

Sri Venkateswara University, Tirupati

Model syllabus for 4- Year UG Honours in B.vocational (Dairy and Animal Husbandry) as Major in consonance with curriculum framework w.e.f.AY2025-26

COURSE STRUCTURE (FOR SEMESTER I to VIII)

Year	Semester	Course	Title of the course	No. of hrs/ week	No. of credits
I	I	1	Dairy Husbandry management production and dairy design & dairy development (Theory)	3	3
			Dairy Husbandry management production and dairy design & dairy development (Practical)	2	1
		2	Indian milk dairy products (Theory)	3	3
			Indian milk dairy products (practical)	2	1
	II	3	Bio-chemistry and physical chemistry of milk (theory)	3	3
			Bio-chemistry and physical chemistry of milk (Practical)	2	1
		4	Dairy plant management (theory)	3	3
			Dairy plant management (Practical)	2	1
II	III	5	Milk and milk products Technology (theory)	3	3
			Milk and milk products Technology (practical)	2	1
		6	Basic of animal nutrition(theory)	3	3
			Basic of animal nutrition (practical)	2	1
		7	Fodder production and conservation(theory)	3	3
			Fodder production and conservation (practical)	2	1
	IV	8	Veterinary physiology (theory)	3	3
			Veterinary physiology (practical)	2	1
		9	Laboratory Diagnostic & Techniques (theory)	3	3
			Laboratory Diagnostic & Techniques (practical)	2	1
		10	Veterinary Gynacology & AI(Artificial insimination)(theory)	3	3
			Veterinary Gynacology & AI (Artificial insimination) (practical)	2	1

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III	V	II	Veterinary pharmacology (theory)	3	3
			Veterinary pharmacology (practical)	2	1
		12	Meat production and meat abattoir management(theory)	3	3
			Meat production and meat abattoir management (practical)	2	1
		13	Veterinary immunology & Vaccinations (Theory)	3	3
			Veterinary immunology & Vaccinations (practical)	2	1
	VI	14	Basics of Veterinary surgery (Theory)	3	3
			Basics of Veterinary surgery (Practical)	2	1
		15	Poultry farm management and production (theory)	3	3
			Poultry farm management and production (practical)	2	1
IV	VII	16	Basics of veterinary anatomy(theory)	3	3
			Basics of veterinary anatomy (practical)	2	1
		17	Dairy farm general management (theory)	3	3
			Dairy farm general management (practical)	2	1
		18	Cattle feed mixing plant (theory)	3	3
			Cattle feed mixing plant (practical)	2	1
		19	Animal genetics and breeding (theory)	3	3
			Animal genetics and breeding (practical)	2	1
		20	Fundamental of veterinary medicine (theory)	3	3
			Fundamental of veterinary medicine (practical)	2	1
	VIII	21	Milk production management Dairy plant Design and Dairy development (theory)	3	3
			Milk production management Dairy plant design and Dairy development (practical)	2	1
		22	Animal birth control programme (theory)	3	3
			Animal birth control programme (practical)	2	1
		23	Principles of Dairy chemistry and Dairy microbiology (theory)	3	3
			Principles of Dairy chemistry and Dairy microbiology(practical)	2	1
		24	Livestock production and management (theory)	3	3
			Live stock production and management (practical)	2	1
		25	Dairy economic and marketing (theory)	3	3
			Dairy economic and marketing (practical)	2	1

SEMESTER-1
COURSE II:- INDIAN MILK DAIRY PRODUCTS

Theory	credits-3	3hrs/week
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Learning outcome:

After completion of course, student is able to

1. Understand about composition of milk, clean milk production, and organic milk production.
2. Advantages of milk products.
3. Acquire knowledge on various methods of milking and sanitation and to provide hands on experience.

UNIT- I

9 hrs

Composition of cow, buffalo, goat, sheep and Human milk and physical and properties of milk., and white revolution, production and consumption of milk, and Differences between colostrums and Normal Milk .

UNIT- II

9 hrs

Animal Hygiene – Milker's hygiene – Production of clean milk and organic milk –Methods of milking – milk handling –Cleaning and disinfection of dairy farm and milk room and defenation and advantages of Homogenization, Standardization of milk and packing of milk .

UNIT-III

9 hrs

Market milk industry in India, milk collection systems and pricing policies clean milk production practice, fixing of price for milk buying of milk –methods of milk payment, organization of raw milk transport, problems and transportation of milk, milk cooling and chilling centers, platform tests, chilling, preheating, filtration, clarification, storage

UNIT –IV

9 hrs

Types of microorganisms present in the milk, milk borne diseases such as Bacterial, Virus, and other diseases., pasteurization (Definition) and sterilization of milk.

Market milk such as Toned, doubled toned, standardization and full cream milk –Standards and

UNIT –V

9 hrs

Methods and manufactures of Ice-creams, method of manufactures of indigenous milk products such as Cheese, Curd, Paneer, Khoa, Chenna , Ghee and Butter .

References (Paper-I and II)

1. Jagadish Prasad, 2002. Principles and practices of Dairy Farm Management. Kalyani Publishers, Ludhiana.
2. ICAR, 2013. Hand book of Animal Husbandry, New Delhi
3. Ranjhan, S.K., and N.N. Pathak, 2003. Text book on buffalo production, Vikas Publishing House Pvt. Ltd., New Delhi
4. Sastry, N.S.R., C.K. Thomas and R. A. Singh, 2015. Livestock Production Management, Kalyani Publishers, New Delhi
5. Banerjee, G.C., 2006. Text book of Animal Husbandry New Delhi.
6. Balasubramani, P and S. P. Palaniappan, 2002. Principles and Practices of Agronomy. Agro bios (India), Jodhpur
7. Chatterjee, B.N and P. K. Das, 1989. Forage crop production – Principles and practices, Oxford and IBH, Publishing Co. Pvt. Ltd. , New Delhi.
8. ICAR, 1996. Hand book of Agriculture. Indian Council of Agricultural Research, New Delhi
9. Dairy Microbiology –R K Robinson
10. Milk products preparation and quality control -C P Ananthakrishnan
11. Food Microbiology -W C Frazier
12. Outlines of Dairy Technology - Sukumar De
13. Modern Dairy products -Lincoln M Lampert
14. Milk and milk products – Eckles , combs ,Harold macy
15. Dairy management in india – madhanmoham

SEMESTER-I

COURSE 2:INDIAN MILK DAIRY PRODUCTS

Practical **credits -1** **2hrs/week**

1. Estimation of Fat in milk
 2. Estimation of PH in milk.
 3. Microscopic observation of milk
 4. Cream separation from Milk
 5. Preparation of butter
 6. Preparation of milk products such as ghee, Khoa, Kulfi, Butter, Paneer , Cheese, and Dahi.
 7. Visit to Milk dairy
 8. Preparation of milk powder
- * Observation of dried and concentrated milk, Microscopic observation, preparation of milk products and Packing, etc.,
- * Field note book should submit at the time of practical examination

Scheme of valuation (50 marks)

1.Estimation of fat	7 Marks
OR	
Estimation of PH in milk	
2. Microscopic observation of milk	07 marks
3. Preparation of Milk powder	07 Marks
4. Separation of cream	07 marks
5. Separation of cream from milk	07 Marks
6. Field note book	05 Marks
7. Certified record	10 marks

MODEL QUESTION PAPER

Course B.voc Dairy & animal husbandry

INDIAN MILK DAIRY PRODUCTS

Time: 3 hours

Marks: 75

PART – A

Answers any five of the following question .Each question carries equal marks (5x3=15)

1. Composition of cattle milk
2. White revolution .
3. Methods of milking
4. Disinfection of dairy farm
5. Market milk in india .
6. Milk cooling and chilling centers .
7. Types of microorganisms in milk
8. Pasteurization
9. Composition and classification of cream s
10. Paneer production .

SECTION-B

Answers all question .Each question carries equal marks .

12x5=60

11.a) write about physical and chemical properties of milk .
(Or)

b) Elaborate on the different between colostrums and normal milk

12) a) Describe homogenization process and its signification in dairy industry .
(Or)

b)write about organic milk methods of milking ,milk handling .

13.) a) Discuss the methods of milk payment and the organization of raw milk transport .

(or)

b) Given an account on feature of milk collection systems and pricing policies in market milk industry in india .

14.)a)Explain in detail about the different milk born e diseases and their prevention .
(or)

b) write a detailed account on different variants of market milk

15.)a) Describe the methods used in manufacture of ice –creams.
(or)

b)Discuss briefly the steps involed in production of cheese.