

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
