

**KVR GOVT. COLLEGE FOR WOMEN(A), KURNOOL**  
**M.SC. (ZOOLOGY): FIRST YEAR EXAMINATION**  
**External Assessment**  
**I Semester**

**ZOO 103: BIOMOLECULES AND METABOLIC REGULATION**

**MODEL QUESTION PAPER**

**Time: 3 Hours**

**Max. Marks: 80**

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**SECTION - A**

**Answer any FOUR questions**

**Marks: 4 x 5 = 20**

**Write a brief account of the following**

1. Biomedical importance of Glycolysis
2. Gluconeogenesis
3. Haemoglobin
4. Phenylalanine
5. Gout
6. Orotic aciduria
7. Phospholipids

**SECTION – B**

**Answer ALL four questions**

**Marks: 4 x 15 = 60**

11. (a) Write an essay on Thermodynamic Principles in Biology?  
(OR)  
(b) Describe the classifications of Carbohydrates?
12. (a) Write an essay on Biosynthesis of Urea?  
(OR)  
(b) Describe the classification and different structures of Protein?
13. (a) Write an essay on Biosynthesis of Pyrimidine nucleotides?  
(OR)  
(b) Explain the Catabolism of purines?
14. (a) Write an essay on Lipid Peroxidation?  
(OR)  
(b) Discuss the Overview of Metabolism of Carbohydrates?

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**ZOO 104: BIOPHYSICAL AND BIOCHEMICAL TECHNIQUES**

**MODEL QUESTION PAPER**

**Time: 3 Hours**

**Max. Marks: 80**

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**SECTION - A**

**Answer any FOUR questions**

**Marks: 4 x 5 = 20**

**Write a brief account of the following**

1. Beer Lambert's law
2. Simple Microscope
3. Paper Chromatography
4. Staining Procedure
5. Autoradiography
6. Patch Clamp
7. Cathode Ray and Dual Beam Oscilloscope

**SECTION – B**

**Answer ALL four questions**

**Marks: 4 x 15 = 60**

11. (a) Give a brief account on UV- Visible Spectrophotometer?  
(OR)  
(b) Write an essay on Types of Ultracentrifuges?
12. (a) Explain the High-Pressure Liquid Chromatography (HPLC)?  
(OR)  
(b) Explain the Applications of Radioactive Methods in Biology?
13. (a) Explain the Dye injection Technique?  
(OR)  
(b) Write an Essay on Types of Kymograph?
14. (a) What is Cell Proliferation and write the Cell Proliferation Measurements?  
(OR)  
(b) Write an essay on Preparation of Culture Media?

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**II Semester**

**ZOO 201: BIOSTATISTICS & COMPUTER APPLICATIONS IN BIOLOGY**

**MODEL QUESTION PAPER**

**Time: 3 Hours**

**Max. Marks: 80**

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**SECTION - A**

**Answer any FOUR questions**

**Marks: 4 x 5 = 20**

**Write a brief account of the following**

1. MS-Access
2. Linux
3. MS- Word
4. E-Mail
5. Input and Output Devices
6. Median and Mode
7. Standard Deviation

**SECTION – B**

**Answer ALL four questions**

**Marks: 4 x 15 = 60**

11. (a) Write in detail about Classification of Computers?  
(OR)  
(b) Write an essay on Generations of Computers?
12. (a) Describe the Applications of Computer Graphics?  
(OR)  
(b) Explain the internet concepts?
13. (a) What is Biostatistics? Give a brief account on a diagrammatic representation of biological data?  
(OR)  
(b) Write an essay on Co-efficient of variation?
14. (a) Discuss the Probability curve?  
(OR)  
(b) Write in detail about elements of probit analysis?

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**II Semester**

**ZOO-202: CELL BIOLOGY AND IMMUNOLOGY**

**MODEL QUESTION PAPER**

**Time: 3 Hours**

**Max. Marks: 80**

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**SECTION - A**

**Answer any FOUR questions**

**Marks: 4 x 5 = 20**

**Write a brief account of the following**

1. Active Transport
2. Osmosis
3. Diffusion
4. Phospholipids
5. Models of Cell signaling
6. Mast Cells
7. Spleen

**SECTION – B**

**Answer ALL four questions**

**Marks: 4 x 15 = 60**

11. (a) Give a brief account on Ultra structure of Plasma Membrane?  
(OR)  
(b) Write an essay on eukaryotic Cell structure and organization?
12. (a) Explain the G-Protein Coupled Receptors?  
(OR)  
(b) Explain the Cyclic-AMP Pathway?
13. (a) Write an essay on Cells of Immune system?  
(OR)  
(b) Write an Essay on Innate immunity?
14. (a) What is Immunization and Write an essay on types of immunization?  
(OR)  
(b) Write an essay on Immuno deficiency diseases

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**ZOO 102 GENETICS &EVOLUTION**

**MODEL QUESTION PAPER**

**Time: 3 Hours**

**Max. Marks: 80**

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**SECTION - A**

**Answer any FOUR questions**

**Marks: 4 x 5 = 20**

**Write a brief account of the following**

1. Incomplete Linkage
2. Recombination
3. Down's syndrome
4. Phenylketonuria
5. Allopatric speciation
6. Sympatric speciation
7. Natural selection

**SECTION – B**

**Answer ALL four questions**

**Marks: 4 x 15 = 60**

11. (a) Write an essay on methods of gene transfers  
(OR)  
(b) Write an essay on Types of crossing over?
12. (a) Explain the Sex anomalies (Turners's Syndrome, Klinefelter's syndrome)?  
(OR)  
(b) Explain the Positive Eugenics?
13. (a) Write an essay on Neo-Darwinism?  
(OR)  
(b) Explain the role of isolating mechanism?
14. (a) Give a brief account on Macro evolution?  
(OR)  
(b) Explain the phylogenetic gradualism?

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**ZOO 203-PHYSIOLOGY OF ANIMALS**  
**MODEL QUESTION PAPER**

**Time: 3 Hours**

**Max. Marks: 80**

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**SECTION - A**

**Answer any FOUR questions**

**Marks: 4 x 5 = 20**

**Write a brief account of the following**

1. Digestion in mouth
2. Intracellular Digestion
3. Blood Groups
4. Biological significance of water
5. Poikilothermic animals
6. Hibernation
7. Functions of luminescence

**SECTION – B**

**Answer ALL four questions**

**Marks: 4 x 15 = 60**

11. (a) Write an essay on Feeding mechanisms?  
(OR)  
(b) Discuss the different Digestive enzymes involved in Digestion process?
12. (a) Write an essay on Mechanism of Respiration?  
(OR)  
(b) Describe the regulation process of body fluids in vertebrates?
13. (a) Explain the Thermoregulation in vertebrates?  
(OR)  
(b) Write an essay on Biological Rhythms?
14. (a) Write an essay on Mechanism of Light production?  
(OR)  
(b) Explain the Muscle structure and functions-correlation?

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**ZOO 101: STRUCTURE, FUNCTIONS AND ANATOMY OF NON-CHORDATES**  
**CHORDATES**

**MODEL QUESTION PAPER**

**Time: 3 Hours**

**Max. Marks: 80**

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**SECTION - A**

**Answer any FOUR questions**  
**20**

**Marks: 4 x 5 =**

**Write a brief account of the following**

1. Species Concept
2. Acoelomata
3. Trachea
4. Circulatory system in Mollusca
5. Horns
6. Evolutionary time scale
7. Respiratory organs in Fish

**SECTION – B**

**Answer ALL four questions**

**Marks: 4 x 15 = 60**

11. (a) Describe the pattern of feeding in lower metazoan?  
(OR)  
(b) Discuss the feeding in lower polychaeta?
12. (a) Explain the circulatory system in Arthropoda?  
(OR)  
(b) Explain the larval forms of Echinodermata?
13. (a) Describe the different types of scales in vertebrates?  
(OR)  
(b) Write an essay on aortic arches portal system in vertebrates?
14. (a) Give a significant account on Human Brain structure?  
(OR)  
(b) Explain the Respiratory organs in Birds?