

One Copy

Reg. No. : .....

D 1114

Q.P. Code : [D 09 PZO 01]

(For the candidates admitted from 2009 onwards)

M.Sc. DEGREE EXAMINATION, DECEMBER 2013.

First Year

Zoology

INVERTEBRATE AND VERTEBRATE BIOLOGY

Time : Three hours

Maximum : 100 marks

Draw suitable diagrams wherever necessary.

Answer any FIVE questions.

All questions carry equal marks.

(5 × 20 = 100)

1. Discuss the amoeboid locomotion and their theories.
2. Write an essay in oyster culture and its importance.
3. Explain the structure and affinities of peripatus.
4. Discuss the protochordate, and their types with suitable examples.

5. Describe the types of adaptive radiation and explain arboreal adaptations in chordates.
  6. Describe the structure and function of nephridia in earth worm.
  7. Discuss the larval forms of echinoderms and their significance.
  8. Write an essay on migration in birds.
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**D 1115**

**Q.P. Code : [D 09 PZO 02]**

(For the candidates admitted from 2009 onwards)

M.Sc. DEGREE EXAMINATION, DECEMBER 2013.

First Year

Zoology

**CELL BIOLOGY AND GENETICS**

Time : Three hours

Maximum : 100 marks

Five out of Eight questions to be answered.

(5 × 20 = 100)

1. Describe the fluid mosaic model of plasma and add a note on active and passive transport membrane.
2. Describe the structure and functions of lysosome.
3. Explain the Watson and crick model of DNA and write the importance of different forms of DNA.
4. Give an account of protein synthesis.
5. Discuss the types of mutation and mutagenesis.

6. Explain the different stages of meiosis and its significance.
  7. Describe the functions of
    - (a) Mitochondria
    - (b) rRNA.
  8. Discuss the post transcriptional modification of mRNA and post translational modification of proteins.
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**D 1116**

**Q.P. Code : [D 09 PZO 03]**

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M.Sc. DEGREE EXAMINATION, DECEMBER 2013.

First Year

Zoology

**ECONOMIC ZOOLOGY**

Time : Three hours

Maximum : 100 marks

Answer any FIVE of the following

Each answer should not exceed 1500 words.

(5 × 20 = 100)

1. What are the beneficial insects? Write short notes on any four beneficial insects.
2. Describe the biology, life cycle, infestation, control and prevention of major sugarcane pests.
3. Explain the moriculture and management.
4. Write an essay on the diseases and parasites of carps, and their control measures.

5. Give an account on poisonous and non -  
poisonous snakes of India.
  6. Discuss about the genetic counselling.
  7. Write an essay on the pathogens, control and  
prevention of cattle and livestock's diseases.
  8. Describe the causative agents, symptoms,  
diagnostic methods and treatment for  
Tuberculosis and AIDS.
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D 1117

Q.P. Code : [D 09 PZO 04]

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M.Sc. DEGREE EXAMINATION, DECEMBER 2013.

First Year

Part III — Zoology

BIOCHEMISTRY AND BIOPHYSICS

Time : Three hours

Maximum : 100 marks

Answer any FIVE questions out of Eight.

All questions carry equal marks.

1. Describe the structure of amino acids giving examples, based on classification. Mention their properties.
2. Explain the structure and classification of carbohydrates giving examples.
3. Classify lipids with suitable examples. Add a note on saturated and unsaturated fatty acids.
4. What are nucleic acids? Write an essay on different types of nucleic acids.

5. Give an account on the properties classification and mechanism of enzyme action.
  6. Describe the principle working mechanism and applications of Thin Layer Chromatography.
  7. Explain the principle instrumentation and application of poly acrylamide gel electrophoresis.
  8. Mention the importance isotopes in the field of Biological studies. Describe the method of detection and measurement of radio activity Using GM counters. Add a note on its applications.
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D 1118

Q.P. Code : [D 09 PZO 05]

(For the candidates admitted from 2009 onwards)

M.Sc. DEGREE EXAMINATION, DECEMBER 2013.

First Year

Zoology

ENVIRONMENTAL SCIENCE AND BIODIVERSITY  
CONSERVATION

Time : Three hours

Maximum : 100 marks

Five out of Eight questions to be answered.

(5 × 20 = 100)

1. Explain the following :
  - (a) Holism
  - (b) Conservation
  - (c) Succession
  - (d) Ecosystem.
  
2. What is ecosystem ecology? What are the different approaches to ecology based on levels of organization of organisms.

3. Write notes on :
    - (a)  $\gamma$ -shaped energy flow model
    - (b) Nutrient cycling
    - (c) Primary production
    - (d) Ecosystem energetics.
  4. Define the term food chain. Give a comparative account of grazing and detritus food chains.
  5. Discuss the environmental conditions which govern the distribution of communities in marine waters.
  6. Give an account of habitat conditions and the biotic communities in a freshwater body. How its habitat conditions differ from those of a terrestrial ecosystem.
  7. What is convention on Biological Diversity? Write a short note of its key provisions.
  8. Write an account of various levels of protected areas developed by IUCN. What steps have been taken to conserve biodiversity at international levels?
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