

**B.U. Examination Dec-2020**  
**M.Sc IIInd Sem Zoology (ATKT)**

**M.M. - 85**

**Paper - I**

**General and Comparative Animal Physiology and Endocrinology**

**Note:- Attempt All Questions (Word Limit- 250 words each Q.)**

**Q.1 Describe Autonomic nervous system in details.**

**Q.2 What do you understand by osmoregulation ? Explain the Process of osmoregulation in aquatic animals.**

**Q.3 Explain mechanism of photoreception.**

**Q.4 What is Chromatophores? Write the chromatophores in fishes.**

**Q.5 Write mechanism of Hormone action.**

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**Paper II Population Ecology and Environmental  
Physiology**

**Note:- Attempt All Questions (Word Limit- 250 words  
each Q.)**

**Q.1 Explain Populations and their  
characteristics.**

**Q.2 Explain the Levels of adaptations and write their  
significance**

**Q.3 Describe the Environmental limiting  
factors.**

**Q.4 write down the conservation management of natural  
resources.**

**Q.5 Explain the concept of  
homeostasis.**

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**Paper III**

**Tools and Techniques in biology Note:- Attempt All  
Questions (Word Limit- 250 words each Q.)**

**Q.1 write an essay on  
Microscopy.**

**Q.2 Write a detailed note on  
chromatography.**

**Q.3 Give an account of  
biosensors.**

**Q.4 Write an illustrated account of Tissue  
Fixation.**

**Q.5 Explain D.N.A.  
Sequencing.**

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**Paper IV**

**Molecular Cell Biology and  
Genetics.**

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**Note:- Attempt All Questions (Word Limit- 250 words each Q.)**

**Q.1 Describe the Structure of Microfilaments and Microtubules.**

**Q.2 Explain Signalling pathway from the membrane to Nucleus.**

**Q.3 Write an essay on various cell adhesion molecules.**

**Q.4 Explain Sex determination in Humans.**

**Q.5 Explain prenatal diagnosis and genetic counselling.**