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MED-001

POST GRADUATE DIPLOMA IN ENVIRONMENT AND SUSTAINABLE DEVELOPMENT (PGDESD)

Term-End Examination

December, 2013

MED-001 : UNDERSTANDING THE ENVIRONMENT

Time : 2 hours *Maximum Marks : 50*

Note : *All questions are **compulsory** and carry **equal** marks.*

1. Respond to the following : **2x5=10**

(a) Name the terms for energy available from

(i) Volcanoes, hotsprings and geysers in the depths of oceans and

(ii) megadams

(b) Define the terms 'ecosystem' and 'biome'.

(c) Define biotic potential and carrying capacity.

(d) How does the 'key link concept' explain the stability of an ecosystem ?

(e) State one difference in the formation of igneous rocks and metamorphic rocks. Give one example of each type of rock.

2. (a) What is meant by "conservation and management of the environment" ? Why has this become necessary ? State three measures by which this can be achieved. **1+2+3=6**

(b) In which biomes are the following found ? ½x4=2
(i) Flightless birds
(ii) Seals
(iii) Largest flower on Earth-*Raffesia*
(iv) Broad leaf deciduous forests.

(c) State any one adaptation for obtaining Oxygen, in animals living in standing waters, and one adaptation of deep sea fish in finding a mate. 2

OR

(a) Differentiate between the following pairs of terms with example, or diagrammatic illustration. 6
(i) Weather and climate
(ii) Food chain and food web
(iii) Pelagic zone and benthic zone of a water body.

(b) What is the impact of the following on the environment ? 4
(i) El-Nino
(ii) Oil Spill

3. (a) The concentration of N_2O, CH_4 and CO_2 have increased considerably in the post industrial revolution era. Why is this a matter of concern ? Explain in details. 5

(b) Add a note on formation of : 2½+2½=5
(i) Photochemical smog and
(ii) Acid rain

OR

(a) List the major types of wastes that pollute land and soil. 5

(b) Write notes on any two of the following :
(i) Ganga action Plan 2½+2½=5
(ii) Sources of radiation pollution
(iii) Impact of noise pollution on human health.

4. (a) (i) Explain the manner in which the total amount of water in nature tends to remain constant. 3+2

(ii) How does an estuary act as a 'nutrient trap' ?

(b) Explain with examples the various kinds of associations between two species which become necessary for survival of both species. 5

OR

Write a sentence each on the following on points asked against them. 10

(a) Sea mounts: location; formation

(b) Continental shelf: location; benefit for marine plants

(c) Euphotic zone: location; benefit for plankton

(d) Ground water : Meaning; relation with aquifer

(e) Thermal Stratification : definition; name of warm upper layers.

5. (a) Explain how bioaccumulation and biomagnification may cause poisoning in an organism. 2½+2½=5

(b) Differentiate between GPP and NPP. 2

(c) Ecosystems are generally very inefficient in the use of energy available to them state three reasons for this. 3

OR

(a) What do you mean by 'Nutrient budget' of an ecosystem ? Explain the various ways by which the forest ecosystem receives nutrient inputs from the environment. 1+6=7

(b) Mention any three factors which promote rapid cycling of nutrients in tropical forests. 3