, 2007. 2. Erach Bharucha, 'Textbook of Environmental Studies', Universities Press(I) PVT, LTD, Hyderabad, 2015. 3. Rajagopalan, R, 'Environmental Studies- From Crisis to Cure', Oxford University Press, 2005. 4. G. Tyler Miller and Scott E. Spoolman, 'Environmental Science', Cengage Learning India PVT, LTD, Delhi, 2014.	2021-04-12 10:00:00	Online Class	
	structure and function of an ecosystem – producers, consumers and decomposers	1	2021-04-19		2021-04-19 10:00:00	Online Class	
1	energy flow in the ecosystem – ecological succession, food chains, food webs and	1	2021-04-21		2021-04-21 12:00:00	Online Class	

ecological pyramids					
Introduction, types, characteristic features, structure and function of the forest ecosystem	1	2021-04-23	2021-04-23 10:00:00	Online Class	
grassland ecosystem, desert ecosystem, aquatic ecosystems - ponds, streams, lakes	1	2021-04-24	2021-04-24 11:00:00	Online Class	
Aquatic ecosystem - rivers, oceans, estuaries	1	2021-04-26	2021-04-26 10:00:00	Online Class	
Introduction to biodiversity - genetic, species and ecosystem diversity	1	2021-04-28	2021-04-28 09:00:00	Online Class	
Biogeographical classification of India - value of biodiversity: consumptive use, productive use	1	2021-04-30	2021-04-30 10:00:00	Online Class	
Social, ethical, aesthetic and option values -	1	2021-05-01	2021-05-03 10:00:00	Smart Board	
Biodiversity at global, national and local levels - India as a mega-diversity nation -	1	2021-05-03	2021-05-04 11:00:00	Online Class	
hot-spots of biodiversity - threats to biodiversity: habitat loss, poaching of wildlife	1	2021-05-05	2021-05-07 09:00:00	Smart Board	
man-wildlife conflicts - endangered and endemic species of India	1	2021-05-07	2021-05-07 09:00:00	Online Class	
conservation of biodiversity: In-situ and ex-situ conservation of	1	2021-05-08	2021-05-08 11:00:00	Online Class	

biodiversity

Field study of common plants, insects, birds, Field study of simple ecosystems – pond, river, hill slopes, etc

1

2021-05-10

2021-05-10
10:00:00

Online Class

Total 14

Definition – causes, effects and control measures of: Air pollution, Causes, effects and control measures of Water pollution Causes, effects and control measures of Water pollution

1

2021-05-12

2021-05-12
12:00:00

Online Class

Causes, effects and control measures of Soil pollution, Causes, effects and control measures of Marine pollution

1

2021-05-14

2021-05-15
11:00:00

Online Class

Causes, effects and control measures of Noise pollution, Thermal pollution

1

2021-05-15

E. Spoolman, –Environmental Sciencell, Cengage Learning India PVT, LTD, Delhi, 2014.

2021-05-17
10:00:00

Online Class

Nuclear hazards – solid waste management, Causes, effects and control measures of municipal solid wastes

1

2021-05-17

2021-05-19
12:00:00

Online Class

Role of an individual in prevention of pollution – pollution case studies

1

2021-05-19

2021-05-21
09:00:00

Online Class

Disaster management: floods, earthquake,

1

2021-05-21

2021-05-22
11:00:00

Online Class

2

cyclone and landslides

1

2021-05-22

2021-05-24
10:00:00

Online Class

Field study of local polluted site – Urban / Rural / Industrial / Agricultural	1	2021-05-24		2021-05-26 12:00:00	Online Class
Total	8				
Forest resources: Use and over-exploitation, deforestation, case studies,	1	2021-05-26		2021-05-29 11:00:00	Online Class
timber extraction, mining, dams and their effects on forests and tribal people	1	2021-05-28		2021-05-31 10:00:00	Online Class
Water resources: Use and over- utilization of surface and ground water, floods, drought, conflicts over water, dams-benefits and problems	1	2021-05-29		2021-06-02 12:00:00	Online Class
Mineral resources: Use and exploitation, environmental effects of extracting and using mineral resources, case studies	1	2021-05-31	1. Dharmendra S. Sengar, 'Environmental law', Prentice hall of India PVT LTD, New Delhi, 2007. 2. Erach Bharucha, 'Textbook of Environmental Studies', Universities Press(I) PVT, LTD, Hyderabad, 2015. 3. Rajagopalan, R, 'Environmental Studies- From Crisis to Cure', Oxford University Press, 2005. 4. G. Tyler Miller and Scott E. Spoolman, 'Environmental Sciencell, Cengage Learning India PVT, LTD, Delhi, 2014.	2021-06-04 09:00:00	Online Class
Food resources: World food problems, changes caused by agriculture and overgrazing	1	2021-06-02		2021-06-05 11:00:00	Online Class
Effects of modern agriculture, fertilizer-pesticide problems, water logging, salinity, case studies	1	2021-06-04		2021-06-07 10:00:00	Online Class
Energy resources: Growing energy needs, renewable and non renewable energy sources, Use of	1	2021-06-05		2021-06-11 09:00:00	Online Class
3					

alternate energy sources				
case studies- Land resources: Land as a resource, land degradation, man induced landslides, soil erosion and desertification	1	2021-06-07		2021-06-12 11:00:00 Online Class
Role of an individual in conservation of natural resources – Equitable use of resources for sustainable lifestyles.	1	2021-06-09		2021-06-14 10:00:00 Online Class
Field study of local area to document environmental assets – river / forest / grassland / hill / mountain.	1	2021-06-11		2021-06-16 12:00:00 Online Class
Total	10			
From unsustainable to sustainable development – urban problems related to energy	1	2021-06-12		2021-06-18 09:00:00 Online Class
water conservation, rain water harvesting, watershed management	1	2021-06-14		2021-06-19 12:00:00 Online Class
resettlement and rehabilitation of people; its problems and concerns, case studies, role of non-governmental organization- environmental ethics: Issues and possible solutions	1	2021-06-16	1. Benny Joseph, 'Environmental Science and Engineering', Tata McGraw-Hill, New Delhi, 2006. 2. Gilbert M.Masters, 'Introduction to Environmental Engineering and Science', 2nd edition, Pearson Education, 2004. 22	2021-06-21 10:00:00 Online Class
4 climate change, global	1	2021-06-18		2021-06-23 Online Class

warming, acid rain,
ozone layer depletion,
nuclear accidents and
holocaust, case studies

12:00:00

wasteland reclamation
– consumerism and
waste products –
environment production
act

1 2021-06-19

2021-06-25
09:00:00 Online Class

Air (Prevention and
Control of Pollution) act
– Water (Prevention
and control of Pollution)
act – Wildlife protection
act

1 2021-06-21

2021-06-28
10:00:00 Online Class

Forest conservation act
– enforcement
machinery involved in
environmental
legislation; central and
state pollution control
boards- Public
awareness.

1 2021-06-23

2021-07-30
09:00:00 Online Class

Total 7

Population growth,
variation among
nations,

1 2021-06-25

2021-07-02
09:00:00 Online Class

population explosion

1 2021-06-26

. Dharmendra S. Sengar, 'Environmental
law', Prentice hall of India PVT LTD, New
Delhi, 2007. 2. Erach Bharucha, 'Textbook
of Environmental Studies', Universities

2021-07-03
11:00:00 Online Class

family welfare
programme –
environment and
human health

1 2021-06-28

Press(I) PVT, LTD, Hyderabad, 2015. 3.
Rajagopalan, R, 'Environmental Studies-
From Crisis to Cure', Oxford University
Press, 2005. 4. G. Tyler Miller and Scott E.
Spoolman, 'Environmental Science',
Cengage Learning India PVT, LTD, Delhi,
2014.

2021-07-05
10:00:00 Online Class

human rights, value
education – HIV / AIDS
–

1 2021-06-30

2021-07-07
12:00:00 Online Class

women welfare, child
welfare

1 2021-07-02

2021-07-09
09:01:00 Online Class

5 – role of information

1 2021-07-03

2021-07-10 ICT

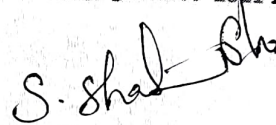
technology in
environment and
human health - Case
studies

11:01:00

Total 6

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PRE ANALYSIS 2020-2021 BATCH GE8291-ENVIRONMENTAL SCIENCE AND ENGINEERING

Register No	STUDENT NAME	Select your Class	knowledge on [To understand the natural environment, its relationships	Your knowledge on [To understand about pollution on the environment.]	Your knowledge on [To study the various natural resources.]	Your knowledge on [To understand the impact of social issues on the environment.]	Your knowledge on [To study about human population on the environment.]	Suggestions (if any)
721420101071	RESITHA M	Fair	Good	Fair	Fair	Good	Good	No suggestion
721420101072	SABARESHWARAN K	Moderate	Moderate	Moderate	Moderate	Moderate	Good	
721420101073	SANJAI S	Good	Fair	Moderate	Good	Good	Fair	
721420101074	SANJAY S	Good	Good	Good	Good	Good	poor	No
721420101075	SANTHOSH P	Good	Good	Fair	Moderate	Moderate	Fair	
721420101076	SANTHOSH KUMAR S	Moderate	Fair	Fair	Moderate	Fair	Good	
721420101077	SARAVANA GOWTHAM A	Good	poor	Moderate	Moderate	Moderate	Good	
721420101078	SARAVANAN N	Good	Fair	Fair	Moderate	Fair	Fair	
721420101079	SATHYA MOORTHY K	Good	Good	Moderate	Moderate	Good	Moderate	
721420101090	SRIVIGNESH B	Moderate	Good	Fair	Good	Good	Fair	
721420101091	SUBARANJITHA S	Moderate	Fair	poor	Moderate	Fair	Good	
721420101092	SUBASANTOSH S	Good	Moderate	Fair	Moderate	Moderate	Fair	
721420101052	MOHAMED MUSRAF S	Moderate	Fair	poor	Fair	Fair	Moderate	
721420101053	MOHAMMAD YASEEN AR	Good	Good	Fair	Moderate	Moderate	Moderate	Good
721420101054	MUTHUPANDI C	Good	Fair	Fair	Good	Good	Excellent	
721420101055	NAMBOORI SAIKALYAN	Good	Moderate	Fair	Fair	Good	Good	
721420101098	VISHNU T	Fair	Moderate	Fair	Moderate	Excellent	Moderate	
721420101099	VISHNU BHARATHI T	Good	Excellent	Fair	Moderate	Good	Moderate	
721420101100	VIVEK SALAMON V	Moderate	Good	Fair	Moderate	Good	Good	
721420101101	WASIMKHAN I	Good	Moderate	Fair	Moderate	Excellent	Moderate	
721420105004	ARUN K	Good	Moderate	Moderate	Good	Moderate	Moderate	
721420105023	SHANTHOS BABU K	Excellent	Good	Good	Fair	Moderate	Good	
721420105027	VIGNI SHWARAN T	Moderate	Moderate	Moderate	Moderate	Moderate	Fair	
721420101058	NAMBOORI SAIKALYAN	Moderate	Good	poor	poor	Fair	Moderate	
721420101056	NANDHINI K	Moderate	Moderate	Fair	Moderate	Good	Moderate	
721420101057	NANDURI SAI CHAITANYA SUDARSHAN	Moderate	Moderate	Fair	Good	Good	Moderate	

721420101058	NAVEENPRASANTH K	Good	Moderate	Fair	Moderate	Good	Moderate		
721420101059	NERAIWIN S	Fair	Fair	Fair	Fair	Fair	Good		
721420101060	NICHENAMETLA VENKATA CHARAN N	Good	Good	Moderate	Moderate	Good	Fair		
721420101061	ONEASHI R	Good	Moderate	Fair	Moderate	Good	Moderate	No	
721420101062	PARITHI BHARATHI S	Good	Good	Fair	Moderate	Moderate	poor		
721420101063	PASUPURATHI SURYAPRAKASH REDDY	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate	Nothing	
721420101093	SWETHA S	Good	Good	Moderate	Moderate	Good	Good	No mam	
721420101094	THILAGAR N	Good	Good	Good	Excellent	Good	Moderate		
721420101095	VANGALI MOHAMMAD FA	Moderate	Moderate	Fair	Good	Good	Fair	No suggestions mam	
721420101096	VIGNESWARAN S	Moderate	Moderate	Fair	Moderate	Moderate	Moderate	something about some concepts	
721420101097	VIJITH V	Good	Moderate	Fair	Good	Moderate	Moderate		
721420101064	PAVAN KUMAR J	Excellent	Excellent	Excellent	Excellent	Excellent	Moderate	All of clear	
721420101065	PONDUGULA CHINNAPI REDDY	Excellent	Moderate	Moderate	Good	Good	Moderate	I have doubts in surface chemistry and phase ruiue	
721420101066	POORNISHA S	Good	Moderate	Fair	Moderate	Good	Moderate		
721420101067	PRAGADHISH T	Excellent	Good	Good	Good	Excellent	Moderate	Good	
721420101068	RAGHUL B	Moderate	Moderate	Fair	Moderate	Good	Good		
721420105008	DEENATHAYALAN R	Excellent	Good	poor	Good	Good	Moderate	Good	
721420105011	KAMMETI HARI TEJA	Moderate	Moderate	Moderate	Moderate	Moderate	Good	Moderate	Good
721420105012	KARTHICK N	Good	Good	Moderate	Good	Good	Good	Good	No
721420105015	MOHAMED RUSLAN V N	Excellent	Excellent	Moderate	Good	Good	Good	Good	
721420105016	MUDDHI SETTY VIJAY KUMAR	Moderate	Fair	Moderate	Fair	Moderate	Excellent		
721420105017	MUTYALAPATI MOUNIKA	Good	Good	Moderate	Excellent	Good	Fair	No	
721420105021	SARATH S	Excellent	Excellent	Excellent	Excellent	Good	Good		

S. J.
 7/11/2021

S. S. K.
 7/11/2021



NEHRU INSTITUTE OF ENGINEERING & TECHNOLOGY

T. M. Palayam, Coimbatore-641105

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NBA Accredited UG Courses: AERO, CSE, MECH



Knowledge Level	K1 : Remembering	K2 : Understanding	K3 : Applying	K4 : Analyzing	K5 : Evaluating	K6 : Creating
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DEPARTMENT OF SCIENCE AND HUMANITIES INTERNAL TEST - I - May'21 GES291- ENVIRONMENTAL SCIENCE AND ENGINEERING (R 2017) (Set - I)

Course Instructor: Mrs.D.Tharani
Class / Sem : I- B.E/B. Tech/ II
Duration: 90 Mins

Portion : 1 units
Date / Session : 08.05.2021
Max. Marks : 50

PART -A (5*2=10 Marks)

1.	What would happen to an ecosystem if all its producers were eliminated?	K2
2.	How the biome does differ from an ecosystem?	K2
3.	What are the criteria for recognizing hot spots?	K1
4.	Write the various adoptive features of desert plants?	K1
5.	Mention the steps involved in the process of formation of pioneer and seral communities.	K1

PART - B Answer all Questions (5*8 = 40 Marks)

6.a.	What is the information that can be obtained from different types of ecological pyramids?	K2
OR		
6.b.	Discuss the Universal model of energy flow in an ecosystem.	K1
7.a.	Discuss the environmental factors affecting the performance of an aquatic ecosystem.	K2
OR		
7.b.	Compare the physical and chemical characteristics of Marine water with Terrestrial water.	K2
8.a.	Name and discuss the values that can be assigned to the biodiversity.	K1
OR		
8.b.	List the important sites in India identified for the conservation of endemic species. Mention the major endemic species of India.	K2
9.a.	How the biodiversity plays important role at global, national and local levels.	K2
OR		
9.b.	Discuss the Biodiversity hot - spots identified in India.	K1
10.a.	Draw the process of food chain and food web.	K2
OR		
10.b.	What are the major causes of man-wild conflicts? Discuss the remedial steps that can curb the conflict.	K2

43
50

Name: Algin P

Reg: NO ; 721420101000

Sub code - name: CIE 8291 - E

Date of test: 8/05/2021

Number of pages: 7

S. J.

Part - A

- 1) * The removal of producers would causes the Collapse of the entire food web, primary consumers of herbivorous, which food feed on producers directly, would die off
- * How ever the dead organism would run and the entire food web could collapse

2) It is a set of ecosystem which are exposed to same climatic conditions and having dominat species with similar life cycle, climatic condition and physical structure. This set of an ecosystem is called as biome

- 3) * The richness of the endemic species
- * It should be have a significant percentage of specialized species
- * The site is under threat
- * It should contain important genes pools of plants of potentially useful plants

(3)

- 4, + Deep roots to tap groundwater
+ large, fleshy stems to store water
+ Thorns and thin, spiky leaves to reduce water loss
+ Thick, waxy skin to reduce loss of water and to reflect heat

- 5, Pioneer Community:
+ The first group of organism which establish their
Community in the area is called pioneer community.
+ It develops soil
+ It is the first Community to develop bare area

Series of ~~several~~ stages:

The various developmental stages of a Community
is called ~~several~~ seral stage

four seral stages:

- + Lateral seral
- + Mid seral
- + potential natural Community
- + Early seral

Part - B

b) Energy flow in the Ecosystem:

* Energy is the most essential requirement for all living organism. Solar energy is the only source to our planet earth.

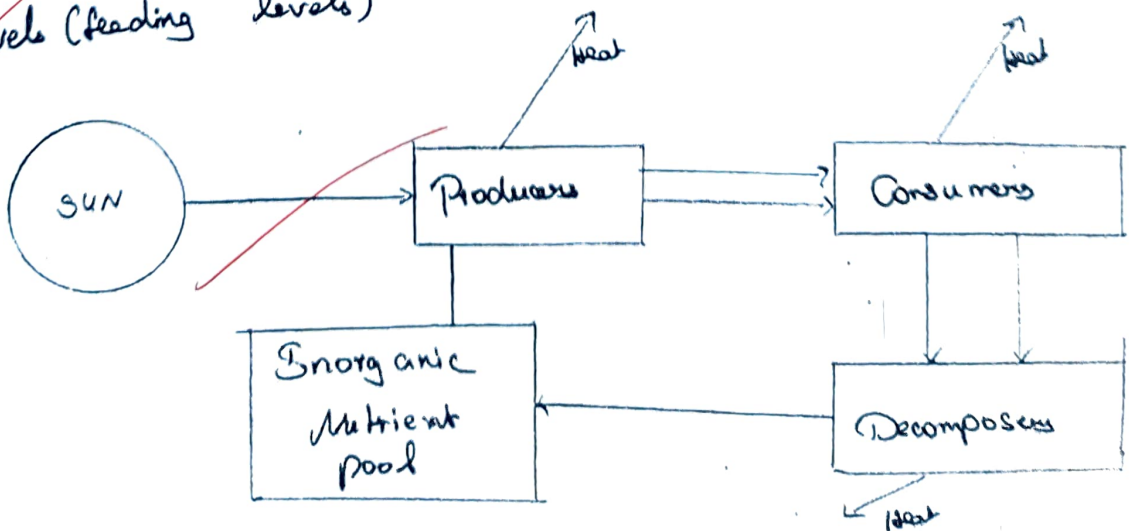
* Solar energy is transformed to chemical energy in photosynthesis by the plant is called primary producers

* Though a lot of sunlight falls on the green plants, only 1% of it utilized for photosynthesis

* This is the most essential step to provide energy for all other living organism in the ecosystem

* Some amount chemical energy is used by the plant for their growth and the remaining is transferred to consumers by the process of eating

* Thus the energy enters the ecosystem through photosynthesis and passes through the different trophic levels (feeding levels).



7, a) Environmental factors affecting the performance of an aquatic ecosystem;

variability and changes are natural processes in aquatic ecosystem and ecosystem communities. Organisms have in many cases adapted to different environmental conditions.

Human effects on aquatic ecosystem can result from pollution, changes to the landscape or hydrological system, and larger scale impacts such as global climate change. The complexity of aquatic ecosystem and the linkages within them can make the effect of disturbances on them difficult to predict. These linkages mean that damage to one component of the ecosystem can lead to impact on the other ecosystem components.

Increasing our understanding of aquatic ecosystem can lead to better practices that minimize impacts on aquatic environments.

Environment factors affect aquatic ecosystem:

- + Beavers
- + Flooding
- + Human influences on aquatic ecosystem
- + Bioaccumulation and Biomagnification
- + Endocrine disrupting substances
- + Climate changes
- + Atmospheric deposition

(5)

8 a, Various uses of diversity are classified:

Consumptive use value:

These are direct use values, when the biodiversity are harvested and consumed directly
eg: food, drug, fuel, etc...

Productive use value:

It have obtained a commercial value these products are marketed and sold these products may be derived from the animal and plant eg: musk → musk deer

Social values:

Social value of the biodiversity refers to the human in which used to the society. It associated with social life.
i, holy plants → tulsi, lotus etc..
ii, holy animals → Cow, snake, etc....

Ethical values:

It includes ethical values like "all life must be preserved"
It means that a species may or maynot be used but its existence in nature gives us pleasure

Optimal values:

These are the potential of biodiversity that are perfectly unknown and need to know. The biodiversity suggest that any species may be proved to be a valuable species

* Medicinal plants and health play a important role

(6)

9, b, Hot Spots of Biodiversity in India:

It is a geographic areas which possess the high endemic species. If these species are lost they can never be replaced or regenerated.

Criteria for recognizing Hotspots:

They should have a significant percentage of specialized species; the site should be under threat and should contain important gene pools of plants of potential use

Two hot spots in India are:

i, Eastern Himalayas

ii, Western Ghats

i, Eastern Himalayas:

It comprises of 35,000 plant species and found here and 30% are endemic also rich in wild plants. 63% mammals are from this region, 60% of Indian Birds, huge wealth of fungi, insects, mammals and birds found in this region

ii, Western Ghats:

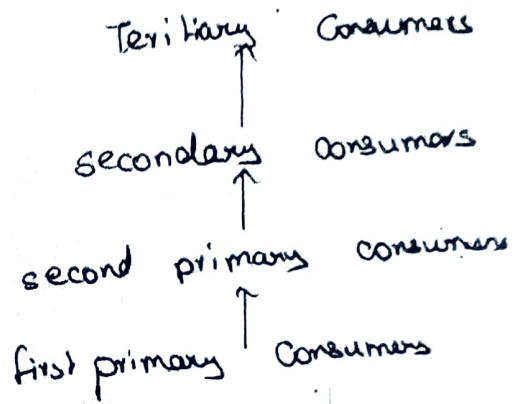
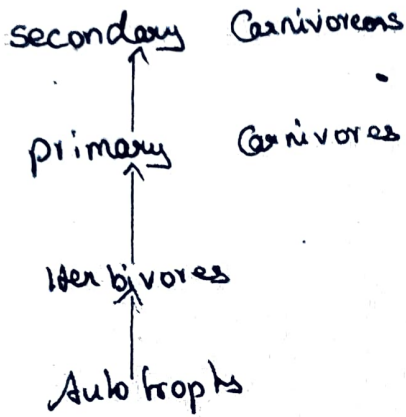
It comprised nearly 1500 endemic, dicotyledones 60% amphibians and 50%. Lizards are endemic here. Blue bird and Lizard hawk are common animal

Indian Biodiversity is highly diverse and rich such that there are various hot spots. However there are numerous threats to our Bio-diversity

10) a) Food chains:

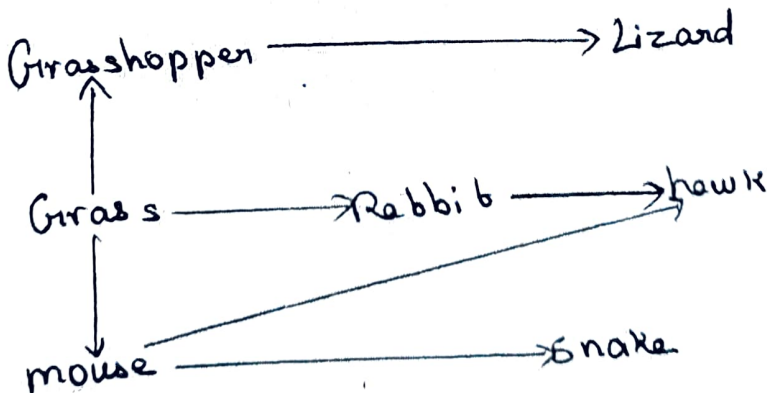
A food chain describes how energy and nutrients move through an ecosystem

eg: plants → Grasshopper → scorpion - Eagle



Food web:

It implies the transfer of food energy from its source in plants through herbivores to carnivores. Food webs consist of number of food chain meshed together





NEHRU INSTITUTE OF ENGINEERING & TECHNOLOGY

T. M. Palayam, Coimbatore-641105

(Approved by AICTE, New Delhi and Affiliated to Anna University, Chennai)

Accredited by NAAC, Recognized by UGC with 2(f) and 12(B)

NBA Accredited UG Courses: AERO, CSE, MECH



Knowledge Level (KL)	K1 : Remembering	K2 : Understanding	K3 : Applying	K4 : Analyzing	K5 : Evaluating	K6 : Creating
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DEPARTMENT OF SCIENCE AND HUMANITIES

INTERNAL TEST – II – June'21

GE8291- ENVIRONMENTAL SCIENCE AND ENGINEERING (R 2017)

(Set – I)

Course Instructor: Mrs.A.Lakshmi Priya

Portion: 2&3 units

Class / Sem: I- B.E/B. Tech/ II

Date/Session:11.06.2021/AN

Duration: 90 Mins

Max. Marks: 50

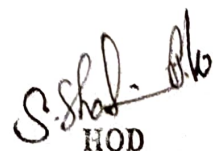
PART –A (5*2=10 Marks)

1.	Mention the environmental impacts of the toxic gases when it is mixed with atmospheric air.	K2
2.	Explain the effects of sewage treatment plants and runoff of chemicals from urban streets in to water bodies.	K2
3.	State the environmental effects of extracting and using mineral resources.	K1
4.	Define the process which affects the growth of algal blooms.	K2
5.	Examine soil erosion. How can it be controlled?	K3

PART – B Answer all Questions (5*8 = 40 Marks)

6.a.	Enumerate the adverse effects and control measures of air pollution.	K2
	OR	
6.b.	Write a flow chart and explain the steps involved in solid waste management.	K1
7.a.	Briefly describe the sources, effects and prevention of soil pollution.	K4
	OR	
7.b.	Explain the causes, effects and control measures of water pollution.	K4
8.a.	Evaluate the role of an individual in pollution prevention in detail.	K5
	OR	
8.b.	Write about the effects of constructing dams on forest and tribal people.	K1
9.a.	Discuss different ways of harnessing solar energy. What are the advantages and limitation of solar energy?	K3
	OR	
9.b.	Explain with a case study about the recent landslides and soil erosion in India	K4
10.a.	Summarize the term "modern agriculture". Discuss its impact and harmful effects.	K5
	OR	
10.b.	Support by an individual is essential to protect natural resources. Explain.	K6


Course Coordinator


HOD

118
50

Name: N. Akash
Reg. NO: 721420101005
Subject code: GEC 201
Date: 11/06/2010
Total pages: 05

SJ

PART - A

- 1) Air pollution can directly contaminate the surface of bodies of water and soil. This can kill crops or reduce their yield. It can kill young trees and other plants. Sulfur dioxide and nitrogen oxide particles in the air, can create acid rain when they mix with water and oxygen in the atmosphere.
- 2) If waste water is not properly treated, then the environment and human health can be negatively impacted. Other substances such as some pharmaceuticals and personal care products, primarily entering the environment in waste water effluents, may also pose threats to human health, aquatic life and wildlife.
- 3)
 - Devegetation and defacing of landscape
 - Surface water pollution.
 - Air pollution
 - Ground water contamination.

5) Soil erosion is the process of removal of the top layer of the soil from one place to another.

Soil erosion can be reduced by:

- Maintaining a healthy & perennial plant cover
- Mulching
- Planting a cover crop such as winter rye in vegetable gardens

6) Nutrients promote and support the growth of algae and cyanobacteria. The eutrophication (nutrient enrichment) of waterways is considered as a major factor. The main nutrients contributing to eutrophication are phosphorus and nitrogen.

PART B

7a) Role of an individual in pollution prevention:

- Plant more trees
- Help more in pollution prevention than pollution control
- Use water, energy and other resources efficiently
- Purchase recyclable, recycled and environment friendly products
- Use CFC free refrigerators
- Use of water

3R

I) Reduce the usage of Raw material

If usage of raw material are reduced, the generation of waste also gets reduced.

II) Reuse of waste material

- a) The refillable containers can be reused.
- b) Rubber rings can be made from the discarded cycle tubes, which reduce waste generation.

III) Recycling of material.

Recycling is the reprocessing of the discarded material into new useful product.

Examples

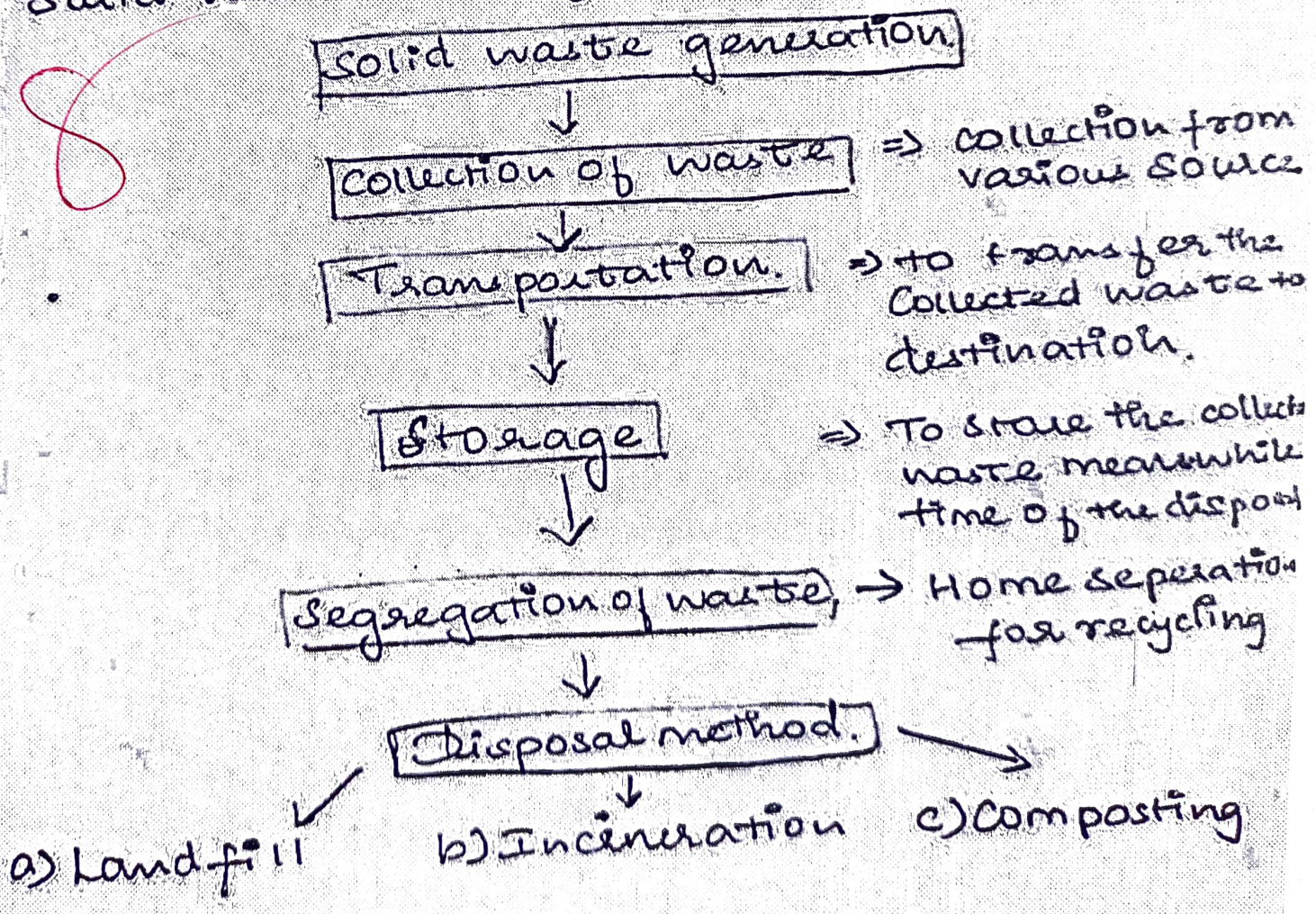
- a) Preparation of cellulose insulation from paper
- b) Preparation of fuel pellets from kitchen waste.

7a)

Pollutant	Major source.	Effects.
Industrial waste.	Textiles, steel, paper, cement industries, oil refineries etc.	Affects human health and soil fertility
Urban waste.	Commercial and domestic waste. Ex: Garbage, plastics, glasses, metallic cans	Spread diseases which destroy the beneficial bacteria.
Agriculture practices	Fertilizers, pesticide. Weedicides.	Nervous disorder, mutation in man

- Reduce deforestation
- use office machine in well ventilated area
- use less polluting substitutes
- use of organic manure instead of inorganic fertilizer
- Reduce carbage by recycling and reuse
- Remove NO_x from motor vehicle exhaust.
- Dont use polystyrene cups that have CFC molecule, which destroy ozone layer.

6b) Solid waste management flow chart.



(5)

Radioactive waste.	Radioactive waste. (eg) Ba-140 I-131 Sr-90 etc.	Acute and genetic diseases.
Biological agents	Human and animal wastes, garbage.	Tuberculosis Cholera.

Control of soil pollution:

- 1) Trees can be planted on barren slopes.
- 2) Rotate the crop pattern.
- 3) Bio pesticide should be used instead of toxic chemical pesticide.
- 4) Recycling and reuse of water.
- 5) Toxic chemical and pesticide like DDT, BHC should be avoided.
- 6) open dumping should be avoided.
- 7) Nuclear explosion and improper disposal of radioactive waste should be banned.

10b) Role of an individual in conservation of natural resources

Conservation of energy:

- Switch off light, fans and other appliances when not in use.
- Use solar heater for cooking food in summer.
- Grow trees near houses, to get cool breeze and shade. This will cut off the electricity charge on AC.

⑥

- Ride bicycle or just walk instead of using car and scooter

Conservation of water

- use of minimum water for all domestic purpose.
- check for leakage pipes and toilets and repair them.
- Reuse of soapy water, after washing clothes for washing drive ways, court yard etc.
- waste water from kitchen can be used in plants.
- Rainwater harvesting in house.

Conservation of soil

- Grow different type of plants, herbs, trees and grass in garden to prevent erosion
- Don't irrigate the plant using a strong flow of water as it will wash the top soil.
- Use mixed cropping so that some specific soil nutrients will not get depleted.
- use of green manure.

Conservation of food resource

- Avoid over eating
- Don't waste food instead give it to some one
- Cook only required amount
- Don't to a large amount of food grain
- Don't cook unnecessarily

Conservation of forest

- Use of non-forest products
- Plant more trees
- Grazing is controlled
- minimize use of paper and wood
- Avoid development work like dam and road construction in forest area.

9a) Significance of solar energy

- 1) solar cells are noise and pollution free
- 2) solar heaters, cookers, require neither fuel nor attention while cooking.
- 3) solar cells can be used in remote and isolated area, forest, hilly regions

Disadvantages.

- 1) The initial cost of purchasing solar system is fairly high
- 2) Although solar energy can still be collected during cloudy and rainy day, the efficiency of the solar energy drops.
- 3) solar energy storage is expensive.
- 4) Associated with pollution.

Methods of harvesting solar energy

- 1) Photo voltaic solar panel
- 2) solar water heater
- 3) Mottten salt solar power



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DEPARTMENT OF SCIENCE AND HUMANITIES
INTERNAL TEST – III – July'21
GES291- ENVIRONMENTAL SCIENCE AND ENGINEERING (R 2017)
(Set – I)

Course Instructor: Mrs.A.Lakshmi Priya
Class / Sem: I- B.E/B. Tech/ II
Duration: 90 Mins

Portion: 4th & 5th units
Date/Session: 04.07.2021/AN
Max. Marks: 50

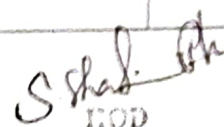
PART –A (5*2=10 Marks)

1.	Explain nuclear holocaust.	K2
2.	What happens when halogen compounds are released into atmosphere?	K1
3.	Give the objectives of Family welfare program.	K1
4.	What are the draw backs of wildlife (protection) act, 1972?	K2
5.	What is population explosion? Write its causes.	K1

PART – B Answer all Questions (5*8 = 40 Marks)

6.a.	Find out rainwater harvesting methods being adopted in your locality and try to propose suggestions for improvement. Why it is necessary now-a-days?	K2
	OR	
6.b.	Compile the important provisions in Environmental act and Air act.	K2
7.a.	State the different natural calamities. Explain any one in detail.	K4
	OR	
7.b.	What do you mean by sustainable development? Explain the measures to attain sustainability.	K2
8.a.	Discuss briefly the problems and concerns related to resettlement and rehabilitation of people.	K2
	OR	
8.b.	Discuss the variation of population among nations.	K2
9.a.	Briefly describe the various schemes launched for women and child welfare In India.	K1
	OR	
9.b.	What are the objectives and elements of value education? How can they be achieved?	K3
10.a.	Discuss about role of information technology in environment and human health.	K2
	OR	
10.b.	Write a note on AIDS in developing countries?	K1


Course Coordinator


HOD

Name: Bavitkian. D

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Register No: 721420101017

III

Subject code & GE 8291

Name: Environmental Science and Engine

Date of test: 04-07-2021

Total No. of Pages: 9

34
50

Part-A

S. J. Patel

1. Nuclear holocaust.

It means destruction of biodiversity by nuclear equipments and nuclear bombs. The act of killing.

2. Halogen compounds are released into atmosphere.

Halogens degrade air quality by promoting surface ozone formation. ~~At~~ ground level ozone is a pollutant and prolonged exposure can lead to respiratory diseases & damages Orgs.

3. The objectives of family welfare Program.

* Slow down the Population explosion by reducing the fertility.

* Pressure on environment due to over exploitation of natural resources.

4. The draw backs of wildlife Protection Act, 1972.

* Penalty is implemented to offenders.

Illegal wildlife trade can't be stopped in J&K.

Personal ownership certificate is required.

5. Population explosion and its causes.

The enormous increase in population, due to low death rate and high birth rate, is termed as Population explosion.

Causes:

* Invention of modern medical facilities

* Increase of life expectancy.

6b) The important provisions in Environmental Protection Act.

This Act was enacted in the conference held at Stockholm in 1972. It deals with the problems relating to air pollution. It envisages the establishment of central and state control boards endowed with the absolute powers to monitor air quality and pollution control.

Objectives of air act are

- i) To prevent, control and abatement of air pollution.
- ii) To maintain the quality of air.
- iii) To establish a board for the prevention and control of air pollution.

6 important features of Air Act

* The Central Board may lay down the standards for the quality of air.

* The Central Board coordinates and state disputes

between state boards, in addition to providing technical
with assistance and guidance to State Boards.

* The State Boards are to collect and disseminate the
information related to air pollution and also to function
as inspectorates of air pollution.

* The directions of the Central Board are mandatory
on State Boards.

* The operation of an industrial unit is prohibited in a
heavily polluted areas without the consent of the
Central Boards.

Environment (Protection) Act, 1986.

This is a general legislation law in order
to rectify the gaps and laps in the above Acts. This
Act empowers the Central government to fix the
standards for quality of air, water, soil and noise and
to formulate procedures and safe guards for handling
of hazardous substances.

Objectives of environmental Act.

7.017 The different natural calamities.

The different natural calamities are floods, hurricanes, tornadoes, volcanic eruptions, earthquakes, tsunamis, etc.

Earthquakes.

* An earthquake is the result of a sudden release of energy in the earth's crust that creates seismic waves. At the earth's surface.

* The earthquakes manifest themselves by vibration, shaking and some times displacement of ground.

* Earthquakes are caused by slippage within geological faults.

* The underground point at origin of earthquake is called the focus.

* The point directly above the focus on the surface is called epicenter.

- i) TO Protect and improvement of the environment.
- ii) TO Prevent hazards to all living creatures and Property.
- iii) TO maintain harmonious Relationship between humans and their environment.

Important features of Environment Act.

* The Act further empowers the government to lay down Procedures and safe guards for the Prevention of Accidents which causes Pollution and remedial measures if an accident occurs.

* If the violation continuous, an additional fine of Rupees five thousands per day may be imposed for the entire Period of violation of rules.

* The Act fixes the liability of the offence Punishable under Act on the Person who is directly in charge.

* The Act empowers the officer of central government to inspect the site or the Plant or the machinery for Preventing Pollution

* It is usually the secondary event that they triggers, such as collapsing buildings, fires, tsunamis.

8.b). The variation of ~~Pop~~ population among nations.

* At Present the world's population has crossed 6 billions. This existing population is also not evenly distributed, less developed countries have 80% Population while the developed countries have only 20%.

* Less developed countries (Africa, Asia, South America) have 80% of the total world Population and occupy less than 20% of the total land Area.

* In the most developed countries like U.S.A, Canada, Australia, the Population increases at the rate of less than 1% of Per year.

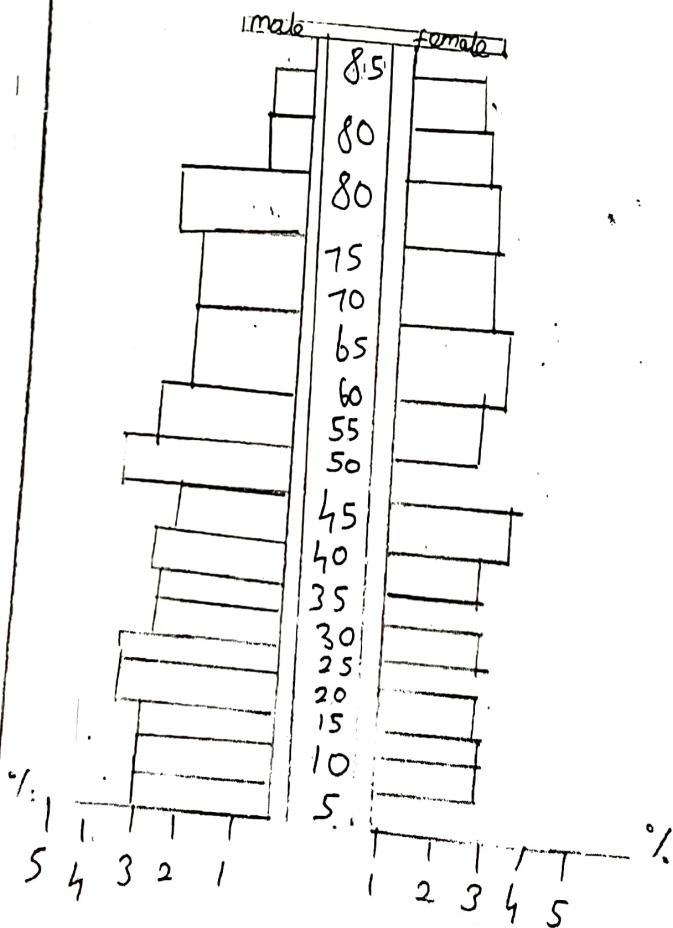
Variation of Population based on Age Structure

- i) Pre-Productive Population (0-14 years)
- ii) Reproductive Population (15-44 years)

iii) Post reproductive Population (above 45 years).

1. urn shaped variation of Population.

The Pre-productive age group population (0-14 years) is smaller than the reproductive age of the Population (15-44 years). In the next 10 years, the number of People in the reproductive age group is less than the before, resulting in a decrease of Population growth.



2. Bell shaped variation of Population

The Pre-Productive age group Population (0-14 years) and reproductive age group Population (15-44 years) are more or less equal. So the People entering into the reproductive age group will not change the Population, and thus the Population growth is stable.

10. b) AIDS in developing countries

* Without a medical miracle, it seems inevitable that the Acquired Immune Deficiency Syndrome (AIDS) Pandemic will become not only the most serious Public health Problem of this generation but a dominating issue in 3rd world developing.

* As a Present-day killer, AIDS in developing countries is insignificant compared to malaria, tuberculosis, or infant. diarrhea, but this number is misleading in 3 ways.

Water

Pollution



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Definition:

Water pollution occurs when harmful substances - often chemicals or microorganisms contaminate a stream, river, lake, ocean, aquifer or other body of water, degrading water quality and rendering it toxic to humans or the environment.

Water Pollution in Terkasi:

Water pollution is the introduction into fresh or ocean waters of chemical, physical or biological material that degrades the quality of the water and affects the organisms living in it.

This process ranges from simple addition of dissolved or suspended solids to discharge of the most insidious and persistent (such as pesticides, heavy metals, and non degradable, bio accumulative, chemical compounds). Examples of water pollution are mining, agricultural wastes and industrial effluent such as

paint, dyeing units etc. Dyeing industries, mixing of sewage, paper mill and industrial effluents, dumping etc. into is a worrying aspects. sand mining in this river was banned in 2010 but it still continues illegally. illegal encroachments of its banks is also a growing concern in Kambiaravari river in Tirunelveli district, Pepsi and other cola companies bottling facility plants were thought to be exploiting the river water, however a court ruling in April 2018 dismissed the allegations and allowed the companies to extract excess water as per the original agreements they have signed.

untreated sewer of towns like Ambasamuthiram, Tirunelveli, Papanasam etc. also reduce the water quality downstream. Religious practices like letting your clothes along the river at Papanasam as an act to wash sins after a bath has also clogged up the river.

Prevention:

- * Preserve and restore water resources in agriculture and water sheds





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- * Ensure that not a drop is wasted in operations.

- * Enable access to water.

Our endeavour is to give back to nature and replenish the ground water twice as much as what is used in our manufacturing site.



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DEPARTMENT OF SCIENCE AND HUMANITIES

I YEAR CSBS (2020-2021)

GE8291-ENVIRONMENTAL SCIENCE AND ENGINEERING



S.No	Register Number	Name	IT 1	IT 2	IT 3
1	721420244001	ADEPPAGARI PAVAN KALYAN	88	90	93
2	721420244002	ANILKUMAR D	89	90	96
3	721420244003	ARJUN A	90	93	97
4	721420244005	ATHIN K V	95	90	96
5	721420244006	BHUMIREDDY SUNIL KUMAR REDDY	96	92	95
6	721420244009	DISILVA B	98	90	96
7	721420244010	GOVARTHAN G	90	90	94
8	721420244011	HARIKRISHNA G	98	94	98
9	721420244012	INFANT MANICKA RAJ J	98	90	96
10	721420244013	JAGAN A	80	93	95
11	721420244014	JAYAKANTHAN A	91	90	97
12	721420244015	KANCHANA C	96	94	95
13	721420244016	KARNATI SAI NATH REDDY	96	90	94
14	721420244017	KARTHIKEYAN R	85	91	95
15	721420244018	KAVIYA N	97	95	98
16	721420244020	KIPSON DANI R R	97	90	96
17	721420244021	KOPPARAPU UMA SHANKAR	94	92	95
18	721420244022	MANIKANDAN M	96	91	99
19	721420244023	MANNURU BADHULLA	96	90	94
20	721420244024	MOHAMED NASSER A	98	95	95
21	721420244025	MOKANAPRIYA S	95	90	96
22	721420244026	NUTHALAPATI VINITHA	94	92	94
23	721420244027	PADIGIPATI ALTHAF	98	92	97
24	721420244028	PAPPURI VARTHAN REDDY	80	90	95
25	721420244029	PARTHIBAN P	90	94	94
26	721420244030	POREDDY AMBARISH REDDY	96	94	93
27	721420244031	POTHANABOYINA VENKATA SIVA SAI	94	90	95
28	721420244032	RAJA GURU MOORTHY V	91	90	96
29	721420244033	SAKTHI ESWAR GURUMAARAN K	98	90	96
30	721420244034	SAMALA GUNA SEKHAR REDDY	89	90	95
31	721420244035	SARAVANAPRIYA K	94	90	98
32	721420244037	SYED SAMAN S M	95	93	96
33	721420244038	VALLAPU GANESH	97	90	93
34	721420244039	VALLAPU MADHUSUDHAN	94	90	94
35	721420244040	VINCEN TRAJ G	94	90	92
36	721420244041	VISHVA M	94	91	94

A. Th...
CLASS ADVISOR

S. Shal...
HOD

POST ANALYSIS 2020-2021 BATCH GE8291-ENVIRONMENTAL SCIENCE AND ENGINEERING

Register No	STUDENT NAME	Select your Class	knowledge on [To understand the natural environment, its relationships	Your knowledge on [To understand about pollution on the environment.]	Your knowledge on [To study the various natural resources.]	Your knowledge on [To understand the impact of social issues on the environment.]	Your knowledge on [To study about human population on the environment.]	Suggestions (if any)
721420101052	MOHAMED MUSRAF S	Excellent	Good	Good	Excellent	Good	Good	No suggestion
721420101053	MOHAMMAD YASEEN ARAFAT	Excellent	Good	Good	Excellent	Moderate	Fair	
721420101054	MUTHUPANDI C	Excellent	Fair	Moderate	Excellent	Good	Good	
721420101055	NAMBOORI SAI KALYAN	Excellent	Good	Excellent	Excellent	Good	Good	
721420101069	RAJ ABRAHAM P	Excellent	Good	Excellent	Moderate	Moderate	Fair	
721420101070	RAPHIK RAJA I	Moderate	Fair	Excellent	Moderate	Fair	Good	
721420101071	RESITHA M	Good	Good	Moderate	Moderate	Moderate	Fair	I am clear
721420101072	SABARESHWARAN K	Good	Fair	Fair	Good	Fair	Good	
721420101073	SANJAI S	Good	Good	Moderate	Good	Good	Good	
721420101074	SANJAY S	Moderate	Good	Good	Good	Good	Fair	no doubts
721420101075	SANTHOSH P	Moderate	Fair	Good	Moderate	Fair	Moderate	
721420101076	SANTHOSH KUMAR S	Good	Moderate	Excellent	Moderate	Moderate	Fair	I can underatand
721420101077	SARAVANA GOWTHAM A	Moderate	Fair	Excellent	Fair	Fair	Good	
721420101078	SARAVANAN N	Excellent	Good	Excellent	Good	Good	Fair	
721420101079	SATHYA MOORTHY K	Excellent	Fair	Excellent	Good	Good	Good	
721420101090	SRIVIGNESH B	Excellent	Good	Excellent	Fair	Good	Good	
721420101091	SUBARANJITHA S	Excellent	Good	Excellent	Excellent	Excellent	Excellent	clear
721420101092	SUBASANTOSH S	Excellent	Excellent	Excellent	Excellent	Good	Good	
721420101093	SWETHA S	Moderate	Good	Excellent	Excellent	Good	Moderate	
721420101094	THILAGAR N	Good	Moderate	Good	Excellent	Excellent	Moderate	
721420101095	VANGALI MOHAMMAD FARDEEN	Good	Moderate	Moderate	Excellent	Moderate	Good	all topics are very easy to underatand
721420101096	VIGNESWARAN S	Excellent	Good	Good	Fair	Moderate	Moderate	
721420101097	VIJITH V	Moderate	Moderate	Moderate	Moderate	Moderate	Excellent	clear
721420101098	VISHNU T	Moderate	Good	Good	poor	Excellent	Fair	
721420101099	VISHNU BHARATHI T	Moderate	Excellent	Fair	Moderate	Excellent	Moderate	
721420101100	VIVEK SALAMON V	Moderate	Excellent	Good	Good	Excellent	poor	
721420101101	WASIMKHAN I	Good	Excellent	Good	Moderate	Excellent	Moderate	I can underatand
721420105004	ARUN K	Good	Good	Good	Good	Fair	Good	

721420105008	DEENATHAYALAN R	Excellent	Good	Moderate	Moderate	Good	Moderate	
721420105011	KAMMETI HARI TEJA	Excellent	Moderate	Good	Moderate	Good	Good	understood
721420105012	KARTHICK N	Excellent	Good	Good	Moderate	Moderate	Moderate	
721420105015	MOHAMED RUSLAN V N	Moderate	Excellent	Moderate	Moderate	Moderate	Moderate	
721420105016	MUDDHI SETTY VIJAY KUMAR	Good	Good	Moderate	Moderate	Excellent	Moderate	syllabus is very easy
721420105017	MUTYALAPATI MOUNIKA	Good	Good	Good	Excellent	Excellent	Moderate	
721420105021	SARATH S	Excellent	Moderate	Fair	Good	Excellent	Moderate	
721420105022	SETTYPALLI THARUN KUMAR REDDY	Excellent	Moderate	Fair	Moderate	Moderate	Excellent	understable
721420105023	SHANTHOS BABU K	Good	Moderate	Fair	Good	Moderate	Good	
721420105027	VIGNESHWARAN T	Excellent	Excellent	Excellent	Excellent	Excellent	Moderate	All of clear
721420101055	NAMBOORI SAI KALYAN	Excellent	Moderate	Moderate	Good	Good	Good	all of clear
721420101056	NANDHINI K	Good	Moderate	Fair	Moderate	Good	Good	
721420101057	NANDURI SAI CHAITANYA SUDARSAN	Excellent	Good	Good	Good	Excellent	Good	Good
721420101058	NAVEENPRASANTH K	Excellent	Moderate	Good	Moderate	Good	poor	
721420101059	NERAIWIN S	Excellent	Good	poor	Good	Good	Excellent	
721420101060	NICHENAMETLA VENKATA CHARAN N	Moderate	Excellent	Excellent	Moderate	Moderate	Excellent	
721420101061	ONEASHI R	Good	Good	Excellent	Good	Excellent	Excellent	Good
721420101062	PARITHI BHARATHI S	Excellent	Excellent	Excellent	Good	Excellent	Excellent	
721420101063	PASUPURATHI SURYAPRAKASH REDDY	Moderate	Excellent	Excellent	Fair	Moderate	Excellent	Good
721420101064	PAVAN KUMAR J	Excellent	Excellent	Excellent	Excellent	Good	Excellent	
721420101065	PONDUGULA CHINNAPI REDDY	Excellent	Excellent	Excellent	Excellent	Good	Moderate	I can understand
721420101066	POORNISHA S	Moderate	Moderate	Moderate	Moderate	Moderate	Good	clear
721420101067	PRAGADHISH T	Moderate	Good	Good	poor	Excellent	Fair	
721420101068	RAGHUL B	Moderate	Excellent	Fair	Moderate	Excellent	Good	

S. J. J.
11/01/2024

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