**TU/ CODL**

**TEZPUR UNIVERSITY**

**SEMESTER END EXAMINATION (SPRING) 2020**

**DRE 101: ENERGY AND ENVIRONMENT**

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: 1x21=21

a. . Carbon is introduced into the atmosphere by all EXCEPT

which of the following means?

i. wind erosion ii. respiration

iii. burning of fossil fuels iv. volcanic eruptions

b. Aerobic respiration requires:

i. glucose and carbon dioxide ii. carbon dioxide and oxygen

iii. glucose and oxygen iv. oxygen and water

c. At the top of a pyramid of biomass are the:

i. secondary consumers ii. primary consumers

iii. secondary producers iv. tertiary consumers (third

level)

d. Photoautotrophs are:

i. primary producers ii. primary consumers

iii. secondary consumers iv. secondary producers

e. Destruction of tropical rain forests will help to accelerate:

i. carbon cycle ii. global warming

iii. precipitation iv. nitrogen cycle

f. Decomposers are mainly:

i. bacteria and fungi ii. virus

iii. birds iv. Scavengers

g. The major reservoir for nitrogen is the:

i. hill ecosystem ii. aquatic ecosystem

iii. forests iv. atmosphere

**P.T.O.**

h. Acid rain is caused by the release of the following components

from combustion of fuels:

i. SOx and NOx ii. SOx and CO2

iii. CO2 and NOx iv. H2O

I. Which of the following is highest contributor to the air pollution?

i. Carbon Monoxide ii. Hydro Carbons

iii. Sulphur Oxides iv. Particulates

j. Energy consumption per unit of GDP is called as:

i. Energy Ratio ii. Energy intensity

iii. Per capita consumption iv. Energy efficiency

k. Chemical reactions triggered by \_\_\_\_\_\_\_ to transform organic

material into hydrocarbons:

i. solar energy ii. hydroelectric

iii. elevated temperatures iv. decomposition

l. Which of the following rock types would most likely be the best oil

reservoir?

i. granite ii. shale

iii. sandstone iv. salt

m. A permeable rock that contains hydrocarbon fluids and gasses is

called a(n) \_\_\_\_\_\_\_\_\_

i. oil trap ii. source bed

iii. oil reservoir iv. none of these

n. Two-thirds of the world's known oil reserves are located in

\_\_\_\_\_\_\_\_.

i. Siberia ii. Gulf of Mexico and Caribbean

iii. the middle East iv. Indonesia

o. Which of the following energy sources does not produce carbon

dioxide?

i. Oil ii. Uranium

iii. coal iv. natural gas

p. Which country leads in the production of bioethanol in the world?

i. United States of America ii.Brazil  
 iii. Germany iv. Argentina

q. SI unit for energy is\_\_\_\_\_\_\_\_\_\_\_\_

i. Watt ii. Kilogram

iii. Newton iv. Joule

r. In hydroelectricity power\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

i. Kinetic energy is transferred to potential energy

ii. Potential energy is transferred to kinetic energy

iii. Solar energy is transferred to wind energy

iv. Wind energy is transferred to solar energy

s. What is the main aim of UNFCCC?

i. Stabilization of greenhouse gas

ii. Increase of greenhouse gas

iii. Increase of temperature

iv. Stabilization of oxygen

t. What is the indicator of pollution in water?

i. Amount of oxygen ii. Amount of hydrogen

iii. Amount of BOD iv. Amount of nitrogen

u. What is the main reason for ozone depletion?

i. Releasing of oxygen ii. Releasing of chemicals

iii. Releasing of CFCs iv. Releasing of nitrogen

2. Write notes on **any five** of the following: 5×5=25

1. Ecological hierarchy
2. Renewable energy resources in North-east India
3. Environmental laws in India
4. UNFCCC
5. Energy security
6. Energy and Society

**3.** Answer **any two** of the following: 12×2=24

1. “The exploitation of renewable energy resources and technologies is a key component of sustainable development”. Discuss how use of renewable energyresources and technologies can lead to the sustainable development around the world.
2. Discuss the major environmental concerns of energy extraction & use and also highlight the possible remedial measures.
3. Discuss the relationship between energy consumption and climatic change variables, and role of energy efficiency and energy conservation in long-term climate change mitigation.

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