C 81820 (Pages : 2) Name.....50.....

Reg. No.....

FOURTH SEMESTER B.Sc. DEGREE EXAMINATION, APRIL/MAY 2015

(UG—CCSS)

Core Course—Zoology

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

(2009—2012 Admissions)

Time : Three Hours Maximum : 30 Weightage

I. Answer *all* twelve questions. Each question carries ¼ weightage :

A. Objective type questions :

1 The relationship between hermit crab and sea anemone is :

(a) Commensalism. (b) Predation.

(c) Mutualism. (d) Parasitism.

2 Mutation theory was proposed by :

(a) Darwin. (b) Hugo de Vries.

(c) Lamarck. (d) Wallace.

3 Fossils are usually found in :

(a) Sedimentary rock. (b) Alluvial soil.

(c) Black soil. (d) Deserts.

4 The unit of sound is :

(a) Nanometer. (b) Decibel.

(c) Bar. (d) Pascal.

B. Name the following :—

5 A species that is confined to a particular area and found anywhere else.

6 Name the scientist who proposed use and disuse theory.

7 Name the pheromone secreted by female silk moth.

8 Name the scientist who proposed recapitulation theory.

C. Fill in the blanks :

9 Sexual selection theory was proposed by ————.

10 The phenomenon of increased species richness at the boundary of communities is called ————.

Turn over

11 The communal interbreeding population of a species is called ————.

12 The organisms found on the bottom sediments are called ————.

(12 × ¼ = 3 weightag

II. Answer *all* nine questions. Each question carries 1 weightage :

13 Define 10 percent law.

14 Define primary production.

15 Write notes on food chain. Draw a simple food chain.

16 Define standing crop.

17 Write notes on symbiotic nitrogen fixation.

18 What is denitrification ? Write an example.

19 Define recycle index.

20 Define carrying capacity.

21 What is realised natality ?

(9 × 1 = 9 weighta

III. Answer any *five* questions. Each question carries 2 weightage :

22 Describe the population growth curves with neat labelled diagrams.

23 Distinguish between home range and territory.

24 What is niche ? Add notes on fundamental niche and realized niche.

25 Distinguish between anagenesis and cladogenesis.

26 Distinguish between Sympatric speciation and Allopatric speciation.

27 Explain the natural selection theory. Write an example.

28 Explain kin selection.

(5 × 2 = 10 weight

IV. Answer any *two* questions. Each question carries 4 weightage :

29 Write an essay on zoogeographical realms.

30 Explain the evidences of organic evolution.

31 Describe the threats of biodiversity. Add notes on the conservation of biodiversity.

(2 × 4 = 8 weight