

U.P. HIGHER EDUCATION SERVICES COMMISSION, ALLAHABAD

ANIMAL HUSBANDRY & DAIRYING

(Subject Code-92)

- Unit-1:** Present-status and future prospects of livestock and poultry production in India, history and development of livestock industry, significance of livestock in relation to agriculture, human health and national economy, animal production systems in different agro-climatic zones. Problems in improvement of cattle breeds, inheritance of livestock traits, population dynamics of Indian livestock and national programme for improvement of cattle, buffaloes, sheep, goats, pigs, equine, camel, rabbits, poultry and swine. Importance of Indian and exotic breeds and their conservation, history of domestication of cattle, sheep and goats. Reproduction behaviours of various species of livestock and poultry, livestock production system, approaches and methods of breeding and application of biotechnology in animal improvement, maintenance of breeds and breeding records, gene frequency analysis, heritability estimation, semen evaluation, preservation, dilution and artificial insemination.
- Unit-2:** Nutritional requirements and feeding programme of different categories of livestock and poultry, pre-biotic and pro-biotics and their significance in livestock and poultry production. Component of animal body, physiology and function of digestive system, nutrients requirement for production of milk, meat, wool, eggs, protein metabolism, role of vitamins, minerals, enzymes and feed additive processing and storage of conventional and non-conventional feed ingredients, feeds formulation and balanced feeds, BIS standards of feeds and marketing nutritional deficiencies, forage crops and green fodders and their compositions and role in growth, health, milk production and reproduction, analysis of fodder and feeds.
- Unit-3:** Animal health and diseases, causes, symptoms, diagnosis and preventive measures, livestock and poultry acts and 300 notic diseases, quarantine maintenance, management of hygiene and sanitation on animal farm house, vaccination to animal and poultry, planning and layout of animal and poultry houses.
- Unit-4:** Compositions of milk from different species of animals. Status of dairy industries in India, various national programmes for milk production and dairy development. Technology mission on dairying, national policy of GATT, WTO, MMPO, concepts of GMP, TQM, Haccp, methods for detection of milk adulteration,
- Unit-5:** Composition of cream, butter, condensed milk, dried milk, cheese, flavoured milk, Ice creams PFA, BIS standard for milk and milk products. Processing technology for different milk products, quality aspects, and storage for better shelf life and good quality, factors affecting the quality of milk and milk products, homogenisation, pasteurisation, sterilization, bactofugation, ultra-filtration, ultra high temperature (UHT) of milk, filling, packaging, storage, transportation and marketing of milk and milk products.