

**सत्रीय कार्य / Assignment Work – 2014-15**

**M.Sc. Zoology (Final)**

Max Marks – 30

Min Marks-12

**निर्देश :** सत्रीय कार्य के प्रत्येक विषय में कुल 30 अंक हैं। सभी प्रश्नों के अंक समान होंगे। सभी प्रश्न हल कीजिए। (Assignment Work of each paper carries 30 Marks. All questions carry equal marks. Attempt all questions.)

**COMPARATIVE ANATOMY OF VERTEBRATES – I**

1. (a) Explain the theory of Natural Selection.  
(b) Write short notes on: (i) Pharyngeal Slit (ii) Origin of Chordates.
2. Discuss the following classes of vertebrates in brief: (i) Chondrichthyes (ii) Osteichthyes.
3. Discuss tissue response to mechanical stress. Explain about Atrophy and Hypertrophy in detail.
4. Compare Gastrulation and Neurulation in Amphioxus, Fishes, Amphibians, Reptiles, Birds & Mammals.
5. Compare the integument of Fishes and Tetrapods. Give a brief account of its specializations.

**LIMNOLOGY – II**

1. Explain the origin and diversity of Lakes.
2. Write short notes on: (i) Colour of Water; (ii) Turbidity; and (iii) Classification of Lakes.
3. Write short notes on: (i) Factors responsible for reduction of Carbon dioxide in Natural Waters; (ii) Hydrogen – Ion Concentration; and (iii) Reserve pH.
4. Explain the relation of organisms to movements of water.
5. Give a detailed account on the distribution of Plankton.

**INSECT PHYSIOLOGY – III**

1. Write short notes on: (i) Moulting; (ii) Salivary Glands; and (iii) Functions of air sacs.
2. Explain the mechanism of circulation in insects.
3. Write short notes on: (i) Excretory End Products; (ii) the moulting hormone Ecdysone; and (iii) the Compound eyes.
4. Give a detailed account on Chemoreceptor.
5. Write short notes on: (i) Luciferase; (ii) Sex Pheromones; (iii) Diapause; (iv) Aggressive mimicry; and (v) Viviparity.

**APPLIED ENTOMOLOGY - IV**

1. Give classification of following insect orders:  
(i) Dictyoptera; (ii) Orthoptera (iii) Mallophaga (Phthiraptera)
2. Explain the role of insects in Forensic Science.
3. Explain resistance, its mechanism and the genetics of resistance.
4. Give a brief account of the identification, life history and control of Pink boll-worm and Paddy Root Weevil (*Echinocnemus oryzae* Marshall).
5. Write short notes on the following:  
(i) Tasar Sericulture; (ii) Post-harvest processing of cocoons; (iii) Bee products; and  
(iv) Lac Extraction.

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