

## FIFTH SEMESTER B.Sc. DEGREE EXAMINATION, NOVEMBER 2018

(CUCBCSS—UG)

Zoology

ZOL 5B 07—ETHOLOGY, EVOLUTION AND ZOOGEOGRAPHY

Time : Three Hours

Maximum : 80 Marks

(A) Answer *all* questions. Each question carries 1 mark :

- 1 What is habituation ?
- 2 What is bipolar distribution ?
- 3 Mention the zoogeographical realm in which Amazon rain forest is located.
- 4 What is insular fauna ?
- 5 What do you know about North east biogeographic zone of India ?
- 6 Mention the theory of Panspermia.
- 7 What are co-acervates ?
- 8 What is bioimmuration ?
- 9 What is phylogenetic tree ?
- 10 What is a deme ?

(10 × 1 = 10 marks)

(B) Answer any *ten* questions in two or three sentences each. Each question carries 2 marks :

- 11 Write on the zoogeographical features of Western Ghats.
- 12 Mention the salient features of social organisation of elephants.
- 13 Distinguish between discontinuous and isolated distribution.
- 14 Explain various topographical barriers to distribution.
- 15 Write briefly on oceanic islands.
- 16 Explain radio carbon dating.
- 17 Explain the evolutionary significance of vestigial organs.
- 18 Explain biological species concept.

- 19 What are the important evolutionary trends in humans ?
- 20 What are the salient features of living fossil ?
- 21 Citing an example explain pre-adaptation.
- 22 Explain the theory of punctuated equilibrium.

(10 × 2 = 20 marks)

(C) Answer any *five* questions in not more than a *paragraph* each. Each question carries 6 marks :

- 23 Write briefly on various zoogeographical realms.
- 24 Write an account on innate behaviour.
- 25 Explain social organisation in termites.
- 26 What is conditioned reflex ? Explain Pavlov's experiment.
- 27 Explain physiological and biochemical evidences of evolution.
- 28 Explain Hardy-Weinberg Principle.
- 29 Write an account on speciation.
- 30 Explain various reproductive isolating mechanisms.

(5 × 6 = 30 marks)

(D) Write essays on any *two* of the following. Each question carries 10 marks :

- 31 Write on various biological rhythms in organisms.
- 32 Write an account on fossil ancestors of man.
- 33 Explain the modern hypothesis and experimental evidence for biochemical origin of life.
- 34 Explain the major postulates and criticisms of Lamarckism and Darwinism.

(2 × 10 = 20 marks)