

FOURTH SEMESTER B.Sc. DEGREE EXAMINATION, MAY 2014

(UG-CCSS)

Core Course

Zoology

ZO 4B 07—ENVIRONMENTAL BIOLOGY, WILDLIFE CONSERVATION,
TOXICOLOGY, ETHOLOGY, EVOLUTION AND ZOOGEOGRAPHY

Time : Three Hours

Maximum : 30 Weightage

*Give illustrations wherever necessary.*I. Answer all *twelve* questions. Each question carries 0.25 Weightage :

A. Objective type question.

1 A cycle of activity having an approximately 24 hour period is :

- (a) Diapause. (b) Circadian rhythm.
(c) Photoperiod. (d) Hibernation.

2 Which of the following is considered as the intermediate between Ape and Man ?

- (a) Dryopithecus. (b) Cromagnon man.
(c) Australopithecus. (d) Neanderthal man.

3 Botulism is due to the infection of :

- (a) Virus. (b) Fungi.
(c) Protozoans. (d) Bacteria.

4 Which of the following is a goal Oriented behaviour ?

- (a) Motivation. (b) Imprinting.
(c) Hibernation. (d) Latent learning.

B. Match the following :—

- | | |
|-----------------|-------------------------|
| 5 Europe | (a) Nearctic region. |
| 6 India | (b) Neotropical region. |
| 7 Africa | (c) Australian region. |
| 8 South America | (d) Oriental region. |
| | (e) Palaearctic region. |
| | (f) Ethiopian region. |

Turn over

C. Fill up the blanks :

- 9 Expansion of UNEP is _____.
- 10 The association between Shark and Sucker fish is _____.
- 11 Theory of inheritance of Acquired characters was proposed by _____.
- 12 Minamata disease is caused due to _____ poisoning.

(12 × ¼ = 3 weightage)

II. Short answer questions. Answer all *nine* questions :

- 13 Explain Shelford's law of tolerance.
- 14 Explain Ecological succession.
- 15 Describe any *four* consequences of Sand mining.
- 16 Distinguish between LC₅₀ and LD₅₀.
- 17 Distinguish between Homologous organs and Analogous organs.
- 18 Explain Hardy - Weinberg equilibrium.
- 19 What is Pre-adaptation? Explain with an example.
- 20 Distinguish between Oceanic islands and Continental islands.
- 21 Describe different types of Animal distribution.

(9 × 1 = 9 weightage)

III. Short answer questions. Answer any *five* questions :

- 22 Describe the energy flow in an ecosystem.
- 23 Explain Nitrogen cycle in detail.
- 24 Describe various approaches to biodiversity conservation.
- 25 What is adaptive radiation ? Illustrate with a suitable example.
- 26 Describe social life in termites.
- 27 Explain theory of natural selection.
- 28 Name the geographical regions coming under Australian region and add a note on Physiological features and special faunal features of Australian region.

(5 × 2 = 10 weightage)

IV. Essay questions. Answer any *two* questions :

- 29 Write an essay on various fossil hominids.
- 30 Give a detailed account of various toxicants and their public health hazards.
- 31 Define population and explain the salient features of population in detail.

(2 × 4 = 8 Weightage)