Reg. No. : .....

D 2177 **Q.P. Code : [D 09 PZO 06]**

(For the candidates admitted from 2009 onwards)

M.Sc. DEGREE EXAMINATION, MAY 2013.

Second Year

Zoology

ANIMAL PHYSIOLOGY AND ENDOCRINOLOGY

Time : Three hours Maximum : 100 marks

Answer any FIVE questions.

(5 × 20 = 100)

1. Illustrate and explain the general organization of alimentary canal of man.

2. What is urine? Describe the steps in urine formation.

3. Why the blood is called liquid tissue? Write a detailed essay on composition of blood.

4. Give a detailed account on feedback control of hormone secretion with an example.

5. What is a hormone? Explain how the hormones are classified?

6. Write an essay on biosynthesis of thyroid hormones

7. Explain in detail what are the hormones that participate in the control of digestion.

8. Discuss - open and closed circulatory system

Reg. No. : .....

D 2129 **Q.P. Code : [D 09 PZO 07]**

(For the candidates admitted from 2009 onwards)

M.Sc. DEGREE EXAMINATION, MAY 2013.

Second Year

Zoology

MICROBIOLOGY AND IMMUNOLOGY

Time : Three hours Maximum : 100 marks

Answer any FIVE questions.

All questions carry equal marks.

(5 × 20 = 100)

1. Explain the methods of classification of virus and give suitable examples.

2. Write a comparative account on the structure of yeast and unicellular algae.

3. What are food poisoning organisms? Explain the mechanisms of microbial spoilage of sea food.

4. Distinguish between innate and acquired immunity. Add a detailed description of types of acquired immunity.

5. Explain the components of cellular and humoral immune systems with a brief description of their functions.

6. What are immuno deficiency disease? Explain their types and consequences with suitable examples.

7. Write an essay on vaccination with highlights on its principle and methods of preparation of any two types of vaccines.

8. Explain the principle and applications of RIA and ELISA.

Reg. No. : .....

D 2178 **Q.P. Code : [D 09 PZO 08]**

(For the candidates admitted from 2009 onwards)

M.Sc. DEGREE EXAMINATION, MAY 2013.

Second Year

Zoology

EVOLUTION AND PHYLOGENY

Time : Three hours Maximum : 100 marks

Answer any FIVE questions.

(5 × 20 = 100)

1. Give a detailed account on Geological time scales with special reference to phylogeny.

2. Explain how the theories of neo-darwinism prove the evolution.

3. What is the mechanism of evolution? Explain with examples.

4. Explain in detail about canal system in porifera.

5. What are the larval forms of echinodermata? Write their significance.

6. Enumerate the characteristics of protochordata and their affinities.

7. Explain how the isolation helps for evolution and origin of new species.

8. Write an essay on crustacean larvae and their significance.

Reg. No. : .....

D 2179 **Q.P. Code : [D 09 PZO 09]**

(For the candidates admitted from 2009 onwards)

M.Sc. DEGREE EXAMINATION, MAY 2013.

Second Year

Zoology

DEVELOPMENTAL BIOLOGY AND HUMAN WELFARE

Time : Three hours Maximum : 100 marks

Answer any FIVE questions.

(5 × 20 = 100)

1. Write notes on primordial germs cells and motility of spermatozoa.

2. Explain the physico chemical changes in the egg cytoplasm caused by fertilization.

3. Explain the morpho genetic gradient in the egg cytoplasm and its importance.

4. Give an account on metamorphosis in Amphibia.

5. Write notes on as human closing and Reasons for infertility in human beings.

6. What is oogenesis? Explain the development of oocyte citing any example.

7. Explain various types of cellular movements during Gastrulation.

8. Explain the causes and concern of cancer. Mention the treatment for cancer.

Reg. No. : .....

D 2130 **Q.P. Code : [D 09 PZO 10]**

(For the candidates admitted from 2009 onwards)

M.Sc. DEGREE EXAMINATION, MAY 2013.

Second Year

Zoology

BIOTECHNOLOGY AND BIOINFORMATICS

Time : Three hours Maximum : 100 marks

Answer any FIVE of the following.

(5 × 20 = 100)

1. Describe the procedure for isolation, characterization and maintenance of cell lines? Write down the applications of cell lines.

2. What are the different types of gene transfer techniques? Explain the principle methods and application of electroporation and microinjection method.

3. What is meant by protoplast? Explain in detail protoplast isolation fusion and its application.

4. Illustrate with examples the different types of recombinant vaccines.

5. How will you produce insect resistance plant using *Bt* gene in detail with illustration?

6. Discuss the biological database available for protein and DNA.

7. How do you predict the structure of protein using biological database?

8. Discuss in detail how to detect inter specific gene mutation through comparative genomics.
