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1 SEM TDC ZOOH (CBCS) C 2

2019

(December)

ZOOLOGY

(Core)

Paper : C–2

(Principle of Ecology)

Full Marks : 53
Pass Marks : 21

Time : 3 hours

The figures in the margin indicate full marks for the questions

1. Select the correct answer from the following options : 1×5=5

(a) The most important factor for the success of animal population is

(i) natality

(ii) adaptability

(iii) unlimited food

(iv) interspecies activity

(b) The formula for exponential growth form of population is

(i) $dN / dt = rN$

(ii) $dt / dN = rN$

(iii) $dx / rN = dt$

(iv) $rN / dN = dt$

(c) Threatended species are included as

(i) critically endangered species

(ii) endangered species

(iii) vulnerable species

(iv) All of the above

(d) Regulation of population density may be

(i) behavioural

(ii) physiological

(iii) population based

(iv) All of the above

(e) The branch of ecology which deals with the study of soil and its influence on organisms is

(i) landscape ecology

(ii) pedo-ecology

(iii) autecology

(iv) community ecology

2. *(a)* Distinguish between any *three* of the following pairs : 2×3=6

   (i) *r*-selection and *K*-selection

   (ii) Economical and ecological value of wildlife conservation

   (iii) Autecology and synecology

   (iv) Crude density and ecological density

   (b) Write brief notes on any *two* of the following : 3×2=6

   (i) Advances of *ex situ* conservation

   (ii) Laws of limiting factors

   (iii) Food chain

3. What is ecological succession? Describe the process of ecological succession with an example. 1+6=7

Or

What is meant by ecotone and edge effect? Describe different types of ecotones. 2+5=7

4. What is species diversity? How is it measured? 1+4=5

Or

What is Gause's principle? Explain the laboratory examples of Gause's principle. 5

5. Answer any *three* of the following questions :

(a) What is population? Describe the characteristics of population. 1+7=8

(b) Describe the flow of energy in ecosystem with the help of suitable models. 8

(c) Describe the nitrogen cycle with suitable diagram. 8

(d) Define survivorship curve. Describe different types of survivorship curves with examples. 1+7=8

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