79

1B6A24330 (Pages : 1) Reg. No:.....

Name: .....

FAROOK COLLEGE (AUTONOMOUS), KOZHIKODE

Sixth Semester B.Sc Zoology Degree Examination, April 2024

BZL6B10 T - Physiology & Endocrinology

(2019 Admission onwards)

Time: 2 hours Max. Marks : 60

Section A

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

1. Comment on the significance of dietary fibres
2. What is chloride shift?
3. Provide a brief account on any one respiratory problem in new born babies.
4. Discuss the role of creatine phosphate in muscle contraction
5. What is rigor mortis?
6. What are neurotransmitters? Give two examples
7. Differentiate unipolar neurons and bipolar neurons
8. Write short notes on symbiotic bioluminescence.
9. State the physiological effects of oxytocin
10. What is corpora allata? Mention its function
11. Name any two placental hormones and state their functions
12. What is haemostasis?

(Ceiling: 20 marks)

Section B

II. Paragraph questions. Each question carries 5 marks

13. Give a brief account on ruminant digestion.
14. With a suitable diagram, briefly explain the structure of Haemoglobin.
15. Briefly discuss about Leukocytes.
16. Briefly describe the organization of myosin and actin filaments in a striated muscle.
17. Describe the generation of action potential during the transmission of a nerve impulse.
18. Briefly discuss different adrenal cortical hormones and their physiological effects.
19. With a suitable diagram, briefly describe ECG

(Ceiling: 30 marks)

Section C

III. Essay questions. Answer any one question.

20. Explain the mechanism of urine formation.
21. Describe the mechanism of hormone action

(1x10 = 10 marks)

80

1B6A24331 (Pages : 1) Reg. No:.....

Name: .....

FAROOK COLLEGE (AUTONOMOUS), KOZHIKODE

Sixth Semester B.Sc Zoology Degree Examination, April 2024

BZL6B11 T - Reproductive & 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 Determinate and Indeterminate development.
2. Explain corpus luteum and corpus albicans.
3. What are Embryonic stem cells? Explain briefly their significance and application.
4. Define Parthenogenesis. List the significance of parthenogenesis.
5. What is PNDT Act?
6. What is blastula? What are the different types of blastula?
7. List the important functions of Amnion in chick.
8. Explain Amphimixis.
9. Enlist the hormones and their role in parturition.
10. Define fate map. Sketch and label the fate map of Frog blastula.
11. What are teratogens? Explain the effects of drugs and alcohol.
12. Differentiate between totipotency and pleuripotency.

(Ceiling: 20 marks)

Section B

II. Paragraph questions. Each question carries 5 marks

13. Briefly explain menstrual cycle. Add note on hormonal control of menstrual cycle.
14. Citing examples, explain the different types of Cleavage.
15. Define ART. Describe the various techniques of ART.
16. With neat labelled sketch, describe the salient features of 48 hour chick embryo.
17. Give an account on the different types of eggs with examples.
18. Describe Gradient experiments in Sea urchin eggs.
19. Define Organiser. Explain the role of different organisers in amphibian development.

(Ceiling: 30 marks)

Section C

III. Essay questions. Answer any one question

20. Explain Gastrulation and formation of germ layers in Chick.
21. Describe the hormonal control of amphibian metamorphosis.

(1x10 = 10 marks)

81

1B6A24332 (Pages : 2) Reg. No:.....

Name: .....

FAROOK COLLEGE (AUTONOMOUS), KOZHIKODE

Sixth Semester B.Sc Zoology Degree Examination, April 2024

BZL6B12 T - Environmental and conservation biology

(2019 Admission onwards)

Time: 2 hours Max. Marks : 60

Section A

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

1. What is Shelford's Law of Tolerance, and how does it explain the relationship between organisms and their environmental factors in ecological systems?
2. Explain ecological efficiency in an ecosystem.
3. What are the different methods for the collection of soil animals?
4. Comment on wetland habitat destruction and its consequences.
5. Explain the components of an ecosystem.
6. Explain different categories of sampling methods for animal populations.
7. What is Commensalism and cite examples.
8. What are the negative interactions that can occur within a population?
9. Explain the health hazards of heavy metals.
10. What do LD50 and LC50 stand for, and how do they differ in toxicology?
11. Write a note on Remote collaring and its role in ecological studies.
12. Write notes on Xenobiotis.

(Ceiling: 20 marks)

Section B

II. Paragraph questions. Each question carries 5 marks

13. Explain the different growth patterns of the population.
14. Give an account of the strategies for disaster management.
15. Explain the concept of energy flow in an ecosystem, detailing how energy is acquired, transferred, and utilized by different trophic levels.
16. What defines a keystone species, and what critical role do they play in maintaining ecosystem stability?
17. Briefly explain the global strategy for conservation - Rio Convention and Kyoto Agreement (1997)
18. Provide a comprehensive explanation of the sedimentary cycle.
19. Differentiate between in situ and ex situ conservation.

(Ceiling: 30 marks)

Section C

III. Essay questions. Answer any one question.

20. Compose an essay examining the characteristics, realm, and faunal adaptations within the marine biotic division.
21. Explain the causes of the loss of biodiversity and extinction of species.

(1x10 = 10 marks)

82

1B6A24333 (Pages : 2) Reg. No:.....

Name: .....

FAROOK COLLEGE (AUTONOMOUS), KOZHIKODE

Sixth Semester B.Sc Zoology Degree Examination, April 2024

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. What is meant by Kairomones?
2. Describe Latent learning. Give example
3. What is diapause?
4. Write a note on human limbic system.
5. What is meant by coacervates? Explain.
6. Describe germplasm theory.
7. Explain bottle neck effect.
8. What is the significance of Sphenodon.
9. Briefly explain carbon dating technique.
10. Describe the characteristics of Deccan Plateau.
11. Which are the biological barriers of animal distribution?
12. Write the faunal characteristics of Neartic region.

(Ceiling: 20 marks)

Section B

II. Paragraph questions. Each question carries 5 marks

13. Briefly describe the sociobiology of Elephants
14. Describe insight learning.
15. Explain co-evolution.
16. Explain Darwinian principles of evolution
17. Describe the features of Hominid fossils.
18. Describe the embryological evidences of Evoluion
19. Describe the features of Wallacea

(Ceiling: 30 marks)

Section C

III. Essay questions. Answer any one question.

20. Describe the concept of species. What are the different types of speciation?
21. Describe the process of biochemical evolution of life, evolution of prokaryotes and eukaryotes

(1x10 = 10 marks)

83

1B6A24334 (Pages : 1) Reg. No:.....

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FAROOK COLLEGE (AUTONOMOUS), KOZHIKODE

Sixth Semester B.Sc Zoology Degree Examination, April 2024

BZL6B14E01T –Human Genetics

(2019 Admission onwards)

Time: 2 hours Max. Marks : 60

Section A

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

1. Ehlers -Danlos syndrome
2. Haplogroups
3. SCID
4. Maternal effect genes
5. Archaeogenetics
6. NOR Banding
7. Cri- du chat syndrome
8. Write a note on genetic behind intelligence
9. Mosaicism
10. Comment on the genetics of Alzhimer's disease
11. Isochromosome
12. Twin data analysis

Ceiling: 20 marks)

Section B

II. Paragraph questions. Each question carries 5 marks

13. Give an account on the errors occurring in the sexual development.
14. Explain the process of FISH. Add a note on its application.
15. Write an account on the construction and analysis of pedigree charts with examples.
16. Explain the non-disjunction of chromosomes
17. Describe Denver system of classification of human chromosomes
18. Write a note on any two X linked recessive disorders
19. Briefly describe genomic imprinting

(Ceiling: 30 marks)

Section C

III. Essay questions. Answer any one question.

20. Describe in detail about any five prenatal diagnostic techniques in use.
21. What are chromosomal disorders. Explain any four autosomal dominant disorders.

(1x10 = 10 marks)