

Reg. No. :

D 2164

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

(For the candidates admitted from 2009 onwards)

M.Sc. DEGREE EXAMINATION, MAY 2014.

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. Give an account on skeleton in sponges.
2. Explain the water vascular system in star fish.
3. Archeopteryx in connecting link between reptiles and birds.
4. Draw a labeled diagram and explain the external characters of Balanoglossus.

5. Explain the causes and significance of adaptive radiation and discuss the aquatic adaptation in chordates.
 6. Write an essay on sea anemone.
 7. Write an essay on migration in fishes.
 8. Describe the larval forms of echinoderms and their significance.
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Q.P. Code : [D 09 PZO 02]

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M.Sc. DEGREE EXAMINATION, MAY 2014.

First Year

Zoology

CELL BIOLOGY AND GENETICS

Time : Three hours

Maximum : 100 marks

Answer any FIVE questions.

(5 × 20 = 100)

1. Draw the ultra structure of nucleus and briefly explain its functions.
2. Illustrate the ultra structure and function of mitochondria.
3. Describe the Watson and crick double helix model of DNA.
4. Write notes on
 - (a) Inhibition in protein synthesis.
 - (b) Chain elongation.
 - (c) Chain termination.

5. Write an essay on structure and functions of rRNA, tRNA and mRNA.
 6. Enumerate the reasons for DNA damage and add comment on its repair mechanism.
 7. Describe how the nitrous acid acts as a mutagen.
 8. Give a detailed account on mitosis with clear sketch.
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M.Sc. DEGREE EXAMINATION, MAY 2014

First Year

Zoology

ECONOMIC ZOOLOGY

Time : Three hours

Maximum : 100 marks

Answer any FIVE of the following.

Each answer should not exceed 1,500 words.

1. **Comment on insect pests and its classification?
Add a note on the insect vector borne diseases in human beings.**
2. **Describe the biology, life cycle, infestation, control and preventive measures of oil seed insect pests.**
3. **Discuss the types and social aspects of honey bees and what are pests and diseases of honey bees?**
4. **Explain the methods of culture of Lac insect.**

5. Write an essay on identifying the poisonous and non-poisonous snakes.
 6. Write an essay on various syndromes caused by the abnormality of chromosomes in man.
 7. Comment on transmission, symptoms and prevention of polio myelitis disease.
 8. Explain the causes and concern of cholera.
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M.Sc. DEGREE EXAMINATION, MAY 2014

First Year

Zoology

BIOCHEMISTRY AND BIOPHYSICS

Time : Three hours

Maximum : 100 marks

Answer any FIVE questions.

(5 × 20 = 100)

1. What are Triacylglycerols? Explain their Chemical properties.
2. (a) Give an account on physical properties of Amino acids. (10)
(b) Classify the proteins according to their solubility. (10)
3. Write an essay on Enzyme Nomenclature.
4. Describe the rolling-circle method of Replication DNA.

5. Write a detailed account on Polymerase Chain Reaction.
 6. Explain about the working procedure for a Spectrophotometer.
 7. Discuss about the theories of Gas Chromatography.
 8. Describe the various steps in Protein Crystallography.
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Q.P. Code : [D 09 PZO 05]

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M.Sc. DEGREE EXAMINATION, MAY 2014.

First Year

Zoology

**ENVIRONMENTAL SCIENCE AND BIO-DIVERSITY
CONSERVATION**

Time : Three hours

Maximum : 100 marks

Answer any FIVE questions.

(5 × 20 = 100 marks)

1. Describe the inter-relationship between man and his environment in detail.
2. What is biogeochemical cycle? Explain their importance with one example.
3. What are the factors that determine population growth? Write about present population growth of man.
4. What is ecosystem? Explain the concept through fresh water ecosystem.

5. Give a detailed account on wildlife conservation.
 6. What is biodiversity? What are the major threats to biodiversity?
 7. Explain in detail how the biodiversity is conserved through legislation.
 8. Briefly explain the types of forests and grasslands present in the world.
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