**ZOOLOGY - PAPER - VI**

**ANIMAL HUSBANDRY**

**Periods:60 Max. Marks: 100**

 **ZOO5312 CREDITS-4**

**UNIT – I : 10 Hours**

General introduction to poultry farming. Principles of poultry housing. Poultry houses. Systems of poultry farming. Management of chicks, growers and layers. Management of Broilers.

**UNIT – II: 10 Hours**

Poultry feed management – Principles of feeding. Nutrient requirements for different stages of layers and broilers. Methods of feeding. Poultry diseases – viral, bacterial, fungal and parasitic (two each); symptoms, control and management.

**UNIT – III: 10 Hours**

Selection, care and handling of hatching eggs. Egg testing. Methods of hatching. Brooding and rearing. Sexing of chicks.

**UNIT- IV: 20 Hours**

Breeds of Dairy Cattle and Buffaloes – Definition of breed; Classification of Indian Cattle breeds, exotic breeds and Indian buffalo breeds. Systems of inbreeding and crossbreeding. Housing of dairy animals – Selection of site for dairy farm; systems of housing – loose, housing system. Conventional dairy barn. Cleaning and sanitation of dairy farm. Weaning of calf. Castration and dehorning. Deworming and Vaccination programme. Records to be maintained in a dairy farm.

**UNIT - V: 10 Hours**

Care and management of dairy animals - Care and management of calf, heifer, milk animal, dry and pregnant animal, bulls and bullocks.

**zoology PRACTICAL syllabus for V semester**

**ZOOLOGY –PRACTICAL - VI**

**ANIMAL HUSBANDRY**

**Periods:24 Max. Marks: 50**

 **ZOO5312 CREDITS-2**

1. Study of various breeds of layers and broilers (photographs)

2. Identification of disease causing organisms in poultry birds (as per theory)

3. Study of the anatomy of a poultry bird by way of dissecting a bird. (Demonstration)

4. Study of various activities in a poultry farm (layers and broilers) and submission of a report.

5. Study of various breeds of cattle (photographs/microfilms)

6. Study of various activities carried out in a dairy farm and submission of a report.

**LEARNING OUTCOMES**

* Learn about biotechnology techniques
* Learn about southern ,western ,northern blotting techniques
* Learn about maintaininace of poultry and cattle.
* Students identify the disease about poultry,cattle.

**ZOOLOGY SYLLABUS for VI semester**

**ZOOLOGY - ELECTIVE PAPER: VII-(B)**

**CELLULAR METABOLISM AND MOLECULAR BIOLOGY**

**Periods: 60 Max. Marks:100\**

 **ZOO Credits:4**

**Unit I**: **Biomolecules**

1.1 Carbohydrates - Classification of carbohydrates. Structure of glucose

1.2 Proteins - Classification of proteins. General properties of amino acids

1.3 Lipids - Classification of lipids

1.4 Nucleic acids - DNA – Structure and function; RNA - Structure, types and functions

**Unit II**: **Enzymes and Cellular Metabolism**

2.1. Introduction to biocatalysis, Enzymes and their classification, Enzymekinetics. Mechanism of action.Inhibition and Regulation

2.2 Carbohydrate Metabolism - Glycolysis, Krebs Cycle, Gluconeogenesis,

2.3 Glycogen metabolism, Review of electron transport chain

**Unit - III : Cellular Metabolism and Cell Physiology**

3.1 Lipid Metabolism - Biosynthesis and β oxidation of palmitic acid

* 1. Protein metabolism - Transamination, Deamination and Urea Cycle
	2. Transport functions of plasma membrane – Active, passive and facilitated transport

3.4 Cell junctions – Tight junctions, desmosomes, gap junctions

**Unit - V:Gene Expression**

3.1 Gene Expression in prokaryotes (Lac Operon)

3.2 Gene Expression in eukaryotes.

3.3 Transcription and Translation.

**ZOOLOGY PRACTICAL syllabus for VI semester**

**ZOOLOGY - ELECTIVE PAPER: VII-(B)**

**CELLULAR METABOLISM AND MOLECULAR BIOLOGY**

**Periods: 24 Max. Marks: 50**

 **ZOO credits:2**

 1. Qualitative tests to identify functional groups of carbohydrates in given

Solutions (Glucose, Fructose, Sucrose, Lactose)

 2. Estimation of total protein in given solutions by Lowry’s method.

 3. Study of activity of salivary amylase under optimum conditions

4. Preparation of permanent slide to show the presence of Barr body in

Human female blood cells or cheek cells

5. Mounting of salivary gland chromosomes of *Chiranomous*

SUGGESTED READINGS

J. M., Tymoczko, J. L. and Stryer, L. (2006). Biochemistry. VI Edition .W.H. Freeman and Co.

Nelson, D. L., Cox, M. M. and Lehninger, A.L. (2009). Principles of Biochemistry. IVEdition. W.H. Freeman and Co.

Murray, R.K., Granner, D.K., Mayes, P.A. and Rodwell, V.W. (2009). Harper’s Illustrated Karp, G. (2010), Cell and molecular biology : Concepts and experiments. VI edition. John Wiley and sons. Inc.

De Robertis, EDP and De Robertis EMF (2006). Cell and molecular biology. VIII edition. Lippincott Williams and Wilkins, Philadelphia Biochemistry. XXVIII Edition. Lange Medical Books/Mc Graw3Hil

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 **Learning Outcomes**

* Student Can Benefit To Now About Metabolism Of Proteins ,Carbohydrates,Enzymes And Lipids
* They also benfited learn about cellular respiration.