

IV/BCA/401

Student's Copy

2018
(CBCS)
(4th Semester)

BACHELOR OF COMPUTER APPLICATIONS

Paper No. BCA-401

(Environment and Ecology)

Full Marks : 75

Time : 3 hours

(PART : A—OBJECTIVE)

(Marks : 25)

The figures in the margin indicate full marks for the questions

SECTION—A

(Marks : 15)

1. Tick (✓) the correct answer in the brackets provided : 1×10=10

(a) Who wrote the *Origin of Species*, which brought to light the close relationship between habitats and species?

- (i) Ralph Emerson ()
- (ii) E. O. Wilson ()
- (iii) Charles Darwin ()
- (iv) John Muir ()

(b) The lithosphere began as a hot ball of matter which formed the earth about

- (i) 3.2 billion years ago ()
- (ii) 3.6 billion years ago ()
- (iii) 4.2 billion years ago ()
- (iv) 4.6 billion years ago ()

(c) The Narmada Bachao Andolan in India is an example of a movement against

- (i) large dams ()
- (ii) small dams ()
- (iii) large industry ()
- (iv) small industry ()

(d) The food pyramid has a large base of plants, which are called

- (i) first-order consumers ()
- (ii) producers ()
- (iii) decomposers ()
- (iv) food chains ()

(e) The food pyramid has a narrower middle section that depicts the number and biomass of herbivorous animals, which are called

- (i) second-order consumers ()
- (ii) carnivorous animals ()
- (iii) producers ()
- (iv) first-order consumers ()

(f) At present conservation scientists have been able to identify and categorise a species on earth is about

- (i) 0.8 million ()
- (ii) 1.8 million ()
- (iii) 2.8 million ()
- (iv) 3.8 million ()

(g) What is the percentage of Indian plants, which are endemic to the country and found nowhere else in the world?

- (i) 2% ()
- (ii) 8% ()
- (iii) 12% ()
- (iv) 18% ()

(h) The pollutants that are produced in the atmosphere when certain chemical reactions take place among the primary pollutants are called

- (i) single pollutants ()
- (ii) tertiary pollutants ()
- (iii) secondary pollutants ()
- (iv) poly pollutants ()

- (i) The persistent pesticide banned in India for agricultural use is
- | | | | |
|-----------|-----|----------|-----|
| (i) DDT | () | (ii) DOP | () |
| (iii) DAP | () | (iv) KOP | () |
- (j) Who believed that humans were 'trustees of the lower animal kingdom'?
- | | |
|----------------------|-----|
| (i) Jawaharlal Nehru | () |
| (ii) Mahatma Gandhi | () |
| (iii) Karl Marx | () |
| (iv) Abraham Lincoln | () |

2. Tick (✓) whether the following statements are True (T) or False (F) : 1×5=5

- (a) A predominant commercial energy sources used in India is coal.
(T / F)
- (b) The Cheetah in India are well-known examples of extinct species.
(T / F)
- (c) The top layer of the soil horizon is called a horizon.
(T / F)
- (d) The World Environment Day is celebrated on 5th June.
(T / F)
- (e) When birthrate is lesser than death rate, it is called zero-population growth.
(T / F)

SECTION—B

(Marks : 10)

Write notes on the following :

2×5=10

1. Human development index
2. Land degradation
3. Genetic diversity
4. E-waste
5. Greenhouse effect

(PART : B—DESCRIPTIVE)

(Marks : 50)

The figures in the margin indicate full marks for the questions

1. (a) What are renewable resources? Describe briefly the exploitation of renewable resources. 3+7=10

OR

- (b) Explain sustainable water management. Also explain the overutilization of surface and groundwater. 4+6=10

2. (a) What is ecosystem? Discuss the structure and function of an ecosystem. 3+7=10

OR

- (b) Define energy flow in ecosystem. With the help of diagrams, explain different types of ecological pyramid. 2+8=10

3. (a) What are endemic species? Explain *in-situ* conservation and *ex-situ* conservation of biodiversity. 4+6=10

OR

- (b) Define biodiversity. Classify the hot spot of biodiversity in India. 3+7=10

4. (a) What is water pollution? Explain point source and non-point source of water pollution. 3+7=10

OR

- (b) What are the effective mitigation programmes in disaster management? Discuss the mitigation measures of earthquake. 4+6=10

5. (a) What is meant by population explosion? Explain the effect of population on sustainable development. 3+7=10

OR

- (b) What is shifting cultivation? Write the impacts on land degradation. 4+6=10
