KAKATIYA UNIVERSITY
B.Sc. POULTRY SCIENCE SYLLABUS UNDER CBCS
(With effect from 2016-2017)
V - SEMESTER
Paper – GE-1 (Theory)
BACKYARD POULTRY

Max. Marks: 80

Unit-I: Basics of Backyard poultry

1. Definition of backyard poultry.
2. Rearing of birds.
3. Utilization of the products and by products by the family.
4. Income generation from backyard poultry unit.

Unit-II: Nutritional value of the egg and meat of backyard poultry.

1. Egg and Nutrition
2. Meat and Nutrition.
3. Mis-concept of egg is non-vegetarian food.
4. Half incubated egg and its nutritive value.

Unit-III: Improvement of country chicken by up gradation.

1. Procurement of exotic male breeds.
2. Establishment of small marketing units for consumers.
3. Bringing awareness among public regarding the nutritive value of egg and meat of local varieties.
4. Preparation of own feed with low cost.

Unit-IV: Brooding equipment for backyard poultry

1. Space and light requirement.
2. Local brooder boxes.
3. Local transporting materials.
4. Other required facilities like water.

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(With effect from 2016-2017)
V - SEMESTER
Paper – V (Theory)
POULTRY HOUSING AND MAIMMUNOLOGY AND VACCINATION

Max. Marks: 50

UNIT-I: Immunity of the Poultry

1.1 The immune system –Introduction of Avian immune system, basic principles-innate and acquired immunities.
1.2 Antigens-Determinants of antigenicity, biological classes of antigens.
1.3 Chicken's primary and secondary lymphoid organs-Bursa and Thymus-Antibody mediated immunity (Humoral immunity).
1.4 Production and the role of different types of antibodies-IgM, IgG, IgA, Bile. Differences between old birds and newly hatched chick acquired antibodies from mother hen. Cell-mediated immunity-Helper T-ells, Cytotoxic T cells, Suppressor T cells.

UNIT-II: The Complement System

2.1 General properties, components, complement activation.
2.2 Classical pathway, alternative C pathway, biological effects of C.
2.3 Quantization of C and its components.
2.4 Biosynthesis of C, deficiencies of complement system.

UNIT-III Immunodeficiency Diseases

3. 1 Primary immunodeficiency's-disorders of complement, disorders of phagocytosis.
3.2 Secondary immunodeficiency's.
3.3 Bird Flu-symptoms, causes and its treatment.
3.4 Classification of hypersensitivity reactions- Type-I, type-II,type-III and Type-IV.

UNIT-IV: Vaccination

4.1 Live and Killed vaccines.
4.2 Vaccination programs, schedule.
4.3 Stress and Vaccination.
4.4 Vaccination procedures for broilers, broiler-breeders, commercial layers, turkeys, duck breeders, and commercial ducklings.

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PRACTICALS

Max. Marks: 30

1. Preparation of vaccines and their preservation.
2. Vaccination poultry birds.
3. Study of internal organs of the body of the fowl.
4. Collection of blood, separation of serum and plasma and preservation.
5. Preparation of blood smear and tissue impression smear and staining.
6. Post-mortem examination for important poultry diseases.
7. Fumigation of hatchery and eggs.
8. Visit to a disease diagnostic laboratory.

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(With effect from 2016-2017)
V - SEMESTER
Paper – VI (Theory)
POULTRY PRODUCTS AND TECHNOLOGY

Max. Marks: 50

UNIT-I: Animal Protein-Poultry Egg and Meat

1.1 Present status of poultry products technology in India and its scope for expansion and future development.
1.2 Structure, chemistry, per capita consumption of poultry and egg in India and abroad including changing consumer attitude towards these items.
1.3 Egg and poultry meat as a source of quality animal protein.
1.4 Sources of contamination of egg and its products and its prevention.

UNIT-II: Egg Quality and its Maintenance

2.1 Importance of egg quality studies and techniques available to evaluate the same Factors responsible for deterioration of egg quality.
2.2 Microbial spoilage of eggs. Methods of preservation of shell eggs.
2.3 Handling, collection, grading, packaging and storage of eggs.
2.4 Organisations and operation of cold stores for holding shell eggs and its products.

UNIT-III: Manufacture of Egg Powder

3.1 Functional properties of eggs. Pasteurization, freezing and dehydration of egg products, including their packaging and storage.
3.2 Principles and techniques of manufacture of egg powder, albumen flakes, yolk granules and other edible egg products.
3.3 Industrial use of egg and egg products.
3.4 National and international standards for egg and egg products.

UNIT-IV: Poultry Dressing and Processing

4.1 Principles of dressing poultry including chilling, packing and labelling. Meat yield, meat cutting and factors influencing meat yield-comparative evaluation of various types of avian species used in India for purposes of meat different methods of preservation of poultry meat-chilling, freezing, curing, smoking, dehydration and canning. Microbial spoilage of poultry meat and its prevention.
4.2 Inspection, grading and standardization of dressed poultry. Fundamentals and principles of further processed poultry products.
4.3 Specifications and regulations relating to poultry products offered for sale Sanitation in poultry processing plant and egg breaking unit.
4.4 Selection of types of detergents and sanitizers. Sampling technique and quality control of egg and poultry products. Packaging transportation and marketing of egg and poultry products.

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PRACTICALS

Max. Marks:30

1. Structural details and internal parts of an egg.
2. Composition and nutritive value of different types of avian eggs.
3. Measurement of external and internal physical quality of eggs.
4. Identification of quality defects in eggs.
5. Candling, grading,Washing and coating of eggs.
6. Spraying of eggs for preservation.
7. Preservation of eggs by different techniques.
8. Preparation of cold store and its operation during storage and removal for disposal.
9. Packing of shell eggs for short and long term transport
10. Preparation of various edible egg products.
11. Evaluation of dressing yield, meat yield and dressing loss of chicken and ducks.
12. Sampling of meat and egg. Products.
13. Organoleptic evaluation of chicken and egg products.
14. Sanitary practices in a poultry and egg breaking plant.
15. Visit to poultry processing plants to get familiar with their organisation, layout and operation.
16. Marketing methods for disposal of egg and poultry products-by visiting different marking units.

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