



Name :

Roll No. :

Invigilator's Signature :

CS/BCA/SEM-4/HU (BCA)-401/2012

2012

ENVIRONMENT & ECOLOGY

Time Allotted : 3 Hours

Full Marks : 70

The figures in the margin indicate full marks.

*Candidates are required to give their answers in their own words
as far as practicable.*

GROUP - A

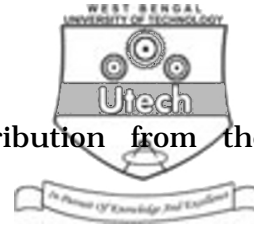
(Multiple Choice Type Questions)

1. Choose the correct alternatives for any *ten* of the following :

10 × 1 = 10

- i) A 'habitat' is
 - a) a place to buy furniture and furnishings
 - b) the same as an ecosystem
 - c) a particular area inhabited by plants and animals
 - d) the number of different organisms living in a specific area.

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ii) Acid rain is formed due to contribution from the following pair of gases :

- a) Methane and ozone
- b) Oxygen and nitrous oxide
- c) Methane and sulphur dioxide
- d) Carbon dioxide and sulphur dioxide.

iii) Which one is primary pollutant ?

- a) Smoke
- b) CO
- c) PAN
- d) CO₂ .

iv) Incineration is disposal method of

- a) solid waste
- b) water pollutant
- c) air pollutant
- d) none of these.

v) Lapse rate refers to the rate at which

- a) Population increases in area with increase in temperature
- b) Temperature decreases with increase in elevation
- c) Temperature decreases with decrease in elevation
- d) None of these.



- vi) D.D.T. is a
- a) Biodegradable pollutant
 - b) Non-biodegradable pollutant
 - c) Biochemical pollutant
 - d) Chemical pollutant.
- vii) pH of acid rain generally varies from
- a) 1 - 2
 - b) 5 - 6
 - c) 0 - 7
 - d) 3 - 6.
- viii) The ozone hole in the Antarctic is due to
- a) CH_2
 - b) CFC
 - c) O_3
 - d) All of these.
- ix) Air pollutant which reduces oxygen carrying capacity of haemoglobin is
- a) Ammonia
 - b) Hydrogen sulphide
 - c) Carbon monoxide
 - d) None of these.

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- x) Which one of the following ozone is harmful ?
- a) Stratospheric ozone
 - b) Tropospheric ozone
 - c) Laboratory ozone
 - d) None of these.
- xi) The Earth Summit at Rio de Jenerio was held with the aim of integrating environmental imperatives and development aspiration in
- a) June 1993
 - b) December, 1972
 - c) June 1972
 - d) None of these.
- xii) The main causes of deforestation are
- a) overgrazing & agriculture
 - b) timber
 - c) industry & develop projects
 - d) all of these.



GROUP - B

(Short Answer Type Questions)

Answer any *three* of the following. $3 \times 5 = 15$

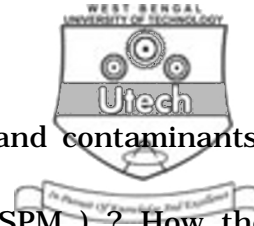
2. Write a note on EIA.
3. What is population growth. Describe the S-shaped growth curve of population growth. $1 + 2 + 2$
4. Define environment. What are the components of environment ? Name any four environmental problems faced by today's world. $1 + 2 + 2$
5.
 - a) What is Greenhouse effect ?
 - b) Name the Greenhouse gases in the atmosphere.
 - c) What is their impact on sea level rise ? $1 + 2 + 2$
6. What is hydrologic cycle ? What is Darcy's law ?
7. What is bio-medical waste ? Write some methods for disposal of biomedical waste.

GROUP - C

(Long Answer Type Questions)

Answer any *three* of the following. $3 \times 15 = 45$

8. How would you broadly classify the major segments of atmosphere ? State the latitudinal and altitudinal specifications of each range with the important chemical species of each region. $7 + 8$



9. State the differences between pollutants and contaminants.

What is suspended particulate matter (SPM) ? How the stratospheric ozone layer is formed and also getting depleted ? Mention the detrimental effect of ozone layer depletion upon biosphere ?

2 + 3 + 6 + 4

10. Define biodiversity. What are the different types of biodiversity ? State the stages of EIA. Write down the definition of ecology and ecosystem.

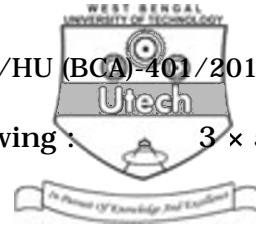
2 + 3 + 6 + 4

11. What is noise pollution ? What are the acute and chronic effects of noise pollution ? Define intensity, frequency and L_{10} (18 hours) index.

2 + 7 + 6

12. How do the pollutants are dispersed in the form of smoke from the chimney of industries ? When and why was the "Green Bench" set-up ? State the role of NGOs in environmental protection.

7 + 3 + 5



13. Write short notes on any *three* of the following : 3 × 5

- a) Role of plastic on land pollution
- b) Electro static precipitator
- c) Composting
- d) Trickling filter
- e) Adverse effects of heavy metals in natural and waste water.

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