

Zoology Model papers 2020-21 to 2022- 2023



ADIKAVI NANNAYA UNIVERSITY:: RAJAHMAHENDRAVARAM
B.Sc Zoology Syllabus (w.e.f: 2020-21 A.Y)

MODEL QUESTION PAPERS(Semester - End)
B .Sc DEGREE EXAMINATIONS
SEMESTER - I

Course - 1:ANIMAL DIVERSITY – BIOLOGY OF NONCHORDATES

Time: 3hrs.

Max. Marks: 75

Section - A

Answer any FIVE of the following:

5x5=25M

Draw labeled diagrams wherever necessary

1. Binomial nomenclature
2. Whittaker's concept
3. Hexactinellida
4. Polymorphism
5. Parasitic adaptations
6. Coelom and coelomic ducts
7. Cephalic appendages in Prawn
8. Pearl formation

Section - B

Answer any FIVE of the following:

5x10=50

Draw labeled diagrams wherever necessary

9. a. Describe the structure and life history of *Elphidium*.
OR
b. Classify the phylum Protozoa with suitable examples up to species level.
10. a. Describe various types of canal systems in sponges.
OR
b. Write an essay on corals and coral reef formation.
11. a. Write in detail about the life history of *Fasciola hepatica*.
OR
b. Discuss the life cycle of *Ascaris lumbricoides*. Add a note on its Pathogenicity.
12. a. Explain the process and economic importance of vermiculture.
OR
b. Describe the structure of *Peripatus*. Add a note on its affinities.
13. a. Give an account on water vascular system in star fish.
OR
b. Write in detail about the structure and affinities of *Balanoglossus*.



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MODEL QUESTION PAPERS(Semester - End)

B.Sc DEGREE EXAMINATIONS

SEMESTER - II

Course - 2: ANIMAL DIVERSITY – BIOLOGY OF CHORDATES

Time: 3hrs.

Max. Marks: 75

Section - A

Answer any FIVE of the following:

5x5=25M

Draw labeled diagrams wherever necessary

1. *Amphioxus*
2. Placoidscale
3. Quillfeather
4. Prototheria
5. Anadromousmigration
6. *Draco*
7. Emu
8. Apoda

Section - B

Answer any FIVE of the following:

5x10=50M

Draw labeled diagrams wherever necessary

9. a. Explain the life history of *Herdmania*
OR
b. Explain the origin and general characters of chordates
10. a. Compare the characters of *Petromyzon* and *Myxine*
OR
b. Describe the structure of heart in *Scoliodon*
11. a. Describe the brain of *Ranahexadactyla*
OR
b. Explain the external features of *Calotes*
12. a. Write an essay on flight adaptations in birds
OR
b. Explain the respiratory system of *Columba livia*
13. a. Compare the characters of Metatheria and Eutheria
OR
b. Write an essay on dentition in mammals



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MODEL QUESTION PAPERS(Semester - End)

B .Sc DEGREE EXAMINATIONS

SEMESTER - III

Course - 3: CELL BIOLOGY, GENETICS, MOLECULAR BIOLOGY AND EVOLUTION

Time: 3hrs.

Max. Marks:

Section - A

Answer any FIVE of the following:

5x5=25

Draw labeled diagrams wherever necessary

1. Prokaryotic cell
2. Golgi complex
3. Polygenes
4. Multiple alleles
5. Mutations
6. Karyotyping
7. Lac operon concept
8. Genetic drift

Section - B

Answer any FIVE of the following:

5x10=50

Draw labeled diagrams wherever necessary

9. a. Describe the ultra structure of animal cell
OR
b. Explain the structure of mitochondria. Add a note on its functions.
10. a. Write an essay on gene interactions
OR
b. Discuss sex linked inheritance.
11. a. What are chromosomal disorders? Explain various types of autosomal and allosomal disorders
OR
12. a. Give an account of DNA replication.
OR
b. Explain the mechanism of Prokaryotic transcription.
13. a. An essay on modern synthetic theory of evolution.
OR
b. Define isolation. Discuss various isolating mechanisms.



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MODEL QUESTION PAPERS(Semester - End)

B .Sc DEGREE EXAMINATIONS

SEMESTER - IV

Course - 4: ANIMAL PHYSIOLOGY, CELLULAR METABOLISM AND EMBRYOLOGY

Time: 3hrs.

Max. Marks: 75

Section - A

Answer any FIVE of the following:

5x5=25

Draw labeled diagrams wherever necessary

1. Assimilation
2. Cardiac cycle
3. Ultra structure of muscle
4. Pancreas
5. Structure of glucose
6. Lipids
7. Gluconeogenesis
8. Types of eggs

II. Section - B

Answer any FIVE of the following:

5x10=50

Draw labeled diagrams wherever necessary

9. a. Explain the process of digestion.
OR
b. Describe the structure and function of heart
10. a. Give an account of nerve impulse transmission.
OR
b. Write an essay on the hormonal control of reproduction in mammals
11. a. Write an essay on the classification of carbohydrates
OR
b. Classify the enzymes. Discuss the mechanism of enzyme action.
12. a. Write an account on Kreb's cycle.
OR
b. Explain B- oxidation of palmitic acid
13. a. Discuss the process of fertilization.
OR
b. Write an essay on gameto genesis.



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B .Sc DEGREE EXAMINATIONS

SEMESTER - IV

Course - 5: IMMUNOLOGY AND ANIMAL BIOTECHNOLOGY

Time: 3hrs.

Max. Marks: 75

Section - A

Answer any FIVE of the following:

5x5=25

Draw labeled diagrams wherever necessary

1. Vaccines
2. Primary lymphoid organs
3. Hapten
4. Hypersensitivity
5. Natural media
6. Cell lines
7. Endo nucleases
8. Polyploidy in fishes

Section - B

Answer any FIVE of the following:

5x10=50

Draw labeled diagrams wherever necessary

9. a. Define immunity. Write in detail about innate immunity.
OR
b. Explain various cells of immune system
10. a. Describe the structure of antibody. Add a note on their functions.
OR
b. Describe the structure of MHC molecules. Discuss their role in the mechanism of exogenous and endogenous pathway of antigen processing and presentation
11. a. Write an essay on different types of stem cells and their applications
OR
b. Explain the production and applications of monoclonal antibodies.
12. a. Write an account on recombinant DNA technology.
OR
b. Write an essay on transgenic animals
13. a. Explain hybridization techniques.
OR
b. Write an essay on PCR



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MODEL QUESTION PAPERS(Semester - End)

B .Sc DEGREE EXAMINATIONS

SEMESTER - V (Skill Enhancement Course - Elective)

Course - 6A: Sustainable Aquaculture Management

Time: 3hrs.

Max. Marks: 75

Section - A

Answer any FIVE of the following:

5x5=25M

1. History of Aquaculture
2. Brackish water aquaculture
3. Culture species of Sea weeds
4. Organic Manures
5. Water Quality
6. Fungal diseases of Fin fish
7. Post stocking Management
8. Procurement of seed for stalking

Section - B

Answer ALL the following:

5x10=50M

9. a. What is the current status of aquaculture at global and National level?
OR
b. Describe the layout of fish farm.
10. a. Explain the construction and management methods of nursery ponds.
OR
b. Write a detailed account on the need of fertilizer and manure application in culture ponds.
- 11 a. Write an essay on Induced breeding
OR
b. Discuss the culture of Indian Major Carps.
- 12 a. Give an account of commercial importance of Shrimp culture.
OR
b. Write an essay on mixed culture of fishes.
13. a. Describe the viral diseases of shell fishes.
OR
b. Write about bacterial diseases of Fin fishes.



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MODEL QUESTION PAPERS(Semester - End)

B .Sc DEGREE EXAMINATIONS

SEMESTER - V (Skill Enhancement Course - Elective)

Course - 7A: Postharvest Technology of Fish and Fisheries

Time: 3hrs.

Max. Marks: 75

Section - A

Answer any FIVE of the following:

5x5=25M

1. Storage and transport of fresh fish
2. Sun drying
3. Canning
4. Fish glue
5. Preparation of Agar
6. Fish liver oil
7. Quality control of fishery products
8. GMP's and SOP's

Section - B

Answer ALL the following:

5x10=50M

9. a. Write an essay on Principles of Post harvesting technology.
OR
b. Explain the spoilage in marine and fresh water fish.
- 10 a. Describe the Traditional methods of Fish preservation.
OR
b. Write about advanced methods of fish preservation.
11. a. Enlist the important fish products.
OR
b. Give an account of fish by-products.
- 12 a. Discuss the sanitation in processing plants of Post harvesting technology.
OR
b. Write an essay on quality control of fish and fishery products.
- 13 a. Explain the sea food quality assurance and systems.
OR
b. Discuss the national and international standards of quality assurance system ISO 9000 : 2000 series of quality assurance system.