

Diploma Programme in Dairy Technology (DDT):2015-16

II. Counseling Schedule for PRACTICAL (From 22.08.2016 Time: 10.00 AM)

A. Guided Practical

Sl. No.	Practical (Days)	Code & Title of the Course	Session (4 hr)	Sl. No. & Title of the Experiments
1.	1	Introduction to the Practical	1	Orientation to Practical/ Lab
		Course – I (BPVI-011) Milk Production and Quality of Milk	2	1. Identification of different milch breeds of cattle, buffaloes, goats and external anatomy of dairy animals 2. Judging of dairy animals
2.	2	Course – I (BPVI-011) Milk Production and Quality of Milk	3	3. Housing of animals and maintenance of hygienic conditions at farm 4. Clean milk production 5. Field/Farm visits
			4	6. Preparation of standard 0.1N sodium hydroxide solution 7. Preparation of standard 0.1N hydrochloric acid 8. Preparation of gerber acid for determination of fat in milk
3.	3	Course – I (BPVI-011) Milk Production and Quality of Milk	5	9. Sampling of milk 10. Platform test - (i) clot – on – boiling test 11. Platform test – (ii) alcohol test 12. Platform test – (iii) sediment test
			6	13. Determination of fat in milk by Gerber method 14. Determination of solid – not – fat (SNF) in milk 15. Determination of total solid (TS) in milk
4.	4	Course – I (BPVI-011) Milk Production and Quality of Milk	7	16. Specific gravity of milk 17. Determination of titratable acidity of milk 18. Determination of pH of milk
			8	19. Detection of starch in milk 20. Detection of cane sugar in milk
5.	5	Course – I (BPVI-011) Milk Production and Quality of Milk	9	21. Detection of glucose in milk 22. Detection of urea in milk
			10	23. Methylene blue reduction (MBR) test 24. Preparation of microbial media
6.	6	Course – I (BPVI-011) Milk Production and Quality of Milk	11	25. Demonstration of presumptive coliform test 26. Demonstration of standard plate count method 27. Staining methods
		Course – II (BPVI-012) Dairy Equipment and Utilities	12	28. Study of different sanitary S.S. pipes, fittings and gaskets 29. To study different types of thermometers, pressure gauge and flow meters
7.	7	Course – II (BPVI-012) Dairy Equipment and Utilities	13	30. Study and sketch the details of milk tanker, storage tanks and silos

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8.	8	Course – II (BPVI-012) Dairy Equipment and Utilities	14	31. Study of water supply system and water softening plant 32. Study of a dairy effluent plant
9.	9	Course – II (BPVI-012) Dairy Equipment and Utilities	15	33. Study of different safety measures to be adapted in a dairy plant.
10.	10	Course– III (BPVI-013) Milk Processing and Packaging	16	34. Reception of milk 35. Straining, filtration & clarification of milk 36. Chilling & storage of milk
			17	37. Study of cream separator 38. Study of separation of milk 39. Standardization of milk
11.	11	Course– III (BPVI-013) Milk Processing and Packaging	18	40. Pasteurization of milk and high temperature short time (HTST) pasteurizer 41. Determination of efficiency of pasteurization
			19	42. Study of homogenizer, homogenization of milk and determination of homogenization efficiency
12.	12	Course– III (BPVI-013) Milk Processing and Packaging	20	43. Study of Milk Sterilizer, Sterilization of Milk and Determination of Sterilization efficiency
			21	44. Study of packaging system of milk
13.	13	Course–IV (BPVI-014) Dairy Products - I	22	45. Cleaning of equipment 46. Sanitization of equipment 47. Assessment of cleaning and sanitization efficiency
14.	14	Course–IV (BPVI-014) Dairy Products – I	23	48. Preparation of Table butter
			24	49. Preparation of <i>ghee</i> 50. Agmark grading of <i>ghee</i>
15.	15	Course – V (BPVI-015) Dairy Products - II	25	51. Preparation of <i>khoa</i>
			26	52. Preparation of <i>peda</i> 53. Preparation of <i>burfi</i>
16.	16	Course – V (BPVI-015) Dairy Products - II	27	54. Preparation of <i>rasogolla</i>
			28	55. Preparation of <i>gulabjamun</i>
18.	18	Course – V (BPVI-015) Dairy Products - II	29	56. Study of manufacture of spray dried milk powder
19.	19	Course – V (BPVI-015) Dairy Products - II	30	57. Preparation of value added products from dried milk powder
			31	58. Visit to dairy product manufacturing plant (Ghee, Butter, Khoa, Dahi Condensed and Milk Powder)
20.	20	Course– VI (BPVI-016) Dairy Products - III	32	59. Preparation of starter culture 60. Preparation of <i>dahi</i>
21.	21	Course– VI (BPVI-016) Dairy Products – III	33	61. Preparation of <i>shrikhand</i>
			34	62. Manufacture of <i>kulfi</i>
22.	22	Course–VII(BPVI-017) Quality Assurance	35	63. Familiarization with laboratory equipment and instruments 64. Determination of fat in <i>milk, cream, butter, khoa, paneer, Ice cream, milk powder</i> 65. Determination of titratable acidity and pH of milk products
			36	66. Determination of acid value in <i>ghee</i>
23.	23	Course–VII (BPVI-017)	37	67. Microbiological analysis of milk products

Sl. No.	Practical (Days)	Code & Title of the Course	Session (4 hr)	Sl. No. & Title of the Experiments
		Quality Assurance	38	68. Microbiological analysis of air and water. 69. In-line testing by rinse and swab methods.
24.	24	Course–VII(BPVI-017) Quality Assurance	39	70. Sensory evaluation of <i>milk, cream, butter, ghee, ice cream, dahi and other products</i>
			40	71. Sensory evaluation of <i>khoa, paneer, milk powder, shrikhand, cheese and other products</i>
25.	25	Course–VII(BPVI-017) Quality Assurance	41	72. Listing of quality control agencies at national level and international level 73. Standards specification (chemical and microbiological) of milk and milk products
26.	26	Course– VIII (BPVI-018) Dairy Management and Entrepreneurship	42	74. Visit to nearby dairy cooperative society and study working aspects
			43	75. Prepare a project report to set up milk parlour /a small dairy plant.
27.	27	Course– VIII (BPVI-018) Dairy Management and Entrepreneurship	44	76. Identification of sources for milk losses during processing of milk and preparation of milk products. Preparation of check list for controlling the losses. 77. Preparation of check list for evaluation of performance of a dairy plant
			45	78. Visit a nearby milk union/dairy and prepare a checklist of problems in procurement and milk distribution.

B. Unguided Practical's

Sl. No.	Practical (Days)	Course Code and Title	Session
28.	28	Course– I (BPVI-011) Milk Production and Quality of Milk	46
		Course-II (BPVI-012) Dairy Equipment and Utilities	47
29.	29	Course–III (BPVI-013) Milk Processing and Packaging	48
		Course-IV (BPVI-014) Dairy Products – I	49
30.	30	Course – V (BPVI-015) Dairy Products – II	50
		Course –VI (BPVI-016) Dairy Products-III	51
31.	31	Course-VII (BPVI-017) Quality Assurance	52
		Course-VIII (BPVI-018) Dairy Management and Entrepreneurship	53

One Practical Session = 4 hours



REGIONAL FOOD RESEARCH & ANALYSIS CENTRE

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