

[4]

**SECTION 'C'**

4 × 10 = 40

**Long Answer questions (Word limit 400-450 words.)**

**Q. 1.** Give an detailed account on adaption in terrestrial life.

**OR**

Write full note on a stream line adaptation in aquatic animals.

**Q. 2.** Give a detailed account on deep sea adaptation in fishes.

**OR**

Explain the role of air sacs in flight adaptation in Birds.

**Q. 3.** Explain acclimatization in detail.

**OR**

Describe the stress tolerance.

**Q. 4.** Give a detailed account on physiological response to body exercise.

**OR**

Describe the osmoregulation in terrestrial habitats.

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[1]

ROLL NO.....

**ZOO. 401/21**

**IV SEMESTER EXAMINATION, 2021**

**M.Sc. (ZOOLOGY)**

**PAPER-I**

**ENVIRONMENTAL PHYSIOLOGY**

**TIME: 3 HOURS**

**MAX.- 80**

**MIN.- 16**

**Note:** The question paper consists of three sections A, B & C. All questions are compulsory.

**Section A- Attempt all MCQ questions**

**Section B- Attempt one question from each unit.**

**Section C- Attempt one question from each unit.**

**SECTION 'A'**

2 × 8 = 16

**Multiple Choice Questions**

1. Which adaptive radiation is used by poikilotherms to protect against extreme heat?  
(a) Migration (b) Cooling (c) Aestivation (d) Hibernation
2. Which of the following animal, exeretes solid urine?  
(a) Crow (b) Fishes (c) Kangaroo rat (d) Camel
3. White coat of polar bears helps them to.  
(a) Camouflage (b) Look big  
(c) Stay healthy (d) Dry faster

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4. What is adaptation for climbing and balancing called?

- (a) Fossorial (b) Arboreal  
(c) Cursorial (d) Terrestrial

5. What is the stress-strain curve?

*P.T.O.*

- (a) It is the percentage of stress and strain.  
(b) It is the relationship between stress and strain.  
(c) It is the difference between stress and strain.  
(d) None of the above.

6. Elastic limit is the point -----.

- (a) Up to which stress is proportional to strain.  
(b) All which elongation dates place without application of additional load.  
(c) Up to which if the load is removed, original volume and shapes are regained.  
(d) None of the above.

7. A person (Man) on a long hunger strike, surviving only on the water will have.....

- (a) Loss amino acid in his urine  
(b) Loss urea in urine  
(c) More sodium in his urine  
(d) More glucose in urine.

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8. Which organelle is the main osmoregulator in protozoans?

- (a) Trichocyst (b) Contractile vacuole  
(c) Cytopyge (d) Cytostome

**SECTION 'B'** 4 × 6 = 24

**Short Answer Type Questions**

**Q.1.** Write short notes on mechanism of adaptation.

**OR**

Explain the adaptation in animals of salt water.

**Q.2.** Explain the adaptation in endoparasite.

**OR**

Write notes on Pneumatic bones.

**Q.3.** Explain stress resistance.

**OR**

Explain the environmental stress.

**Q.4.** Explain the osmoregulatory function of contractile vacuole in protozoa.

**OR**

Explain the role of yoga to maintaining the stress.