

**PART C — (5 × 8 = 40 marks)**

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

Each answer should not exceed 600 words.

16. (a) Classify placenta on the basis of tissue involved in it and comment on its functions.

Or

- (b) Explain the generation of test tube baby with its sequential steps and sketches.

17. (a) Write an essay on adoption found in desert animals.

Or

- (b) Write an essay on Ecosystem and biological effects of light on ecosystem.

18. (a) Explain Glycolysis with reference to energy investment phase, splitting phase and energy yielding phase.

Or

- (b) Illustrate the transport of CO<sub>2</sub> from the tissues to the lungs through the blood.

19. (a) Explain how impulse is generated, propagated and conducted along the nerve fibre.

Or

- (b) Elucidate the various phases of menstrual cycle and add a note on its hormonal regulation.

20. (a) Critically analyse the Darwin principles and facts.

Or

- (b) Discuss the types of mimicry with example and comment on its role in evolution.

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**Reg. No. : .....**

**Code No. : 10637 E      Sub. Code : JAZO 21/  
SAZO 21/AAZO 21**

**B.Sc. (CBCS) DEGREE EXAMINATION, APRIL 2022.**

**Second/Fourth Semester**

**Zoology — Allied**

**DEVELOPMENTAL ZOOLOGY, ECOLOGY ANIMAL  
PHYSIOLOGY AND EVOLUTION**

**(For those who joined in July 2016 – 2020)**

**Time : Three hours**

**Maximum : 75 marks**

**PART A — (10 × 1 = 10 marks)**

**Answer ALL questions.**

**Choose the correct answer :**

1. The type of ovum present in human beings is  
(a) Alecithal                      (b) Microlecithal  
(c) Megalecithal                (d) Telolecithal
2. The immediate successive developmental stage of cleavage is  
(a) Morula                        (b) Blastula  
(c) Gastrula                      (d) Port cleavage
3. In ecosystem temperature is a factor of  
(a) Physiochemical              (b) Ecological  
(c) Abiotic                        (d) All of these



4. Identify the warm blooded animal from the followings  
 (a) Bird (b) Man  
 (c) Crocodile (d) Bird and man
5. The essential biomolecule for growth and repair to our body is  
 (a) Carbohydrate (b) Protein  
 (c) Lipid (d) Fatty acid
6. Glycolysis steps have been worked out by  
 (a) James and Black  
 (b) Linda and Robin  
 (c) Embden and Mayorhof  
 (d) Edward and Mosses
7. The hormone called as antidimetic hormone is  
 (a) Oxytocin (b) Thyrotrophin  
 (c) Vasopressin (d) Adrenalin
8. The menstrual period last for a healthy women is  
 (a) 26 days (b) 27 days  
 (c) 28 days (d) 29 days
9. The concept of origin of species published by  
 (a) Lamark (b) DeVries  
 (c) Henslo (d) Darwin
10. The phenomenon of "adoptive radiation" was coined by  
 (a) Darwin (b) Lamarek  
 (c) Osborn (d) Ruiter

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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) With neat labelled sketch describe the structure of human sperm.

Or

- (b) What is Fate map? Explain its construction and applications.

12. (a) Define and explain the commensalism and mutualism with example.

Or

- (b) Temperature in the limiting factor in an Ecosystem – Explain.

13. (a) Draw the properties and biological functions of carbohydrate.

Or

- (b) Explain the hormones involved in protein digestion and its process of digestion.

14. (a) Describe the structure and function of Testis.

Or

- (b) What is Dialysis? What are its process and applications?

15. (a) With suitable example explain how adaptive radiation evolved in birds.

Or

- (b) Explain the aspects of DeVries mutation theory.

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