

**H-4/33/22**

Roll No. ....

**IV Semester Examination, 2022****M.Sc.****ZOOLOGY****Paper II****(Ecology and Environmental Physiology)**

Time : 3 Hours ]

[ Max. Marks : 80

**Note :** All questions are compulsory. Question Paper comprises of 3 sections. Section **A** is objective type/multiple choice questions with no internal choice. Section **B** is short answer type with internal choice. Section **C** is long answer type with internal choice.

**SECTION A****1×8=8****(Objective Type/Multiple Choice Questions)***Choose the correct answer :*

- 1.** Aquatic animals which can tolerate only a narrow range of salinity are said to be :
  - (a) Eurythermal
  - (b) Euryhaline
  - (c) Stenohaline
  - (d) Stenothermal

- 2.** Which of the following biotic interaction is useful for only one population is :
  - (a) Commensalism
  - (b) Parasitism
  - (c) Mutualism
  - (d) Protocooperation
- 3.** Which gas will not cause any atmospheric pollution ?
  - (a) Carbon di-oxide
  - (b) Hydrogen
  - (c) Carbon mono-oxide
  - (d) Sulphur di-oxide
- 4.** Main indicator of SO<sub>2</sub> pollution are :
  - (a) Lichens
  - (b) Algae
  - (c) Bryophytes
  - (d) Ferns
- 5.** The casting off of a body part is called :
  - (a) Anotomy
  - (b) Autotomy
  - (c) Neoteny
  - (d) None of these
- 6.** Organism capable of swimming & resting on the surface of water are termed :
  - (a) Neuston
  - (b) Nekton
  - (c) Plankton
  - (d) Benthos

P.T.O.

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7. Which hormone is responsible for increasing blood glucose level during stress .....

- (a) Glucagon                      (b) Cortisol
- (c) Cortisol & Glucagon
- (d) Insulin

8. Who defined stress as the “non-specific response of the body to any demand placed on it :

- (a) Shelford                      (b) Robert
- (c) William                      (d) Hans Selye

#### SECTION B

6×4=24

#### (Short Answer Type Questions)

**Note :** Attempt *one* question from each unit.

#### Unit-I

1. Describe Shelford's law of Tolerance.

*Or*

Explain the universal model of Energy flow.

#### Unit-II

2. Write methods of Energy conservation in brief.

*Or*

Write methods of soil conservation in brief.

#### Unit-III

3. Write note on parasitic adaptations.

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*Or*

Write note on Deep sea Adaptation.

#### Unit-IV

4. Write role of HPA axis during stress.

*Or*

Write about stress caused by Noise.

#### SECTION C

12×4=48

#### (Long Answer Type Questions)

**Note :** Attempt *one* question from each unit.

#### Unit-I

1. What is Ecological succession ? Describe various patterns of succession in brief.

*Or*

Write notes on :

- (a) Habitat and Niche, and
- (b) Ecotone and Edge effect.

#### Unit-II

2. What is bioremediation ? Describe different types in brief.

*Or*

Describe methods of In situ & Ex situ conservation in brief.

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**Unit-III**

- 3.** Why birds are considered as master of air ?

Describe various adaptations found in them.

*Or*

Describe different types of Terrestrial adaptations.

**Unit-IV**

- 4.** Describe physiological response to oxygen deficient stress.

*Or*

Write notes on following in brief :

(a) Hemological control of stress

(b) Importance of yoga in stress management

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