

Roll No. ....

Total Pages : 2

**MDE/M-24**

**4693**

## **BIOLOGY OF VERTEBRATES**

Paper–M–Z–204

Time Allowed : 3 Hours]

[Maximum Marks : 80

**Note** : Attempt **five** questions in all, selecting **one** question from each Unit. Question No. **1** is compulsory. All questions carry equal marks.

### **Compulsory Question**

1. Write short notes on the following :  $8 \times 2 = 16$

- |                      |                             |
|----------------------|-----------------------------|
| (a) Astrocytes.      | (b) Electoreceptors.        |
| (c) Rouleaux.        | (d) Opishthonephric Kidney. |
| (e) Uropygial gland. | (f) Stomach of Birds.       |
| (g) Osteoclast.      | (h) Pectoral Girdles.       |

### **UNIT–I**

2. Give general concept of Protochordata or pre-vertebrates.

16

3. Write notes on the following :  $2 \times 8 = 16$

- |             |            |
|-------------|------------|
| (a) Glands. | (b) Horns. |
|-------------|------------|

### **UNIT–II**

4. Write short notes on the following :  $2 \times 8 = 16$

- (a) Comparative account of Jaw suspensorium.

(b) Skeleton elements of the Body.

5. Write short notes on the following :  $2 \times 8 = 16$

- (a) Characters of Respiratory tissue.  
(b) Internal and External Respiration.

### **UNIT–III**

6. Write short notes on the following :  $2 \times 8 = 16$

- (a) Component of Blood.  
(b) Aortic arches.

7. Write short notes on the following :  $2 \times 8 = 16$

- (a) Flight adaptation in Birds.  
(b) Migration in Fish.

### **UNIT–IV**

8. Write notes on comparative anatomy of Brain in amphibians, reptiles and birds. 16

9. Write notes on the following :  $2 \times 8 = 16$

- (a) Olfaction.  
(b) Sensory receptors.