

FAROOK COLLEGE (AUTONOMOUS), KOZHIKODE
Fourth Semester B.Sc Zoology Degree Examination, April 2024
BZL4B04 - Animal Diversity - Chordata Part II
 (2022 Admission onwards)

Time: 2 hours

Max. Marks : 60

SECTION A

I. Answer the following questions. Each question carries two marks.

1. Mention the aquatic adaptations of the birds coming under order Impennae.
2. Write the scientific names of a] Duck-billed Platypus b] Echidna
3. Write an account on the rediscovery of Jerdon's Courser.
4. Distinguish between pulmonary circulation and systemic circulation.
5. What is pecten? Write down its role.
6. Briefly explain the respiratory modifications in birds helping for flight.
7. Distinguish between retrices and remiges.
8. Distinguish between Metatheria & Eutheria.
9. Mention any two flight adaptations of *Pteropus*.
10. Write an account on Order Falconiformes.
11. Write a short account of Coprophagy in *Oryctolagus*.
12. Mention any four examples of Superorder Palaeognathae.

(Ceiling: 20)

SECTION B

II. Answer the following questions in a paragraph. Each question carries five marks.

13. Explain the salient features of Order Cetacea with a suitable example.
14. With a labelled diagram, explain the female genital organs of *Columba livia*.
15. Explain the salient features of *Archaeopteryx lithographica*.
16. Distinguish between Artiodactyla and Perissodactyla.
17. With a suitable diagram, explain the structure of eye of *Oryctolagus cuniculus*.
18. Write the dental formula and add notes on dentition in Rabbit.
19. Write a note on any four recently extinct birds.

(Ceiling: 30)

SECTION C

III. Essay questions. Answer any one question.

20. With suitable illustrations, explain the different kinds of feathers in *Columba livia*.
21. With a suitable diagram, describe the digestive system of *Oryctolagus cuniculus*.

(1x10 = 10 marks)

FAROOK COLLEGE (AUTONOMOUS), KOZHIKODE
Fourth Semester B.Sc Botany Degree Examination, April 2024
BZL4C04 - Genetics & Immunology
(2022 Admission onwards)

Time: 2 hours

Max. Marks : 60

Section A

Short answer questions. Each question carries 2 marks.

1. Write a short note on sickle cell anemia
2. What do you mean by pre-natal diagnosis? Name any two prenatal diagnostic techniques.
3. Comment on XX female – XO male type sex determination mechanism
4. What are transposons?
5. Differentiate between exons and introns
6. Write a short note on transcription unit
7. Give any four applications of genetic engineering
8. Briefly explain different types of cancer
9. What is the principle of ELISA ?
10. What is autoimmunity? Give any two autoimmune disorders.
11. What are cytokines? Give an example
12. Write a short note on MHC

(Ceiling: 20 marks)

Section B

Paragraph questions. Each question carries 5 marks

13. Explain sex linked diseases with a suitable example
14. Explain genic balance theory of sex determination
15. Outline the steps in protein synthesis
16. What are the characteristics of cancer cells ? Explain
17. Write a note on Humoral Immunity
18. Give an account on the characteristics and types of cloning vectors
19. Define immunodeficiency diseases. Briefly explain any two primary immune deficiency diseases

(Ceiling: 30 marks)

Section C

Essay questions. Answer any one question.

20. Discuss the different steps in r DNA technology
21. Give an account on various cells involved in immune system

(1 x 10 = 10 marks)