

(6 pages)

Reg. No. :

Code No. : 9427

Sub. Code : HZOE 21

M.Sc. (CBCS) DEGREE EXAMINATION, APRIL 2015.

Second Semester

Zoology

Elective — POPULATION ECOLOGY AND
ANIMAL BEHAVIOUR

(For those who joined in July 2012 onwards)

Time : Three hours

Maximum : 75 marks

PART A — (10 × 1 = 10 marks)

Answer ALL questions.

Choose the correct answer :

1. 'J' shaped growth curve is characteristic the population of
 - (a) Human beings
 - (b) Hamsters
 - (c) Butterflies
 - (d) Crocodiles

2. When the reproductive group is more and post reproductive group is less than the age pyramid shape forms?
 - (a) Triangular
 - (b) Bills
 - (c) Urn
 - (d) Rectangular
3. Dormancy condition exhibited by animals to overcome the extreme cold condition is referred as
 - (a) Diapause
 - (b) Hibernation
 - (c) Aestivation
 - (d) Acclimation
4. The study deals with ageing is referred as
 - (a) Oncology
 - (b) Gerontology
 - (c) Honcology
 - (d) Paleantology
5. One niche and one species concept was putforth by
 - (a) Gaberiale
 - (b) Louis
 - (c) Gause
 - (d) Odum
6. Symbiotic inter-specific relationship in which one partner to benefited and the other partner is not harmed is referred as
 - (a) Mutualism
 - (b) Commensalism
 - (c) Parasitism
 - (d) Predation

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7. Orientation movement of mobile organism in response to stimulus of gravity is referred as
- Rheotaxis
 - Thigmotaxis
 - Galrenotaxis
 - Chemotaxis
8. The phenomenon where the speed on velocity of locomotion of an organism stimulated by a stimulus is called
- Taxis
 - Reflexes
 - Kinesis
 - Tropism
9. Reasoning is the tool using behaviour of learning pattern in restricted among
- Mammals
 - Reptiles
 - Amphibians
 - Birds
10. One of the following is example for circadian rhythm
- Sleeping and awakening in human beings
 - Flowering in lily and jasmine
 - Laying of eggs in hen
 - All of these

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PART B — (5 × 5 = 25 marks)

Answer ALL questions, choosing either (a) or (b).

Each answer should not exceed 250 words.

11. (a) Analyse the concept of ecotone and phenomenon of edge effect.

Or

- (b) With sigmoid growth curve explain its characteristics.

12. (a) Briefly present the patterns of animal population dispersion.

Or

- (b) Enlist and explain the types of migration noticed in animals.

13. (a) Evaluate the concept of ecological niche with suitable examples.

Or

- (b) Explain Gauss exclusive principle and comment on its ecological significances.

14. (a) Examine the different types of animal behaviour.

Or

- (b) Narrate the events involved in allopatric speciation.

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15. (a) Analyse the learning behaviour and its types.

Or

- (b) Differentiate group selection and kin selection with example.

PART C — (5 × 8 = 40 marks)

Answer ALL questions, choosing either (a) or (b).

Each answer should not exceed 600 words.

16. (a) Discuss the various factors govern population growth.

Or

- (b) List down the characteristics of life table and comment on its significances in demography.

17. (a) Highlight the incidents of evolution of life history traits.

Or

- (b) Enlist and explain the theories put forth in favours of Ageing.

18. (a) Summarize the density independent and density dependent factors that regulate population regulation.

Or

- (b) Write an elaborate note on animal association, its types and their ecological significances.

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19. (a) Critically analyse the neural and hormonal control of animal behaviour.

Or

- (b) Write short notes on :

- (i) Home range and
- (ii) Anti-predator defence.

20. (a) Insects exhibit polymorphic organization. Justify with suitable example.

Or

- (b) Give an account on reproductive behaviour with reference to mating system and courtship behaviour.

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