

IGNOU RC HYDERABAD

Diploma in Dairy Technology Course for July 2024 session Programme Code: DDT

Study Centre: TSDDCF Ltd, Vijaya Training Centre,
Lalapet, Hyderabad (PSC No.01112P)

Counseling Schedule of Practical Sessions

| Sl. No. | Day | Timings | Session | Course Code | Practical Units | Name of the Experiment | Name of the Academic Counsellor | NO.OF SESSIONS APPROVED BY RC |
|---------|------------|--------------------------|---------|-------------|--------------------|---|---------------------------------|-------------------------------|
| 1 | 01.01.2025 | 09.00 A.M. to 10.00 A.M. | 1 | BPVI-011 | B) Quality of Milk | Experiment -1: Preparation of standard 0.1 N sodiumhydroxide solution | P SATYANARAYANA REDDY | 1 |
| | | | | | 1, 2 & 3 | Experiment -2: Preparation of standard 0.1 N hydrochloric acid | | |
| | | | | | | Experiment -3: Preparation of gerber acid for determination of fat in milk | | |
| | | 10.00 A.M. to 12.30 P.M. | 2 | BPVI-011 | 11,12,13 | Experiment -11: Determination of specific gravity of milk Experiment-12: Determination of titratable acidity of milk Experiment-13: Determination of PH of milk | P SATYANARAYANA REDDY | 1 |
| LUNCH | | | | | | | | |

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| 1.30 P.M. to 02.30 P.M. | 3 | BPVI-011 | A) Milk Production | Experiment -1: Identification of different Milch breeds of cattle etc. and external anatomy of dairy animals | DR.N. LAKSHMI MANJUSHA | 1 |
| | | | 1 to 4 | Experiment - 2:Judging of dairy animals | | |
| | | | | Experiment -3: Identification of various feeds and fodders for dairy animals | | |
| | | | | Experiment - 4:Preparations of balanced | | |
| | | | | rations, calf starters, milk replacers and feeding of calves. | | |
| 03.30 P.M. to 04.30 P.M. | 4 | BPVI-011 | B) Quality of Milk | Experiment-4: Sampling of milk | DR.N. LAKSHMI MANJUSHA | 1 |
| | | | 4, 5, 6, 7 | Experiment -5: Platform test – (i) clot – on – boiling test | | |
| | | | | Experiment-6: Platform test – (ii) alcohol test | | |
| | | | | Experiment -7: Platform test – (iii) sediment test | | |
| | | | | Experiment -8: Determination of fat in milk by Gerber method | | |

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| | | 04.30 P.M. to 05.00 P.M. | 5 | BPVI-011 | 8, 9,10 | Experiment -9: Determination of solid – not – fat (SNF) in milk Experiment-10: Determination of total solid (TS) in milk | DR.N. LAKSHMI MANJUSHA | 1 |
| | | 05.00 P.M. to 05.30 P.M. | 6 | BPVI-011 | A) Milk Production 5 to 7 | Experiment - 5:Housing of animals and maintenance of hygienic conditions at farm. Experiment -6: Clean milk production Experiment -7: Field/Farm visits | DR.N. LAKSHMI MANJUSHA | 1 |
| 2 | 02.01.2024 | 09.00 A.M. to 10.00 A.M. | 7 | BPVI-011 | 14, 15,16 | Experiment -14: Detection of starch in milk Experiment -15: Detection of cane sugar in milk Experiment -16: Detection of glucose in milk | P SATYANARAYANA REDDY | 1 |
| | | 10.00 P.M. to 10.30 A.M. | 8 | BPVI-011 | 17, 18, 19 | Experiment -17: Detection of urea in milk Experiment -18: Detection of ammonium sulphate in milk | P SATYANARAYANA REDDY | 1 |

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| | | | | Experiment -19: Detection of sodium carbonate or bicarbonate as <u>neutralizer in milk</u> | | |
| 10.30 A.M. to 11.00 A.M. | 9 | BPVI-011 | 20,21 | Experiment -20: Resazurin reduction test Experiment -21: Methylene blue reduction (MBR) test | P SATYANARAYANA REDDY | 1 |
| 11.30 A.M. to 12.30 P.M. | 10 | BPVI-011 | 22 to 25 | Experiment -22: Preparation of <u>microbial media</u> Experiment -23: Demonstration of presumptive <u>coliform test</u> Experiment -24: Demonstration of standard plate count <u>method</u> Experiment -25: Staining methods | P SATYANARAYANA REDDY | 1 |
| LUNCH | | | | | | |
| 1.00 P.M. to 01.30 P.M. | 11 | BPVI-012 | 1, 2, 3 | Experiment -1: To learn elementary layout drawing of <u>utilities</u> Experiment -2: Study of Various workshop <u>tools</u> Experiment -3: Study of different sanitary S.S.pipes, fittings and gaskets. | DR.N. LAKSHMI MANJUSHA | 1 |

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| 01.30 P.M. to 2.30 P.M. | 12 | BPVI-013 | 1,2,3 | Experiment -1: Reception of milk | DR.N. LAKSHMI MANJUSHA | 1 |
| | | | | Experiment -2: Straining, filtration & clarification of milk | | |
| | | | | Experiment -3: Chilling & storage of milk | | |
| 2.30 A.M. to 3.00 P.M. | 13 | BPVI-012 | 4 to 6 | Experiment -4: Dismantling and assembling of milk pumps | DR.N. LAKSHMI MANJUSHA | 1 |
| | | | | Experiment -5: Study and sketch the details of milk tanker, storage tanks and silos | | |
| | | | | Experiment -6: To study different types of the thermometers, pressure gauge and flow meters | | |
| 3.00 P.M. to 04.30 P.M. | 14 | BPVI-013 | 4,5,6 | Experiment -4: Study of cream separator | DR.N. LAKSHMI MANJUSHA | 1 |
| | | | | Experiment -5: Study of separation of milk | | |
| | | | | Experiment -6: Standardization of milk | | |

Dr. N. Lakshmi Manjusha

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| 4.30 P.M. to 05.00 P.M. | 15 | BPVI-012 | 7 & 8 | Experiment -7: Study of refrigeration system: Compressor (reciprocating), condensers (shell & tube, atmospheric) and expansion devices (thermostatic) expansion valve/capillary tube) | DR.N. LAKSHMI MANJUSHA | 1 |
| 05.00 P.M. to 05.30 P.M. | 16 | BPVI-013 | 7, 8, 9 | Experiment -8: Study of parts and operation of cold storage plant and an ice bank unit Experiment -7: Study of batch pasteurizer and high temperature short time (HTST) pasteurizer Experiment -8: Pasteurization of milk Experiment -09: Determination of efficiency of pasteurization | DR.N. LAKSHMI MANJUSHA | 1 |

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| 3 | 03.01.2025 | 09.00 A.M. to 10.00 A.M. | 17 | BPVI-012 | 9 | Experiment -9: Study different parts and learn the Operation of Plate Chiller and Bulk Milk Cooler | P SATYANARAYANA REDDY | 1 |
| | | 10.00 A.M. to 10.30 | 18 | BPVI-012 | 10.11 | Experiment -10: Study of homogenizer, homogenization of milk and determination of homogenization efficiency | P SATYANARAYANA REDDY | 1 |

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| 10.00 A.M. | | | | Experiment -11: Study of milk sterilizer, sterilization of milk and determination of sterilization efficiency | | |
| 10.30 A.M. to 11.00 A.M. | 19 | BPVI-012 | 10 & 11 | Experiment - 10:Study of water supply system and water softening plant Experiment - 11:Study the constructional details of fire tube and water tube boilers. | P SATYANARAYANA REDDY | 1 |
| 11.30 A.M. to 12.00 P.M. | 20 | BPVI-013 | 12, 13 | Experiment -12: Study of packaging system of milk Experiment - 13:Preparation of flavored milk, reconstituted milk, toned and double topped milk. | P SATYANARAYANA REDDY | 1 |
| 12.00 P.M. to 01.00 P.M. | 21 | BPVI-012 | 12 & 13 | Experiment - 12:Study of a dairy effluent plant Experiment -13: To Study the different parts of single – phase and three phase induction motors. | P SATYANARAYANA REDDY | 1 |
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| 01.30 P.M. to 2.00 P.M. | 22 | BPVI-012 | 14 | Experiment - 14: Starting of 3 phase squirrel cage induction motors by direct on line and star - data starter | DR.N. LAKSHMI MANJUSHA | 1 |
| 2.00 P.M. to 02.30 P.M. | 23 | BPVI-012 | 15 & 16 | Experiment -15: Study of different safety measures to be adopted in a dairy plant. Experiment -16: To study the control and safety mountings of a steam boiler Experiment -14 Cleaning of equipment. | DR.N. LAKSHMI MANJUSHA | 1 |
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| 02.30 P.M. to 03.00 P.M. | 24 | BPVI-013 | 14,15,16 | Experiment -15: Sanitization of equipment. Experiment - 16:Assessment of cleaning and sanitization efficiency | DR.N. LAKSHMI MANJUSHA | 1 |
| 03.00 P.M. to 03.30 P.M. | 25 | BPVI-014 | 1 & 2 | Experiment -1: Preparation and standardization of cream Experiment -2: Preparation of sterilized cream | DR.N. LAKSHMI MANJUSHA, | 1 |
| 03.30 P.M. to 04.00 P.M. | 26 | BPVI-014 | 3 & 4 | Experiment -3: Preparation of butter starter Experiment -4: Preparation of cream for butter making | DR.N. LAKSHMI MANJUSHA | 1 |
| 04.00 P.M. to 04.30 P.M. | 27 | BPVI-015 | 1 & 2 | Experiment -1: Preparation of Khoa Experiment -2: Preparation of Gulabjamun | DR.N. LAKSHMI MANJUSHA | 1 |
| 04.30 P.M. to 05.30 P.M. | 28 | BPVI-014 | 5 & 6 | Experiment -5: Construction and operation of power churn Experiment -6: Construction and operation of butter packaging machine. | DR.N. LAKSHMI MANJUSHA | 1 |

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| 4 | 04.01.2024 | 09.00 A.M. to 10.00 A.M. | 29 | BPVI-014 | 7 & 8 | Experiment -7: Preparation of desi butter (makkhan), table butter and cooking butter | P SATYANARAYANA REDDY | 1 | |
| | | | | | | | | | Experiment - 8: Cooking butter by hand operated churn. |
| | | 10.00 P.M. to 10.30 A.M. | 30 | BPVI-014 | 9 & 10 | Experiment -9: Study of manufacture of table butter by power churn. | P SATYANARAYANA REDDY | 1 | |
| | | | | | | | | | Experiment -10: Preparation of ghee |
| | | 10.30 A.M. to 11.00 A.M. | 31 | BPVI-015 | 3 | Experiment -3: Preparation of peda | P SATYANARAYANA REDDY | 1 | |
| | | 11.30 A.M. to 12.00 P.M. | 32 | BPVI-014 | 11 | Experiment - 11: Agmark grading of ghee | P SATYANARAYANA REDDY | 1 | |
| 12.00 P.M. to 01.00 P.M. | 33 | BPVI-015 | 4 | Experiment -4: Preparation of burfi | P SATYANARAYANA REDDY | 1 | | | |
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| 01.30 P.M. to 2.00 P.M. | 34 | BPVI-015 | 5,6 | Experiment -5: Preparation of rabri | DR.N. LAKSHMI MANJUSHA | 1 |
| | | | | Experiment -6: Preparation of kalakand and cake | | |
| 2.00 P.M. to 02.30 P.M. | 35 | BPVI-015 | 7 | Experiment -7: Preparation of kheer | DR.N. LAKSHMI MANJUSHA | 1 |
| 02.30 P.M. to 03.00 P.M. | 36 | BPVI-015 | 8 | Experiment -8: Preparation of chhana | DR.N. LAKSHMI MANJUSHA | 1 |
| 03.00 P.M. to 03.30 P.M. | 37 | BPVI-015 | 9 | Experiment -9: preparation of rasogolla | DR.N. LAKSHMI MANJUSHA | 1 |
| 03.30 P.M. to 04.00 P.M. | 38 | BPVI-015 | 10 | Experiment -10: Preparation of sandesh | DR.N. LAKSHMI MANJUSHA | 1 |
| 04.00 P.M. to 04.30 P.M. | 39 | BPVI-015 | 11 | Experiment -11: Preparation of rasmalai | DR.N. LAKSHMI MANJUSHA | 1 |

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| | | 04.30 P.M. to 05.30 P.M. | 40 | BPVI-015 | 12 | Experiment -12: Preparation of channa-murki | DR.N. LAKSHMI MANJUSHA | 1 |
| 5 | 05.01.2024 | 09.00 A.M. to 10.00 A.M. | 41 | BPVI-015 | 13 | Experiment -13: Preparation of paneer | P SATYANARAYANA REDDY | 1 |
| | | 10.00 A.M. to 10.30 A.M. | 42 | BPVI-015 | 14 | Experiment -14: Study of vacuum pan/double effect/triple effect of evaporator | P SATYANARAYANA REDDY | 1 |
| | | 10.30 A.M. to 11.00 | 43 | BPVI-015 | 15,16 | Experiment -15: Study of manufacture of Spray Dried Milk Powder | P SATYANARAYANA REDDY | 1 |

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| A.M. | | | | Experiment -16 Preparation of Value-Added Products | |
| 11.00 A.M. to 12.00 P.M. | 44 | BPVI-015 | 17 | Experiment -17: Visit of Dairy Product Manufacturing Plant | P. SATYANARAYANA REDDY |
| 12.00 P.M. to 1.00 P.M. | 45 | BPVI-016 | 1, 2, 3 | Experiment -1: Preparation of starter culture | P. SATYANARAYANA REDDY |
| | | | | Experiment -2: Preparation of dahi | |
| | | | | Experiment -3: Preparation of mishti dahi | |
| LUNCH | | | | | |
| 01.30 P.M. to 2.0 P.M. | 46 | BPVI-016 | 4,5,6 | Experiment -4: Preparation of lassi | DR. N. LAKSHMI MANJUSHA |
| | | | | Experiment -5: Preparation of yoghurt | |
| | | | | Experiment -6: Preparation of shrikhand | |
| 02.00 P.M. to 02.30 | 47 | BPVI-016 | 7 & 8 | Experiment -7: Preparation of Cheddar Cheese from Cow milk | DR. N. LAKSHMI MANJUSHA |

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| P.M. | | | | Experiment -8: Preparation of <u>Mozzarella Cheese</u> | | |
| 02.30 P.M. to 03.00 P.M. | 48 | BPVI-016 | 9 & 10 | Experiment -9: Preparation of <u>Processed Cheese</u> Experiment -10: Preparation of Processed Cheese <u>Spread</u> | DR.N. LAKSHMI MANJUSHA | 1 |
| 03.00 P.M. to 03.30 P.M. | 49 | BPVI-016 | 11 & 12 | Experiment - 11:Calculating of Ingredients for Ice <u>Cream Mix</u> Experiment - 12:Preparation of Ice Cream Mix | DR.N. LAKSHMI MANJUSHA | 1 |
| 03.30 P.M. to 04.30 P.M. | 50 | BPVI-016 | 13 | Experiment - 13:Preparation of Ice Cream and Determination of Overrun | DR.N. LAKSHMI MANJUSHA | 1 |
| 04.30 P.M. to 05.00 P.M. | 51 | BPVI-016 | 14 | Experiment -14:Visit to Ice-cream Factory | DR.N. LAKSHMI MANJUSHA | 1 |

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| | | 05.00 P.M. to 05.30 P.M. | 52 | BPVI-016 | 15 | Experiment -15:Visit to Cheese Factory | DR.N. LAKSHMI MANJUSHA | 1 |
| 6 | 06.01.2024 | 09.00 A.M. to 10.00 A.M. | 53 | BPVI-016 | 16, 17 | Experiment 16:Preparation of Softy Experiment 17:Manufacture of Kulfi | P SATYANARAYANA REDDY | 1 |
| | | 10.00 A.M. to 10.30 A.M. | 54 | BPVI-016 | 18, 19 | Experiment -18: Manufacture of Casein Experiment -19: Study of Manufacture of Lactose | P SATYANARAYANA REDDY | 1 |
| | | 10.30 A.M. to 11.00 A.M. | 55 | BPVI-017 | 1,2,3 | Experiment - 1:Familiarization with Laboratory Equipments and Instruments Experiment -2:Listing of Quality Control Agencies at National and International Level Experiment - 3:Standrad specifications (Chemical and Microbiological) of Milk and Milk Products | P SATYANARAYANA REDDY | 1 |

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| 11.00 P.M. to 11.30 A.M. | 56 | BPVI-017 | 4,5 | Experiment - 4:Determination of Fat in Milk, Butter, Khoa, Panner, Ice Cream, Milk Powder | P SATYANARAYANA REDDY | 1 |
| | | | | Experiment - 05:Determination of Titratable Acidity and pH of Milk and Milk Products | | |
| 11.30 A.M. to 12.00 P.M. | 57 | BPVI-017 | 6,7 | Experiment - 06:Determination of Solubility of milk powder | P SATYANARAYANA REDDY | 1 |
| | | | | Experiment - 07:Determination of Acid Value in Ghee | | |
| LUNCH | | | | | | |
| 01.00 P.M. to 01.30 P.M. | 58 | BPVI-017 | 8,9,10 | Experiment - 08:Microbiological Analysis of Milk and Milk Products | DR.N. LAKSHMI MANJUSHA | 1 |
| | | | | Experiment -09: Microbiological Analysis of Air and Water | | |
| | | | | Experiment -10:Tests for Sanitation of Dairy equipments (Rinse Solution and Swab Contact Methods) | | |
| | | | | Experiment - 11:Judging of Milk | | |

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| 02.00 P.M. to 02.30 P.M. | 60 | BPVI-017 | 14,15,16 | Experiment 13:Judging of Ghee Experiment - 14:Judging of Dahi Experiment - 15:Judging of Ice Cream Experiment - 16:Judging of Khoa (Pindi Type) | DR.N. LAKSHMI MANJUSHA | 1 |
| 02.30 P.M. to 03.00 P.M. | 61 | BPVI-017 | 17,18,19,20 | Experiment - 17:Judging of Panner Experiment - 18:Judging of Cheddar Cheese Experiment - 19:Judging of Milk Powders Experiment - 20:Judging of Shrikhand | DR.N. LAKSHMI MANJUSHA | 1 |
| 03.30 P.M. to 04.00 P.M. | 62 | BPVI-018 | 1 & 2 | Experiment -1: Identification of Sources for milk Losses During Processing of Milk and Preparation of Milk Products Experiment -2: Identification of Parameters for Production Efficiency | DR.N. LAKSHMI MANJUSHA | 1 |
| 04.30 P.M. | | | | Experiment - 03:Study of working of Cooperative Society | | |




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| | | to 05.00 P.M. | 63 | BPVI-018 | 3 & 4 | Experiment 04:Calculation of Milk Payment based on Fat and Two-axis Pricing Policy | DR.N. LAKSHMI MANJUSHA | 1 |
| | | 05.00 P.M. to 05.30 P.M. | 64 | BPVI-018 | 5 | Experiment 5:Designing of milk Collection Route | DR.N. LAKSHMI MANJUSHA | 1 |
| 7 | 07.01.2024 | 09.00 A.M. to 01.00 P.M. | 65 | BPVI-018 | 6,7 | Experiment -6: Preparation of Ledger, Trail Balance and Balance Sheet of DCS | P SATYANARAYANA REDDY | 1 |
| | | | | | | Experiment - 07:Identification of Entrepreneurial Skills | | |
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| | | 01.30 P.M. to 05.30 P.M. | 66 | BPVI-018 | 8 | Experiment -8: Preparation of a Project Report to Set up a small Dairy Plant | DR.N. LAKSHMI MANJUSHA | 1 |


Note1: Avail the Services of Approved Academic Counsellors only for payment purpose

Note2: In case students are not turned up for counselling sessions, the remaining sessions may be cancelled.

SIGNATURE OF ASSISTANT REGIONAL DIRECTOR


Dr. Raji Bora
Asst. Regional Director
INDIRA GANDHI NATIONAL OPEN UNIVERSITY
Regional Centre - Nainital
HYDERABAD - 500 004.

SIGNATURE OF REGIONAL DIRECTOR


31/12/24
डॉ. के. रमेश
वरिष्ठ क्षेत्रीय निदेशक
Dr. K. RAMESH
Senior Regional Director
इग्नू क्षेत्रीय केंद्र / IGNOU Regional Centre
हैदराबाद / Hyderabad.