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- (D) Describe the structure and function of respiratory organ in Birds. **12**

Or

Describe the types of heart on the basis of Evolution.

Unit-IV

4. (A) Name the types of sense organs found in vertebrates. **2**
- (B) Name the ventricles of Brain found in different parts of brain. **2**
- (C) Draw a well labelled diagram only of structure of Mammalian Brain. **4**

Or

Draw a well labelled diagram only of ultra-structure of uriniferous tubule.

- (D) Describe the three main types of Kidney found in Vertebrates. **12**

Or

Describe the anatomy and function of Human eye.



Roll No.

Total No. of Sections : 4

Total No. of Printed Pages : 4

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III Semester Examination

M.Sc.

Zoology

Paper I

[Comparative Anatomy of Vertebrates]

Time : Three Hours]

[Maximum Marks : 80

[Minimum Passing Marks : 16

Note : Part A and B of each question in each unit consists of Very Short Answer Type Questions which are to be answered in one or two sentences. Part C (Short Answer Type) of each question will be answered 200-250 words. Part D (Long Answer Type) of each question should be answered within the word limit 400-450.

Unit-I

1. (A) What are the Embryological evidences that supports the Echinoderm theory of origin of Chordates. **2**
- (B) Write the name of orders of class Amphibia along with two examples for each order. **2**

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- (C) Write four avian flight adaptations. 4

Or

What is Annelid theory of origin of Chordata.

- (D) Classify class Reptilia upto orders by giving important characters and examples. 12

Or

Give an outline table (chart) for mammalian classification and describe the metatherian in detail.

Unit-II

2. (A) Name the different types of centrum found in vertebrates. 2
- (B) Write how sweat gland regulates the body temperature ? 2
- (C) Describe the Keratinization process of Integument. 4

Or

Draw a well labelled diagram only of Pectoral Girdle of frog.

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- (D) Give a comparative account between integument of Amphibia, Reptilia and Mammalia 12

Or

Give a comparative account between pelvic girdle of class Reptilia, Aves and Mammalia.

Unit-III

3. (A) Define Portal System. 2
- (B) Write the difference between Pulmonary and Systemic Circulation. 2
- (C) Draw a well labelled diagram only of : 4
- (a) T.S. of Teleost gill,
- (b) T.S. of Elasmobranch gill.

Or

Draw a well labelled diagram only of :

- (a) Aortic arch of Amphibia,
- (b) Aortic arch of Aves.