[Total No. of Questions - 10] [Total No. of Printed Pages - 3]
(2123)

1304

B. Tech 1st Semester Examination

Disaster Management and Environmental Science (N.S.)

HS-101

Time : 3 Hours **Max. Marks : 100**

The candidates shall limit their answers precisely within the answer-book (40 pages) issued to them and no supplementary/continuation sheet will be issued.

Note : Candidates are required to attempt five questions in all selecting one question from each of the sections A, B, C and D of the question paper and all the subparts of the questions in Section E. Use of non-programmable calculator is allowed.

SECTION - A

1. Explain the way you understand the environmental instability. Enumerate and discuss briefly the natural disastrous events that create environmental imbalances. **(20)**

2. Describe the cause, action, and products of a volcano. Outline the specific types with suitable examples. Also discuss the effects of volcanic activity on climate and weather. **(20)**

SECTION - B

3. Discuss the mitigating measures of secondary effects of earthquakes including a variety of short range events, such as landslides, fires, and floods; and long range effects such as regional subsidence and changes in groundwater table. **(20)**

4. Explain how man has tried to mitigate river floods, and discuss the adverse impacts of such controlling structures on flood plain ecosystem. **(20)**

SECTION - C

5. Differentiate between the renewable, non-renewable, and perpetual natural resources, giving examples of each type. **(20)**

6. Critically discuss and debate the necessity of construction of dams and reservoirs for creating storages of water above the ground. In this context, describe the environmental impacts of dams in detail. **(20)**

SECTION - D

7. Define and describe the structure of atmosphere. Discuss the influence of radiative forcing on climate change. Outline the regional impacts of temperature change. **(20)**

8. Explain the Kyoto Protocol aims to address the problem of anthropogenic climate change. In what way the Protocol reinforced the UNFCCC by requiring developed countries to set legally binding emission reduction targets for greenhouse gases. **(20)**

SECTION - E

9. Fill in the blank with single correct option:

   (a) The minimum DO prescribed for a river stream to avoid fish kill is _____ (2 mg/L or 4 mg/L or 6 mg/L or 8 mg/L).

   (b) The most significant primary gaseous pollutant found in vehicular emission is _____ (CO/ CO_2/ SO_2/ O_3).

   (c) Depletion of ozone layer in the outer atmosphere is likely to increase the incidence of _____ (lung cancer/ skin cancer/ bronchitis/ none of these).

   (d) The zone on earth where alone life exists is called _____ (hydrosphere/ lithosphere/ biosphere/ troposphere).

   (e) The polluting gas which is primarily responsible for causing the green house effect and global warming is _____ (SO_2/ H_2S/ CO_2/ none of them).

(f) If the concentration of a substance dissolved in water is expressed as ppb (parts per billion), then for all practical purposes it can also be written as _____ (mg/L or µg/L or g/m^3).

(g) Global atmospheric temperatures are likely to be increased due to _____ (burning fossil fuels/ water pollution/ soil erosion/ none of these).

(h) The biodiversity hotspot in India is _____ (Western Ghats/ Gulf of Manner/Pachmarhi/Sunderbans).

(i) First of the major environmental protection acts to be promulgated in India was _____ (the water act/ the air act/ the environment act).

(j) The Stockholm Convention on persistent organic pollutants was signed in the year _____ (1998/ 1999/ 2000/ 2001). **(1×10=10)**

10. Match the following statements (put the number from column Q into the column P) **(10)**

Column - P	**Column - Q**
(i) Bhopal	(i) Carbon monoxide
(ii) Weather	(ii) Environmental Management
(iii) Cyclone	(iii) Carbon dioxide
(iv) ISO 14000 Standards	(iv) Troposphere
(v) Garbage	(v) Kitchen
(vi Acidity	(vi) Reverse osmosis
(vii) Incomplete combustion	(vii) Methyl isocyanides
(viii) Grey water	(viii) Mass curve
(ix) Dissolved Solids	(ix) Biodegradable
(x) Reservoir	(x) Gaseous pollutants