B.Sc. DEGREE (CBCS) EXAMINATION, NOVEMBER 2018

Third Semester
B.Sc Zoology Model II Aquaculture

VOCATIONAL COURSE - ZA3VOT06 - FISH NUTRITION
2017 Admission Onwards

188355F0

Maximum Marks: 60
Time: 3 Hours

Part A
Answer any ten questions.
Each question carries 1 mark.

1. Which are the proteases produced by the Pancreas?
2. What is a Beta Pleated sheet?
3. What are Aldoses? Give examples
4. What is meant by an n3 Fatty Acid?
5. What is Specific Dynamic Action or Heat of Nutrient Metabolism?
6. What are the Nutritional Factors affecting Digestibility Coefficient?
7. What is Nitrogen Balance index?
8. What are Mould Inhibitors? Mention examples?
9. What is the influence of water temperature on energy requirement in fishes?
10. What are Haemagglutinins? Give examples?
11. Name any two methods used in the formulation of fish feeds?
12. Explain Auger Feeders?

Part B
Answer any six questions.
Each question carries 5 marks.

13. What are digestive glands? Elaborate the different digestive glands in fishes and the digestive enzymes in their secretions.
14. What are Fat soluble Vitamins? Comment on the functions, deficiency diseases and sources of the fat soluble Vitamins?

15. What is Proximate Analysis? Explain the estimation of Crude Protein, Dry Matter and Crude Lipid?

16. Comment on the various Non Conventional Feedstuffs used in the preparation of Fish Feeds?

17. Explain briefly the steps in the preparation of pelleted feeds?

18. Explain the different methods for the measurement of Calorific value of feeds?

19. Give a brief account of the various equipments used in feed manufacturing mills?

20. Distinguish between Food Conversion Ratio and Food Efficiency Ratio? What is the application of these ratios in aquaculture?

21. Explain Capital Investment, Fixed Costs, Variable Costs and Break-even Price in Aquaculture?

Part C
Answer any two questions.
Each question carries 10 marks.

22. Explain the functions, sources and deficiency symptoms of various Macro and Micronutrients in Fish Nutrition

23. Write an Essay on the different feed ingredients of plant and animal origin used in the preparation of artificial feeds?

24. How are feeds classified based on (a) Moisture Content (b) Stage of Life Cycle in which feed is given. Elaborate on Larval Feeds?

25. What are Growth Promoters? Explain the different types of Growth Promoters used and their importance in fish culture.

(6x5=30)

(2x10=20)
B.Sc. DEGREE (CBCS) EXAMINATION, NOVEMBER 2018

Third Semester
B.Sc Zoology Model II Aquaculture

VOCATIONAL COURSE - ZA3VOT05 - FISHERIES ENVIRONMENT
2017 Admission Onwards
04104BA2

Maximum Marks: 60
Time: 3 Hours

Part A
Answer any ten questions.
Each question carries 1 mark.

1. Comment on hypolimnion
2. What is a food chain?
3. What is a saprophytic food chain? Write down a suitable example from aquatic environment.
4. What is sea breeze?
5. Comment on wavelength
6. Comment on marine sediments
7. Brief description on phytoplankton with example
8. Give four examples for secondary producers from marine environment
9. What is nitrification and role of microbes in it?
10. What is agar?
11. What is Eutrophication
12. What is Net Sonde

Part B
Answer any six questions
Each question carries 5 marks.

13. Describe in detail the on Law of limiting factors
14. Give an account of Ecological succession and different types of succession.
15. Explain Weather and Formation of Monsoon?
16. What is upwelling?
17. Comment on Major seasons and seasonal changes in Indian subcontinent?
18. Explain Dark and Light bottle technique
19. Explain ecology of an Estuay
20. Give an account of Fish Finding devices.

Part C
Answer any two questions.
Each question carries 10 marks.

22. Comprehensive description on adaptations of rocky, muddy and sandy shore animals
23. Give an account on physical and chemical parameters of aquatic environment
24. Elaborate on the ecology of mangrove ecosystem. Its role and relevance
25. Give an account on the various biological sampling devices
B.Sc. DEGREE (CBCS) EXAMINATION, NOVEMBER 2018
Third Semester
CORE COURSE - ZY3CRT03 - ANIMAL DIVERSITY - CHORDATA
( Common to B.Sc Zoology Model I, B.Sc Zoology Model II Aquaculture, B.Sc Zoology Model II Food Microbiology, B.Sc Zoology Model II Medical Microbiology)
2017 Admission Onwards

Maximum Marks: 60

Part A
Answer any ten questions.
Each question carries 1 mark.

1. What are Chondrichthyes?
2. Comment on tail shift in larvacea.
3. What is Tunic?
4. What are Trophozooids?
5. Comment on Hatsheps pit in Ambhioxus.
6. Comment on Narcine.
7. Comment on climbing perch.
8. Name the classes under superclass Tetrapoda.
9. Assign the following to the respective orders a) Hyla  b) Amblystoma.
10. Give the scientific name of common frog.
11. What are perineal glands?
12. What are baleen plates?

Part B
Answer any six questions.
Each question carries 5 marks.

13. What are the characteristic features of Urochordata?
14. Mention the salient features of Ostracoderms and give an example.
15. Mention the salient features of Holocephali.
16. Explain the different kinds of scales in fishes.
17. Write notes on a) Synsacrum b) Pygostyle
18. Mention the modifications of the endoskeleton of Birds for flight.
19. Justify the statement "Protherians are unfinished mammals".
20. Give an account on pouch mammals.
21. Differentiate between Perissodactyla and Artiodactyla.

(5×5=30)

Part C
Answer any two questions.
Each question carries 10 marks.

22. Write an essay on the migration in fishes.
23. Describe the salient features of class Reptilia and classify up to subclass giving suitable examples.
24. Outline the classification of Class Mammalia.
25. Write an essay on dentition in mammals.

(2×10=20)