

FAROOK COLLEGE (AUTONOMOUS), KOZHIKODE  
Sixth Semester B.Sc Zoology Degree Examination, April 2023  
BZL6B10T – Physiology & Endocrinology  
(2019 Admission onwards)

Time: 2 hours

Max. Marks : 60

**Section A**

**I. Short answer questions. Each question carries 2 marks.**

1. Mention the functions of Cholecystokinin
2. Highlight any two physiological problems in diving mammals.
3. Distinguish between Tachycardia and Bradycardia.
4. How desert animals conserve water?
5. What is muscle twitch?
6. What is Myocardial infarction? Mention its main causes
7. Explain Hamburger's phenomenon.
8. What are glial cells? Mention their functions
9. What is bioluminescence? Name the substrate and the enzyme involved in the biochemical mechanism of bioluminescence
10. Which hormone is concerned with resistance to stress? Name the gland that secretes it.
11. What is Cretinism? How is it caused?
12. Which endocrine gland is involved in setting the body's biological clock and also name the hormones secreted by it.

(Ceiling: 20 marks)

**Section B**

**II. Paragraph questions. Each question carries 5 marks**

13. Write notes on fasting and its significance.
14. With suitable examples, explain different types of hearts.
15. Describe Oxygen-Haemoglobin dissociation curve and its significance.
16. Explain ornithine cycle.
17. Briefly explain the organization of myosin and actin filaments in a striated muscle.
18. Briefly discuss different placental hormones and their physiological effects
19. Explain any five endocrine organs and their hormones in crustaceans.

(Ceiling: 30 marks)

**Section C**

**III. Essay questions. Answer any one question.**

20. Explain the mechanism of impulse transmission along a neuron
21. With suitable illustrations explain the mechanism of action of hormones

(1x10 = 10 marks)

## FAROOK COLLEGE (AUTONOMOUS), KOZHIKODE

Sixth Semester B.Sc Zoology Degree Examination, April 2023

BZL6B11T – Reproductive &amp; Developmental Biology

(2019 Admission onwards)

Time: 2 hours

Max. Marks : 60

## SECTION A

**I Short answer questions. Each question carries 2 marks.**

1. Differentiate between totipotency and pluripotency.
2. What are the biochemical changes that takes place during and after fertilization?
3. Explain the significance of primitive streak.
4. Explain blastulation in Frog.
5. With a suitable diagram explain the structure of a blastocyst
6. Explain the importance of grey crescent?
7. Explain germplasm theory.
8. Explain the significance of parthenogenesis.
9. What is capacitation?
10. What are the applications of stem cell research.
11. Explain the teratogenic effect of nicotine.
12. Describe the role of antifertilizin.

(Ceiling: 20 Marks)

## SECTION B

**II Paragraph questions. Each question carries 5 marks.**

13. Classify cleavages based on development and pattern.
14. Describe the menstrual cycle and its hormonal regulation.
15. Describe the salient features of 24 hour chick embryo.
16. With suitable diagrams explain the cleavage in *Amphioxus*.
17. Describe the neural tube formation in Frog.
18. Explain Spemann's constriction experiment.
19. What are the common chemical and hormonal methods of contraception.

(Ceiling: 30 Marks)

## SECTION C

**III Essay questions. Answer any one question.**

20. Explain the process of gastrulation in *Amphioxus*.
21. With suitable diagrams describe the development of eye in Frog.

(1 x 10 = 10 Marks)



FAROOK COLLEGE (AUTONOMOUS), KOZHIKODE  
Sixth Semester B.Sc Zoology Degree Examination, April 2023  
BZL6B12T – Environmental and Conservation Biology

(2019 Admission onwards)

Time: 2 hours

Max. Marks : 60

**Section A**

**I. Short answer questions. Each question carries 2 marks (Ceiling: 20 marks)**

1. Mention different kinds of ecosystems.
2. What is Primary productivity.
3. Differentiate between lentic and lotic habitat.
4. What is key stone species?
5. Enumerate the faunal characteristics of Benthic realm.
6. Mention four advantages of ecological niche.
7. Explain Positive interactions with an example.
8. What is Joint Forest Management? Give an example.
9. Explain remote sensing and its applications in ecological studies.
10. Write notes on cyclone and landslides.
11. Explain Dose-response relationship.
12. Write a note on geographic information system

**Section B**

**II. Paragraph questions. Each question carries 5 marks (Ceiling: 30 marks)**

13. Explain in detail about Ecological Pyramid.
14. What is Biogeochemical Cycles? Explain Nitrogen fixation
15. Point out some adaptations of animals of forests.
16. Explain Predation and Parasitism in animal interaction.
17. Briefly describe about Ecological impacts of tourism.
18. Briefly explain the Loss of biodiversity and its causes.
19. Write an account on Toxic chemicals.

**Section C**

**III. Essay questions. Answer any one question. (1x10 =10 marks)**

20. What is ecological succession? Explain its process and types in detail.
21. Briefly discuss *Ex situ* and *in situ* conservation in biodiversity.

FAROOK COLLEGE (AUTONOMOUS), KOZHIKODE  
Sixth Semester B.Sc Zoology Degree Examination, April 2023  
BZL6B13T – Ethology, Evolution & Zoogeography  
(2019 Admission onwards)

Time: 2 hours

Max. Marks : 60

**Section A**

**I. Short answer questions. Each question carries 2 marks.**

1. Write short notes on Deccan plateau.
2. Why Sphenodon is considered as living fossil.
3. Comment on fossilization.
4. Write notes on types of memory.
5. What is 'hot dilute soup'? Who proposed the term?
6. Distinguish between homologous organs and analogous organs.
7. Write a note on contributions of Wallace.
8. What is bottle neck effect?
9. Compare Cosmopolitan and discontinuous distribution.
10. Define subspecies, semi species with example.
11. Enlist the characteristics of coevolution.
12. Write two examples for biochemical evidences of evolution.

(Ceiling: 20 marks)

**Section B**

**II. Paragraph questions. Each question carries 5 marks**

13. Briefly describe various Zoogeographical realms
14. What are pheromones? Mention their biological roles.
15. Comment on Social groups in termites.
16. Explain punctuated equilibrium with example.
17. Describe Urey-Miller experiment.
18. What are the important postulates of Darwinism?
19. Give an account on natural selection with suitable examples.

(Ceiling: 30 marks)

**Section C**

**III. Essay questions. Answer any one question.**

20. Describe the evolutionary history of man.
21. Write an essay on factors that upset Hardy-Weinberg Equilibrium.

(1x10 = 10 marks)



FAROOK COLLEGE (AUTONOMOUS), KOZHIKODE  
Sixth Semester B.Sc Zoology Degree Examination, April 2023

BZL6B14(E01)T – Human Genetics

(2019 Admission onwards)

Time: 2 hours

Max. Marks : 60

**Section A**

**I. Short answer questions. Each question carries 2 marks.**

1. Write an account on Arachnodactyly.
2. What is Philadelphia chromosome?
3. Comment on NOR banding.
4. Symptoms and causes of VSD.
5. Explain the inheritance of intelligence.
6. What is the role of segmentation genes?
7. Explain biology of twinning.
8. What is ultrasonography (USG)?
9. Comment on Genetic origin of Indian populations.
10. Describe prenatal sexing.
11. Comment on Psychodynamics of genetic counselling.
12. What is phenocopy?

(Ceiling: 20 marks)

**Section B**

**II. Paragraph questions. Each question carries 5 marks**

13. Write an account on congenital adrenal hyperplasia.
14. Write a note on non-disjunction of sex chromosomes and mosaicism.
15. Explain the Fluorescence in-situ hybridization (FISH).
16. Briefly explain Cystic fibrosis.
17. Write a note on Alzheimer's disease.
18. Explain the construction of pedigree.
19. Write a note on Burkitt's lymphoma.

(Ceiling: 30 marks)

**Section C**

**III. Essay questions. Answer any one question.**

20. Give a detailed account on Autosomal dominant disorders.
21. Write an essay on Genetic counselling.

(1 x 10 = 10 marks)