New & Restructuring
of
Post Graduate
Curriculum & Syllabus
for
M.Sc. (Ag.)-Animal Husbandry & Dairying
w.e.f. Session : 2019-20
Semester System
as per
Fifth Deans Committee Reoprt of ICAR

Submitted & Approved By-
Board of Studies
Faculty of Agriculture
Dr.Ram Manohar Lohia Avadh University
Ayodhya (U.P.) 224001

M.Sc. (Ag.) Animal Husbandary & Dairying

Ist Semester			Evaluation Mark			
Code No.	Course Title	Credit Hours	Mid Term	End Term	Practical	Total
AHD. - 501	Production & Management of Dairy Animals	3(2+1)	20	50	30	100
AHD. - 502	Poultry Production & Management	3(2+1)	20	50	30	100
AHD. - 503	Market Mild Technology	3(2+1)	20	50	30	100
AS. - 501	Agricultural Statistics	3(2+1)	20	50	30	100
	Total Credit	12				
IInd Semester			**Evaluation Mark**			
Code No.	**Course Title**	**Credit Hours**	**Mid Term**	**End Term**	**Practical**	**Total**
AHD. - 504	Fundamentals of Animal Nutrition	3(2+1)	20	50	30	100
AHD. - 505	Reproductive Physiology of Farm Animals	3(2+1)	20	50	30	100
AHD. - 506	Dairy Processing and Pland Management	3(2+1)	20	50	30	100
AHD. - 507	Feed Evalution Techniques	3(2+1)	20	50	30	100
	Total Credit	12				
IIIrd Semester			**Evaluation Mark**			
Code No.	**Course Title**	**Credit Hours**	**Mid Term**	**End Term**	**Practical**	**Total**
AHD. - 508	Microbiology of Milk & Milk Products	3(2+1)	20	50	30	100
AHD. - 509	Dairy Technology	3(2+1)	20	50	30	100
AHD. - 510	Fundamentals of Animal Breeding & Genetics	3(2+1)	20	50	30	100
CA. - 502	Computer Application in Agriculture	2(1+1)	20	50	30	100
	Total Credit	11				
IVth Semester			**Evaluation Mark**			
Code No.	**Course Title**	**Credit Hours**	**Mid Term**	**End Term**	**Practical**	**Total**
AHD. - 591	Master Seminar	1(0+1)				100
AHD. - 599	Master Research (Thesis)	20	Satisfactory			100
OR						
Special Papers - (20 - Credit)						
AHD. - 511	Dairy Extention	4(3+1)	20	50	30	100
AHD. - 512	Dairy Business Management	4(3+1)	20	50	30	100
AHD. 513	Feeds & Feeding Management of Live Stock	4(3+1)	20	50	30	100
AHD. - 514	Experimental Design	4(3+1)	20	50	30	100
AHD. - 515	Production and Management of Sheep, Goat, Swine & Poultry	4(3+1)	20	50	30	100
	Total Credit	21				
	Total Credit Hours	56				

AHD 501. Production and Management of Dairy Animals 3(2+1)

Development of livestock industry in India and world, Present status and future prospectus of livestock development in India. Important Bread of Buffalo, Cattle, Sheep and Goat, treats of economical importance, Housing and raring system, Breading management and method of breading pre nature and post nature care and management of cattle and buffalo, Management strategies for reducing mortality in calves, age at first calving and calving interval in cattle and buffalo, Management of labour, Milking Management, Transport of Animal, Health Management (Important Diseases like FMD, HS, Timpanty, Impaction of Rumen, Dystocia milk fever, Ketosis) Feed and Fodder resources and there uses for feeding. Specific technique of feeding and watering, Computation of Practical and Economical Ration, Supply of Green Fodder, Around the Year, Enrichment of Poor Quality Roughage.

Practical: Relevant to concerned theory topics.

AHD 502. Poultry Production & Management 3(2+1)

Genetic Classification of Poultry Status of poultry industry in India, why poultry farming is too much important in our country.Requirement of Protein, Energy, Vitamins, Minerals and Feed additives for layers and broilers. Feed ingredients and ingredients related to energy, protein, minerals and vitamins sources Care and management of starters, growers, layers, broilers and breeding stocks. The formation of an egg and endocrine regulatory mechanism involved. Incubation and hatching of egg, Development of embryo in egg and Incubation. Deworming and vaccination programme, causal organism, symptoms, prevention and control of some important diseases like - Ranikhet, Pullorum, Marek disease, Coccidiosis, C.R.D, Fowl pox and Coryza. Principals of Bio security, Form Sanitization and disinfection procedure, Layout and design of Housing and cages.

Practical: Relevant to concerned theory tonics.

AHD 503. Market Milk Technology **3(2+1)**

Recent advances in marketing of milk in India. Agencies involved in the production & handling of market milk. Methods of procurement of milk, payments & quality assessment by organoleptic and platform test" Methods of chilling of milk and transportation. Milk storage tanks, Maintenance and cleaning of equipments in receiving room and storage. PTA standards for market milk; Preservatives commonly used in market milk. Definition and technology of clean milk, safe milk, recombined milk, toned milk, filled milk and special milk production. Importance of packaging of milk and different types of containers used, Recent advances in pricing and distribution of market milk; Problems of city milk supply.

Practical: Relevant to concerned theory topics.

AHD 504. Fundamentals of Animal Nutrition **3(2+1)**

Composition of Animal body. Digestive system of ruminant and non-ruminant animals; Ruminant Vs non-ruminant nutrition; Digestion and metabolism of various nutrients like crude fibre, crude fat, crude protein, minerals, vitamins and NPN compounds in ruminant animals. Evaluation of feed in relation to protein and energy value. Nutrient requirements of farm animals like cattle and buffalo for various purposes like maintenance, growth, milk production, pregnancy, work and for service. .

Practical: Relevant to concerned theory topics.

AHD 505. Reproductive Physiology of Farm Animals **3(2+1)**

Anatomy of male and female reproductive tract. Physiology of endocrine mechanism involved in male reproduction such as sexual drive, spermatogenesis, hormones of testes, ejaculation and sperm transport. Physiology and endocrine mechanism involved in female reproduction such as estrous cycle, oogenesis, ovulation and formation of corpusluteum (Physiology and endocrine mechanism involved in fertilization, implantation, maintenance of pregnancy, parturition, initiation and secretion of milk, let down and holding up of milk phenomena. Physiology and endocrine mechanism involved in puberty, mammary gland development and maintenance of lactation.

Practical: Relevant to concerned theory topics.

AHD 506. Dairy Processing and Plant Management **3(2+1)**

processing of market milk: pre-heating, filtration, clarification, purpose, principle, methods, homogenization, pasteurization, sterilization, uprization and bactofugation of milk. Cooling and storage of milk. Refrigeration and its importance in dairy industry; principles and systems of refrigeration, refrigerants; their uses and limitations, brine and its composition and maintenance. Metals and materials commonly used in dairy industry, cleaning and sterilization of dairy utensils and equipments. Requirements for dairy building constructions, importance of dairy plant layout. Factors to be considered in location of dairy plants,, requirements, maintenance and upkeep of equipments for collection, transportation, storage, cooling, separation, homogenization, clarification, pasteurization and packaging of milk.

Practical: Relevant to concerned theory topics.

AHD 507. Feed Evaluation techniques 3(2+1)

Classification of feeding stuffs. Composition of feed; Weende vs Soest methods of analysis. Digestibility and metabolic trials for various classes of animal. Rumen fistula techniques; Artificial rumen experimentation; In-vitro and In-vivo studies.

Practical: Relevant to concerned theory topics.

AHD-508. Microbiology of Milk and Milk Products 3(2+1)

Micro-organism in milk. Milk as a nutrients media, for bacterial growth, inhibitory substances in milk. Sources of contamination during production, handling and distribution of milk. Important groups of bacteria occurring in milk. Thermoduric and thermophilic bacteria, activities of different species in milk. principles involved in sanitary milk production. Routine bacteriological tests for quality control of market milk. Transmission of diseases of bovine and human origin through milk and milk products. Bacteriology of milk products, role of lactic acid bacteria and other micro-organisms in the manufacture of butter, cheese and fermented milk. Spoilage of various milk products by micro- organisms. Bacteriology of starter culture.

Practical: Relevant to concerned theory topics.