

(6 Pages)

Reg. No. : .....

Code No. : 20568 E      Sub. Code : CAZO 21

B.Sc. (CBCS) DEGREE EXAMINATION, APRIL 2023

Second/Fourth Semester

Zoology — Allied

DEVELOPMENTAL ZOOLOGY, ECOLOGY, ANIMAL  
PHYSIOLOGY AND EVOLUTION

(For those who joined in July 2021 onwards)

Time : Three hours

Maximum : 75 marks

PART A — (10 × 1 = 10 marks)

Answer ALL questions.

Choose the correct answer :

1. The hormone that is released from the testes is

- (a) progesterone
- (b) vasopressin
- (c) testosterone
- (d) oxytocin

2. \_\_\_\_\_ is an organelle that helps the sperm to penetrate the ovum.

- (a) Acrosome      (b) Zona pellucida
- (c) Megalium      (d) None of the above

3. When one organism benefits and other is harmed, then it is known as \_\_\_\_\_

- (a) commensalism
- (b) parasitism
- (c) sexual reproduction
- (d) all of them

4. One form of symbiosis is \_\_\_\_\_

- (a) Pearl      (b) Sea anemone
- (c) Commensalism      (d) Ants

5. Name the enzyme used for branching of glycogen

- (a) Branching enzyme
- (b) Hexokinase
- (c) Phosphoglucomutase
- (d) Glycogen synthase

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6. What is the site for gluconeogenesis?
- (a) Liver                      (b) Blood
- (c) Muscles                      (d) Brain
7. Loop of Henle is connected with
- (a) Reproduction      (b) Digestion
- (c) Excretion              (d) Respiration
8. The blood is purified in ———
- (a) Kidney                      (b) Lungs
- (c) Heart                      (d) Intestine
9. The theory of natural selection was proposed by
- (a) Lamarck                      (b) Darwin
- (c) De vries                      (d) Hacekel
10. Darwinism cannot explain ———
- (a) Mimicry
- (b) Adaptation
- (c) Stuggle for existence
- (d) Tusks of elephants

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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) Describe the structure of blastocyst.
- Or
- (b) Explain the structure of sperm.
12. (a) Comment on symbiosis.
- Or
- (b) Write a note on commensalism.
13. (a) Explain the digestion of carbohydrate.
- Or
- (b) Write an account on glycogenesis.
14. (a) Describe the structure of ovary.
- Or
- (b) Explain menstrual cycle in brief.
15. (a) Briefly explain colomation.
- Or
- (b) Give an account on adaptation in birds.

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PART C — (5 × 8 = 40 marks)

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

Each answer should not exceed 600 words.

16. (a) Explain the nuclear transplantation in acetabularia.

Or

- (b) Write an essay on placenta in mammals.

17. (a) Explain the biological effects of temperature and light.

Or

- (b) Give an account on desert adaptation.

18. (a) Explain glycolysis.

Or

- (b) Explain the exchange of O<sub>2</sub> and CO<sub>2</sub> in blood and tissues.

19. (a) Describe the structure of nephron.

Or

- (b) Explain the structure of neurons.

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20. (a) Discuss the theories of evolution.

Or

- (b) Write an account on mimicry.
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