

**D 70369**

(Pages : 2)

Name.....

Reg. No.....

**FIFTH SEMESTER B.Sc. DEGREE EXAMINATION, NOVEMBER 2019**

(CUCBCSS—UG)

**Zoology**

**ZOL 5B 07—ETHOLOGY, EVOLUTION AND ZOOGEOGRAPHY**

Time : Three Hours

Maximum : 80 Marks

**Part A**

I. One Word Questions. Answer *all* questions. Each carries 1 mark :

- 1 Which type of distribution is exhibited by flightless birds ?
- 2 Name the developmental arrest in animals resulting from extreme environmental conditions.
- 3 Who proposed the concept of biogenetic law ?
- 4 Name the major group of mammals occurring in the Australian region.
- 5 Name the type of learning that requires high degree of intelligence.
- 6 Name the taxonomic group which is intermediate between species and subspecies.
- 7 Name an evolutionary phenomenon resulting from genetic drift.
- 8 Cite any two examples for convergent evolution.
- 9 Write down the scientific name of 'Handy man'.
- 10 Mention the dominant animal groups of Mesozoic Era.

(10 × 1 = 10 marks)

**Part B**

II. Short Answer Questions. Answer any *ten* questions. Each carries 2 marks :

- 11 Explain geographic barriers of animal distribution.
- 12 Comment on the faunal characteristics of oceanic islands.
- 13 Name the biogeographical zones of India.
- 14 What is Cambrian explosion ?
- 15 What is permineralization ?
- 16 Write down the evolutionary significance of vestigial structures.
- 17 What is Neo Lamarckism ?
- 18 What is industrial melanism ?

**Turn over**

- 19 What is pre-adaptation ?
- 20 Comment on the evolutionary significance of gene mutation.
- 21 Explain the features of Neanderthal man.
- 22 Describe the theory panspermia.

(10 × 2 = 20 marks)

### Part C

III. Paragraph Questions. Answer any *five* questions. Each carries 6 marks :

- 23 Explain the theory of punctuated equilibrium.
- 24 Describe the important fossil dating techniques.
- 25 Write notes on hibernation and aestivation.
- 26 Explain the chemical origin of life on earth.
- 27 Describe the origin and evolution of birds.
- 28 Write notes on conditioned reflex.
- 29 Explain the process of allopatric speciation.
- 30 Explain Darwin's theory of natural selection.

(5 × 6 = 30 marks)

### Part D

IV. Essay Questions. Answer any *two* of the following. Each carries 10 marks :

- 31 Write an account on divergent evolution. Comment on its significance.
- 32 Give an account on isolation and isolating mechanisms.
- 33 Explain the various evidences of organic evolution.
- 34 Explain the theory of Hardy-Weinberg equilibrium. Add notes on the factors that upset this equilibrium.

(2 × 10 = 20 marks)