

FAROOK COLLEGE (AUTONOMOUS), KOZHIKODE

Sixth Semester B.Sc Zoology Degree Examination, April 2022

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 Meiotic non-disjunction.
2. Briefly describe Familial hyper cholesterolemia.
3. Comment on Contributions of Chicago conference.
4. Symptoms and causes of ASD.
5. What are the factors that affect prenatal development?
6. Comment on Schizophrenia.
7. What is a maternal effect gene?
8. Comment on Methods of genetic counselling.
9. Give a short description on Archaeogenetics.
10. What is Ecogenetics?
11. Write a short note on Indian Genome Variation Initiative.
12. What is haplogroups?

(Ceiling: 20 marks)

Section B

II. Paragraph questions. Each question carries 5 marks

13. Briefly explain the different types of chromosome banding techniques.
14. Write a note on hereditary microcephaly.
15. Describe the Symbols of Pedigree.
16. Briefly explain Autosomal dominant human disorders.
17. Comment on Alzheimer's disease.
18. Describe the biology of twinning and method of analysis of twin data.
19. Write a note on Duchenne muscular dystrophy.

(Ceiling : 30 marks)

Section C

III. Essay questions. Answer any one question.

20. Explain various types of Chromosome structural modification.
21. Write an essay on Prenatal diagnosis of genetic abnormalities

(1x10 = 10 marks)

FAROOK COLLEGE (AUTONOMOUS), KOZHIKODE
Sixth Semester B.Sc Zoology Degree Examination, April 2022
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. Explain the role of hypothalamus in thirst and feeding.
2. Define latent learning, give examples.
3. What are pheromones? Mention their biological roles.
4. Write notes on Pre-adaptation.
5. Distinguish between coacervates and microspheres.
6. Mention two embryological evidences of evolution.
7. Write a note on contributions of Wallace.
8. What are living fossils? Give examples.
9. Compare hybrid inviability and hybrid sterility.
10. Differentiate allopatric and sympatric speciation.
11. Enlist the faunal characteristics of continental islands.
12. Write notes on Himalayan zone in India.

(Ceiling: 20 marks)

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

13. Explain punctuated equilibrium with example.
14. Write short notes on fossils, fossilization and dating of fossils.
15. Comment on Social groups in termites.
16. Explain homologous organs and their role in evolution.
17. Describe Urey-Miller experiment.
18. Explain Hardy-Weinberg Equilibrium and the factors that upset it.
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 isolating mechanisms and their role in speciation.
21. Write an essay on evidences of organic evolution.

(1x10 = 10 marks)

FAROOK COLLEGE (AUTONOMOUS), KOZHIKODE
Sixth Semester B.Sc Zoology Degree Examination, April 2022
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. Explain ecological efficiency.
2. Classify marine habitats.
3. Differentiate between J and S growth curves in population ecology.
4. Why species diversity is important for a community?
5. Enumerate the faunal characteristics of muddy sea shores.
6. Write a short notes on concept of ecotype?
7. Explain neutralism with an example.
8. Comment on Hot Spots in India.
9. Explain remote sensing and its applications in ecological studies.
10. Write notes on tagging method in birds.
11. Explain measures of toxicity with examples.
12. Write a note on Germ plasm banks.

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

13. Explain in detail about photosynthetic production and energy fixation
14. What is sedimentary cycle? Explain Phosphorous cycle
15. Explain age distribution in population ecology with an example
16. Explain habitat destruction and its consequences.
17. Briefly describe about Sampling of animal populations.
18. Explain the major threats to biodiversity.
19. Write an account on Signs and symptoms of common poisoning and their antidotes.

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

20. What are Limiting factors? Explain different concepts with an example.
21. Explain the different Components of biodiversity with examples.

FAROOK COLLEGE (AUTONOMOUS), KOZHIKODE
Sixth Semester B.Sc Zoology Degree Examination, April 2022
BZL6B11T – Reproductive & Developmental Biology
 (2019 Admission onwards)

Time: 2 hours

Max. Marks : 60

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

1. Distinguish between radial and spiral cleavages.
2. Differentiate between GIFT and ICSI.
3. Explain flexion and torsion during embryonic development of chick.
4. Explain cleavage in man.
5. Explain the teratogenic effect of heavy metals.
6. Distinguish between an organizer and an inductor.
7. Explain the theory of epigenesis.
8. Mention the significances of Parthenogenesis.
9. What is PNDT act?
10. Explain blastulation in *Amphioxus*.
11. Explain the functions of egg envelopes.
12. What is colostrum? Explain its importance

(Ceiling: 20 Marks)

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

13. Describe the different types of blastulae with suitable examples.
14. Explain the structure of ovary and graffian follicle.
15. Explain the salient features of chick embryo at primitive streak stage.
16. Explain cell lineage with a suitable example
17. With suitable diagrams explain cleavage in Frog.
18. Explain the gradient experiment in sea urchin eggs.
19. Explain amniocentesis and CVS procedures and its significance.

(Ceiling: 30 Marks)

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

20. Explain the process of gastrulation and germ layer formation in man.
21. Explain the development and functions of extra embryonic membranes in chick.

(1 x 10 = 10 Marks)

FAROOK COLLEGE (AUTONOMOUS), KOZHIKODE
Sixth Semester B.Sc Zoology Degree Examination, April 2022
BZL6B10T – Physiology & Endocrinology
(2019 Admission onwards)

Time: 2 hours

Max. Marks : 60

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

1. What is anorexia?
2. With suitable examples, distinguish between neurogenic and myogenic heart.
3. Discuss the role of ADH in the regulation of urine production.
4. What is rigor mortis?
5. What are neurotrophins?
6. Comment on sodium-potassium pump
7. What is aphaeresis?
8. What is extracellular bioluminescence? Give an example
9. Highlight the role of troponin in muscle contraction
10. Which hormone lowers the level of calcium in the blood? Name the gland that secretes it.
11. What are neurohormones? Give an example
12. Comment on Addison's disease.

(Ceiling: 20 marks)

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

13. Briefly discuss the importance of dietary fibres.
14. Explain extrinsic pathway of blood coagulation.
15. Explain the mechanism of osmoregulation in marine bony and cartilaginous fishes.
16. Briefly discuss the transmission of impulse across a chemical synapse.
17. Explain Cori cycle.
18. Explain the negative feedback mechanism of hormone regulation.
19. Describe the role of hormones in insect metamorphosis.

(Ceiling: 30 marks)

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

20. Explain the method of transport of carbon dioxide between the lungs and tissues
21. Give an account of the hormones of the pituitary gland and explain their functions

(1x10 = 10 marks)