

Maharashtra State Board of Vocational Examination, Mumbai 400 051

1	Name of Course	Diploma Course in Dairy Farming																																																																																																							
2	Course Code	305432																																																																																																							
3	Max no. of Students	25																																																																																																							
4	Duration	2 year																																																																																																							
5	Course Type	Full Time																																																																																																							
6	No. of Days per week	6 days																																																																																																							
7	No. of hours per day	7 Hrs																																																																																																							
8	Space require	Theory Class Room – 200 sqft Practical Lab – 1000 sqft + 2 acre																																																																																																							
9	Entry qualification	S.S.C. Pass																																																																																																							
10	Objective of syllabus	To train the students to scientifically undertake all operations of Animal husbandry and dairy technology and to create employment potential and man power for dairy development. To train the personnel in dairy animal improvement using Animal Breeding.																																																																																																							
11	Employment opportunities	The student can get jobs in Veterinary Assistant/Livestock assistant/Dairy farm assistant or with working experience will be in a position to start his own independent Business.																																																																																																							
12	Teachers Qualification	1) For Vocational subject - M.S.C. (Agri) or B.V.Sc. 2) For Non Vocational Subject - Master Degree in Concern subject																																																																																																							
13	Teaching Scheme –	<table border="1" style="width: 100%; border-collapse: collapse; text-align: center;"> <thead> <tr> <th rowspan="2">Sr.</th> <th rowspan="2">Subject</th> <th rowspan="2">Subject Code</th> <th colspan="2">Clock Hours / Week</th> <th rowspan="2">Total</th> </tr> <tr> <th>Theory</th> <th>Practical</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>English (Communication Skill)</td> <td>90000001</td> <td>2 Hrs</td> <td>1 Hrs</td> <td>3 Hrs</td> </tr> <tr> <td>2</td> <td>Elective – I</td> <td></td> <td>2 Hrs</td> <td>1 Hrs</td> <td>3 Hrs</td> </tr> <tr> <td>3</td> <td>Elective – II</td> <td></td> <td>2 Hrs</td> <td>1 Hrs</td> <td>3 Hrs</td> </tr> <tr> <td>4</td> <td>Fundamental of Dairy Science</td> <td>30540010</td> <td>3 Hrs</td> <td>8 Hrs</td> <td>11 Hrs</td> </tr> <tr> <td>5</td> <td>Live stock Nutrition & Management</td> <td>30540028</td> <td>3 Hrs</td> <td>8 Hrs</td> <td>11 Hrs</td> </tr> <tr> <td>6</td> <td>Animal Husbandry, Indian & Exotic Breed</td> <td>30540063</td> <td>3 Hrs</td> <td>8 Hrs</td> <td>11 Hrs</td> </tr> <tr> <td colspan="5">Total</td> <td>42 Hrs</td> </tr> </tbody> </table>									Sr.	Subject	Subject Code	Clock Hours / Week		Total	Theory	Practical	1	English (Communication Skill)	90000001	2 Hrs	1 Hrs	3 Hrs	2	Elective – I		2 Hrs	1 Hrs	3 Hrs	3	Elective – II		2 Hrs	1 Hrs	3 Hrs	4	Fundamental of Dairy Science	30540010	3 Hrs	8 Hrs	11 Hrs	5	Live stock Nutrition & Management	30540028	3 Hrs	8 Hrs	11 Hrs	6	Animal Husbandry, Indian & Exotic Breed	30540063	3 Hrs	8 Hrs	11 Hrs	Total					42 Hrs																																													
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14	Internship	Two Months Summer Internship from 1 st May to 30 th June is Compulsory.																																																																																																							
15	Examination Scheme – Final Examination will be based on syllabus of both years.	<table border="1" style="width: 100%; border-collapse: collapse; text-align: center;"> <thead> <tr> <th rowspan="2">Paper</th> <th rowspan="2">Subject</th> <th rowspan="2">Subject Code</th> <th colspan="3">Theory</th> <th colspan="2">Practical</th> <th colspan="2">Total</th> </tr> <tr> <th>Duration</th> <th>Max</th> <th>Min</th> <th>Duration</th> <th>Max</th> <th>Min</th> <th>Max</th> <th>Min</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>English (Communication Skill)</td> <td>90000001</td> <td>3 Hrs</td> <td>70</td> <td>25</td> <td>3 Hrs</td> <td>30</td> <td>15</td> <td>100</td> <td>40</td> </tr> <tr> <td>2</td> <td>Elective – I</td> <td></td> <td>3 Hrs</td> <td>70</td> <td>25</td> <td>3 Hrs</td> <td>30</td> <td>15</td> <td>100</td> <td>40</td> </tr> <tr> <td>3</td> <td>Elective – II</td> <td></td> <td>3 Hrs</td> <td>70</td> <td>25</td> <td>3 Hrs</td> <td>30</td> <td>15</td> <td>100</td> <td>40</td> </tr> <tr> <td>4</td> <td>Fundamental of Dairy Science</td> <td>30540010</td> <td>3 Hrs</td> <td>100</td> <td>35</td> <td>3 Hrs</td> <td>100</td> <td>50</td> <td>200</td> <td>85</td> </tr> <tr> <td>5</td> <td>Live stock Nutrition & Management</td> <td>30540028</td> <td>3 Hrs</td> <td>100</td> <td>35</td> <td>3 Hrs</td> <td>100</td> <td>50</td> <td>200</td> <td>85</td> </tr> <tr> <td>6</td> <td>Animal Husbandry, Indian & Exotic Breed</td> <td>30540063</td> <td>3 Hrs</td> <td>100</td> <td>35</td> <td>3 Hrs</td> <td>100</td> <td>50</td> <td>200</td> <td>85</td> </tr> <tr> <td colspan="9"></td> <td>900</td> <td>375</td> </tr> </tbody> </table>									Paper	Subject	Subject Code	Theory			Practical		Total		Duration	Max	Min	Duration	Max	Min	Max	Min	1	English (Communication Skill)	90000001	3 Hrs	70	25	3 Hrs	30	15	100	40	2	Elective – I		3 Hrs	70	25	3 Hrs	30	15	100	40	3	Elective – II		3 Hrs	70	25	3 Hrs	30	15	100	40	4	Fundamental of Dairy Science	30540010	3 Hrs	100	35	3 Hrs	100	50	200	85	5	Live stock Nutrition & Management	30540028	3 Hrs	100	35	3 Hrs	100	50	200	85	6	Animal Husbandry, Indian & Exotic Breed	30540063	3 Hrs	100	35	3 Hrs	100	50	200	85										900	375
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16	Teachers	Three Teachers per batch for vocational component. For English, Elective-I & II guest faculty on clock hour basis.																																																																																																							
17	a) For Elective I – Student can choose any one subject	Code				b) For Elective II – Student can choose any one subject				Code																																																																																															
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	90000011	Applied Mathematics				90000021	Applied Sciences (Physics & Chemistry)																																																																																																		
	90000012	Business Economics				90000022	Computer Application																																																																																																		
	90000013	Physical Biology (Botany & Zoology)				90000023	Business Mathematics																																																																																																		
	90000014	Entrepreneurship																																																																																																							
	90000015	Psychology																																																																																																							

Subject : Fundamental of Dairy Science - Ist Year

Subject Code : 30540010

- 1. Dairy Development** - Review of Dairy research & Development, Present status future scope of dairy industries, National Dairy development board.
- 2. Basic Animal Husbandry Practices** – Identification of Dairy animals- Tattooing, Branding, ear tagging , grooming, exercise , Washing, Breeding, Dehorning, Castration
- 3. General Dairy Farm Practices** - Rearing of calf, care & management of heifers, Care of Pregnant cow, Care During Calving, Methods of drying cow. Milk Secretion,- Internal & External Structures of mammary gland, laid down of milk., Method of Milking.
- 4. Milk** – Definition , composition , constituents, factors affecting composition of milk, physicochemical property of milk, food & nutritive of milk, judging & grading of milk, Defects in milk,
- 5. Milk Microbiology** – Raw milk, sources of contamination type of microorganisms , factor affecting growth of micro organisms , Destruction Methods of organisms, Microbial Standards of Raw & Processed Milk, Importanc of clean milk productions, prevention of milk born infection.

Subject : Fundamental of Dairy Science – IInd Year

Subject Code : 30540010

- 1. Milk & Metals** - Fabrication of dairy equipment, selection of metels for dairy equipment, action of milk on metals, corrosion control , characteristics of different metals & it's alloy, Dairy Containers – milk cans, milk tankers, storage tanks & silos, Type of Can washer.
- 2. Milk Processing** – Pasteurization- Definition, object, need, types , homogenization - Definition, object, merits & demerits , Sterilization - Definition, Requirement , merit & demerits , types of sterilizers, Standardization - Definition, Method, Merits.
- 3. Cleaning & Sanitization** – Cleaning processes , Sanitization processes
- 4. Collection & Transportation of Milk** –
Buying of milk, Collection of milk , Cooling of Milk, Method of transportation, Reception of milk,
- 5. Proceed Milk** - Standardized milk, Pasteurized milk, homogenized milk , Sterilized milk , flavored milk , Reconstituted milk, recombined milk, tone milk, double milk.

Subject : Live Stock Nutrition & Management - Ist Year

Subject Code : 30540028

- 1. Principles of feeding & Feeding Practices of Various Categories of Dairy Animals -**
Essential in the proper feeding of dairy cows, characteristics of good dairy ration ,
Computation of Ration – By Thumb rules, Tips for feeding of high producing cross breed
cows.
2. Classification of feed stuff , Feeding Standard, Conservation of Fodders as silage ,
conservation of silage as hay.
- 3. Principle of feed & Feeding of Milking Animal**

Subject : Live Stock Nutrition & Management – IInd Year

Subject Code : 30540028

- 1. Systems of housing for dairy animals** – Tail to Tail System, Head to Head System, Loose
housing system, constructional details , study of chaff cutter, study of milking machine, study
of Milko-tester
2. **Dairy Co-operatives** – Definition , Meaning, & Characteristics History of Cooperation ,
Cooperative as a tool for Rural & dairy Development, Basic & general cooperation, Function ,
formation & working of dairy societies, role of woman in dairy cooperatives.
3. **Book Keeping & Accountancy** - Meaning, Objectives & Importance utility of book keeping,
Single & double entry system of accounting , classification of accounts.
4. **Care & Amnagement of Different Classes of Animals-** Cow, Buffaloes, Sheep & Goat.
Ageing of cattle and identification of farm animals. Culling of inferior stock, and it's sixposal.

Subject : Animal Husbandry, Indian & Exotic Breed - Ist Year

Subject Code : 30540063

1-Farming of animals- Animal Farms, Introduction, History, Types, Importance, scope, Facilities and schemes. Economical values, Nutritive value of milk of Cow, goat, buffaloes, their rearing, after care, milk products. Nutritive values of beef, mutton, eggs. Comparative study of nutrition.

2- Animal feeds- Various Types of animal feed including green feed, crushed feed, Cakes, bran, food supplements, their nutritive value, comparative value and cost, preparation, significance on production, storage.

3- Farm sanitation and health- advantages of sanitation, Preventive measure, vaccination, antibiotics doses, cleanliness, maintenance of farm, preparation of compost and manure.

4- Tools and equipments – Study of various tools and equipments used in rearing animals, Health and sanitation, feed choppers, milk bottling, honey packing, sealing, sterilization, pasteurization, lactating instruments, decastration devices, inseminators, incubators of poultry, and other necessary equipments, first aid for animals as well as farmer Precautions and maintenance.

5- Study of poultry farm (Fleshy birds as well as layers) - Planning and lay out, type, input requirements, Necessary infra structure, precaution, after care.

6- Study of apiary- Structures, rearing, collection of honey, filtering, packing, storage.

7- Diseases of poultry birds- Causal organism, predisposition, vectors, epidemic and endemic diseases, bacterial, viral and fungal diseases, preventive measures and control.

Subject : Animal Husbandry, Indian & Exotic Breed – IInd Year

Subject Code : 30540063

1- Physiology of farm animals- Animal cell, organs of animals, Digestive system of higher animals and birds, Reproductive system, Hormonal Co-ordination, Excretory system in and reproduction of silk worm, Various methods of improving productivity of animals.

2-Classification And Morphology of farm animals- Taxonomical study of farm animals, poultry birds and insects like bees and silk worm, characters, Morphological structures, Main productive phases in life.

3- Breeding of animals- Study of various indigenous and exotic breeds of farm animals like sheep and goats, cows and buffaloes, bullocks, pigs and poultry birds (including fleshy as well as egg laying) , their specifications (characteristics), breeding methods in animals.

4- Study of animal farm- Planning, lay out, type structure, essential inputs, Packing, storage and marketing of milk, reasons of spoilage of milk and remedies.

5- Sericulture- Techniques, Rearing, Planting mulberry, Selection of larvae, collection of cocoons, extraction of silk, packing.

6- Diseases of farm animals- Causal organism, predisposition, vectors, epidemic and endemic diseases, bacterial, viral and fungal diseases, preventive measures and control measures.
