**TU/ CODL**

**TEZPUR UNIVERSITY**

**SEMESTER END EXAMINATION (SPRING) 2020**

**DEM 101: ENVIRONMENT: BASIC UNDERSTANDING**

**Time**:3 Hours **Total Marks**: 70

*The figures in the right-hand margin indicate marks for the individual question.*

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1. Choose the correct answer- 1x10=10

a) The amount of energy actually incorporated into the biomass of

phototrophs is ……………

i. net primary productivity ii. gross primary productivity

iii. primary productivity iv. secondary productivity

b) Which of the following pyramids can never be inverted in a natural

ecosystem?

i. pyramid of numbers ii. pyramid of biomass

iii. pyramid of energy iv. pyramid of density

c) Organisms in third trophic level (T3) are ………………

i. detritivores ii. carnivores

iii. herbivores iv. producers

d) Ozone forms a well-marked ozone layer, called ozonosphere within

the ......................

i. troposphere ii. mesosphere

iii. stratosphere iv. ionosphere

e) Carbon dioxide makes up approximately what percentage of the

atmosphere?

i. 0.03% ii. 3%

iii. 0.3% iv. 0.003%

f) Human Environment Conference-1972 was held at ……….

i. Brazil ii. Stockholm

iii. Geneva iv. Paris

**P.T.O**.

g) Fertilizers used in agricultural fields often reach to lakes and ponds

due to surface runoff. This causes a phenomenon called ……

i. bioaccumulation ii. phosphorylation

iii. eutrophication iv. oligotrophic

h) What is the original source of almost all the energy in most

ecosystems?

i. carbohydrates ii. water

iii. sunlight iv. carbon

I) Acceptable “Noise Pollution Level” in India ranges between ……

i. 16-35 dB ii. 40-45 dB

iii. 70-100 dB iv.10-15 dB

j) ‘Greenhouse effect’ means-

1. increase of heat due to atmospheric pollution
2. trapping of solar energy due to carbon dioxide gases
3. trapping of solar energy by earth upper surface
4. cultivation of crops in green house to conserve heat

2. Fill in the blanks-

1. The number of animals that a given area will support without damage to the habitat or to the animals is called its ………… 1
2. Biogeochemical cycles refer to the …………………….. between the living and abiotic components of various nutrients. 1
3. Water covers …… of the earth’s surface but only ……. of this is fresh water. 2
4. The ambient air is stable when the ambient lapse rate is …… 1
5. During the process of photosynthesis, radiant energy trapped by green plants is converted to……………………. chemical energy. 1
6. A group of species (plants and/or animals) living together in a natural area is known as a ………………… community. 1
7. Carnivory in plants is thought to have evolved in response to ……

…….. 1

1. The process of converting nitrate to nitrogen gas and nitrous oxide is called ………… 1
2. The earth is an open system with respect to …… 1

3.Write a brief note on the following: 3x5=15

1. Tragedy of the Commons
2. Intellectual Property Rights
3. EIA
4. Bio-piracy
5. El Niño

4. Answer the following:

1. Define ecological pyramid. Why are there usually few organisms at the top of an energy pyramid? 1+2=3
2. Why protection and conservation of biodiversity is so important?

3

1. Write the elements of environment and discuss how they interact with each other. 4
2. What are ‘greenhouse gases’? Why does an increased greenhouse effect lead to climate change? 4
3. Describe the causes and effects of floods. 4

***or***

Explain the physical and chemical weathering of rocks.

1. Describe ecological functions of an ecosystem in terms of energy flow. 5
2. Why the cases of human-wildlife conflict are increasing in India? Discuss the underlying causes of human-wildlife conflict.

3+3=6

***or***

Describe the associated problems of growing human population and write how its consequences effect on environment.

1. Describe any two human-induced environmental hazards. 6

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