

Indira Gandhi National Open University New Delhi – Study Centre – 27120 (P)

Department of Dairy Science and Technology, Janta Vedic College, Baraut (Baghpat) U.P.

Diploma in Dairy Technology (40 Guided & 08 unguided of 4 hours each session)

Counseling Schedule for Practical, Session – Jan. 2023 & Jul. 2023

Sr. No.	Date, Day and Time	Course Code & Title	Session No.	Serial No. and Title of the experiment / Exercise	Name of the counselor
1.	07.01.2024 Sunday 8.30-12.30 Noon	BPVI-011 Milk Production and Quality of Milk	1	1. Identification of different milch breeds of cattle, buffaloes, goats and external anatomy of dairy animals. 2. Judging of dairy animals. 3. Identification of various feeds and fodders for dairy animals.	Dr. Devesh Gupta
	1:00 – 5:00 PM	BPVI-011 Milk Production and Quality of Milk	2	4. Preparations of balanced rations, calf starters, milk replacer and feeding of calves. 5. Housing of animals and maintenance of hygienic condition at farm. 6. Clean milk production. 7. Fields/Farm Visits.	Dr. R.K. Atrey
2.	14.01.2024 Sunday 8.30-12.30 Noon	BPVI-011 Milk Production and quality of milk	3	1. Preparation of standard 0.1 N sodium hydroxide solution. 2. Preparation of standard 0.1N hydrochloric acid. 3. Preparation of Gerber acid for determination of fat in milk. 4. Sampling of milk.	Dr. Sudhir Kumar
	1:00 – 5:00 PM	BPVI-011 Milk production and quality of milk	4	5. Plate form tests-(1) clot in boiling. 6. Plate form Test-(II) alcohol test. 7. Plate form tests-(III) sediment test. 8. Determination of fat in milk by Gerber method. 9. Determination of solids not fat in milk. 10. Determination of total solids in milk. 11. Determination of specific gravity in milk. 12. Determination of Titrable acidity in milk.	Dr. R.K. Atrey
3.	21.01.2024 Sunday 8:30 – 12:30 Noon	BPVI-011 Milk Production and Quality of Milk	5	13. Determination of milk pH. 14. Determination of Starch in milk. 15. Determination of cane sugar in milk.	Dr. Devesh Gupta

	Noon			<p>16. Detection of glucose in milk.</p> <p>17. Detection of urea in milk.</p> <p>18. Detection of Ammonium sulphate in milk.</p> <p>19. Detection of sodium carbonate or bicarbonate as neutralizer in milk.</p>	
	1:00 – 5:00 PM	BPVI-011 Milk Production and quality of milk	6	<p>20. Resazurin test.</p> <p>21. Methylene blue reduction test.</p> <p>22. Preparation of microbial media.</p> <p>23. Demonstration of presumptive coli form test.</p> <p>24. Demonstration of standard plate count methods.</p> <p>25. Staining methods.</p>	Dr. R.K. Atrey
4.	28.01.2024 Sunday 8:30 – 12:30 Noon	BPVI-012 Dairy equipment & utilities	7	<p>1. To learn elementary layout drawings of utilities.</p> <p>2. Study of various workshop tools.</p> <p>3. Study of different sanitary S.S. Pipe fitting and gaskets.</p>	Dr. Sudhir Kumar
	1:00 – 5:00 PM	BPVI-012 Dairy Equipment & Utilities	8	<p>4. Dismantling and assembling of milk pumps.</p> <p>5. Study and sketch the details of milk tankers, storage tanks and silos.</p>	Dr. R.K. Atrey
5.	04.02.2024 Sunday 8:30 – 12:30 Noon	BPVI-012 Dairy Equipment & Utilities	9	<p>6. To study different types of thermometers, pressure gauge and flow meters.</p> <p>7. Study of refrigeration system.</p>	Dr. Devesh Gupta
	1:00 – 5:00 PM	BPVI-012 Dairy Equipment & Utilities	10	<p>8. Study of part and operation of a cold storage plant and an ice bank unit.</p> <p>9. Study different part and learn the operation of plate chiller and bulk milk cooler.</p>	Dr. R.K. Atrey
6.	11.02.2024 Sunday 8:30 – 12:30 Noon	BPVI-012 Dairy Equipment & Utilities	11	<p>10. Study of water supply system and water softening plant.</p> <p>11. Study the constructional details of a fire tube boiler and water tube boilers.</p> <p>12. Study of a dairy effluent plant.</p>	Dr. Sudhir Kumar
	1:00 – 5:00 PM	BPVI-012 Dairy Equipment & Utilities	12	<p>13. To study the different parts of single phase and three phase induction motors.</p>	Dr. R.K. Atrey

				<p>14. Starting of 3 phases squirrel cage induction motors by direct on line and star data starter.</p> <p>15. Study of different safety measures to be adopted in a dairy plant.</p> <p>16. Study the control and safety mountings of a steam boiler.</p>	
7.	18.02.2024 Sunday 8:30 – 12:30 Noon	BPVI-013 Milk Processing and Packaging	13	<p>1. Reception of Milk.</p> <p>2. Straining, filtration and clarification of milk.</p> <p>3. Chilling and storage of milk.</p> <p>4. Study of cream separator.</p> <p>5. Study of separation of cream.</p>	Dr. Devesh Gupta
	1:00 – 5:00 PM	BPVI-013 Milk Processing and Pacakaging	14	<p>6. Standardization of milk.</p> <p>7. Study of batch pasteurizer and high temperature short time pasteurizer.</p> <p>8. Pasteurization of milk.</p>	Dr. R.K. Atrey
8.	24.02.2024 Saturday 8:30 – 12:30 Noon	BPVI-013 Milk Processing and Packaging	15	<p>9. Determination of efficiency of pasteurization.</p> <p>10. Study of homogenizer, homogenization of milk and determination of homogenization efficiency.</p> <p>11. Study of sterilizer, sterilization of milk and determination of sterilization efficiency.</p> <p>12. Study of packaging system of milk.</p>	Dr. Sudhir Kumar
	1:00 – 5:00 PM	BPVI-013 Milk Processing and Packaging	16	<p>13. Preparation of flavoured milk, reconstituted, toned and double toned milk.</p> <p>14. Cleaning of equipments.</p> <p>15. Sanitization of equipments.</p> <p>16. Assessment of cleaning and sanitization efficiency.</p>	Dr. R. K. Atrey
9	25.02.2024 Sunday 8:30-12:30 Noon	BPVI-014 Dairy Products-I	17	<p>1. Preparation and standardization of cream.</p> <p>2. Preparation of sterilized cream.</p> <p>3. Preparation of Butter starter.</p> <p>4. Preparation of cream for butter making.</p>	Dr. Devesh Gupta

	1:00 – 5:00 PM	BPVI-014 Dairy Products-I	18	7. Preparation of desi butter (makhhan), table butter and cooking butter by hand operated Churn. 9. Preparation of Ghee.	Dr. R.K. Atrey
10.	03.03.2024 Sunday 8:30-12:30 Noon	BPVI-014 Dairy Products-I	19	5. Construction and operation of power churn. 6. Construction and operation of butter packaging machine. 8. Study of manufacture of table butter by power churn.	Dr. Sudhir Kumar
	1:00-5:00 PM	BPVI-014 Dairy Products-I	20	11. Visit by small scale dairy plant. 10. Ag-mark grading of Ghee	Dr. R.K. Atrey
11.	08.03.2024 Friday 8:30-12:30 Noon	BPVI-015 Dairy Products-II	21	1. Preparation of Khoa. 2. Preparation of Gulabjamun. 3. Preparation of Pedas. 4. Preparation of Burfi.	Dr. Devesh Gupta
	1:00 – 5:00 PM	BPVI-015 Dairy Products-II	22	5. Preparation of Rabri. 6. Preparation of Kalakand and milk cake. 7. Preparation of Kheer.	Dr. R.K. Atrey
12.	10.03.2024 Sunday 8:30-12:30 Noon	BPVI-015 Dairy Products-II	23	8. Preparation of Chhana. 9. Preparation of Rasogolla. 10. Preparation of Sandesh	Dr. Sudhir Kumar
	1:00 – 5:00 PM	BPVI-015 Dairy Products-II	24	11. Preparation of Rasmalai. 12. Preparation of Chhana Murki. 13. Preparation of Paneer.	Dr. R.K. Atrey
13.	17.03.2024 Sunday 8:30-12:30 Noon	BPVI-015 Dairy Products-II	25	14. Study of vacuum pan/double effect/triple effect of evaporator. 15. Study of manufacture of spray dried milk powder. 16. Preparation of value added products from dried milk dairy whitener.	Dr. Devesh Gupta
	1:00 – 5:00 PM	BPVI-016 Diary Products-III	26	1. Preparation of Starter Culture. 2. Preparation of Dahi. 3. Preparation of Mishti Dahi.	Dr. R.K. Atrey
14.	31.03.2024 Sunday 8:30-12:30 Noon	BPVI-016 Dairy Products-III	27	4. Preparation of Lassi. 5. Preparation of Yoghurt. 6. Preparation of Srikhand. 7. Preparation of cheddar cheese from cow milk.	Dr. Sudhir Kumar

	1:00 – 5:00 PM	BPVI-016 Dairy Products-III	28	8. Preparation of mozzarella cheese. 16. Preparation of softy. 9. Preparation of processed cheese. 10. Preparation of processed cheese spread. 11. Calculation of ingredient for ice-cream mix.	Dr. R.K. Atrey
15.	07.04.2024 Sunday 8:30-12:30 Noon	BPVI-016 Dairy Products-III	29	17. Manufacture of kulfi. 18. Manufacture of casein. 19. Study of manufacture of lactose	Dr. Devesh Gupta
	1:00 – 5:00 PM	BPVI-016 Dairy Products III	30	12. Preparation of Ice-cream mix. 13. Preparation of Ice-cream and determination of over run.	Dr. R.K. Atrey
16.	11.04.2024 Thursday 8:30-12:30 Noon	BVPI-015 Dairy Products-II	31	17. Visit of Dairy products manufacturing plant.	Dr. Sudhir Kumar
	1:00 – 5:00 PM	BVPI-016 Diary Products-III	32	14-15 visit of Ice-cream plant and cheese factory.	Dr. Sudhir Kumar
17.	14.04.2024 Sunday 8:30-12:30 Noon	BPVI-017 Quality Assurance	33	1. Familiarization with laboratory equipment and instruments. 2. Listing of quality control agencies at national and international level. 3. Standards specification(Chemical & Microbiological) of milk and milk products. 10. Test for sanitation of dairy equipments (Rinse solution and Swab Contacts Methods)	Dr. Devesh Gupta
	1:00 – 5:00 PM	BPVI-017	34	4. Determination of fat in milk, cream, butter, khoa, paneer, ice-cream & milk powder. 5. Determination of titrable acidity and pH of milk and milk products. 6. Determination of solubility of milk powder. 7. Determination of acid value in ghee.	Dr. R.K. Atrey

18.	21.04.2024 Sunday 8:30-12:30 Noon	BPVI-017 Quality Assurance	35	8. Microbiological analysis of milk & milk products. 9. Microbiological analysis of water & air.	Dr. Sudhir Kumar
	1:00 – 5:00 PM	BVPI-017 Quality Assurance	36	11-17 sensory evaluation of milk, butter, ghee, dahi, ice-cream, khoa, paneer, cheddar cheese, milk powder and srikhand.	Dr. R.K. Atrey
19.	28.04.2024 Sunday 8:30-12:30 Noon	BPVI-018 Diary Management & Entrepreneurship	37	1. Identification of sources for milk losses during processing of milk and preparation of milk products preparation of check list for controlling losses. 2. Identification of parameters for production efficiency. 3. Study of working of a co-operative society. 4. Calculation of milk payment based on fat and two axis pricing policy of dairy cooperative society.	Dr. Devesh Gupta
	1:00 – 5:00 PM	BPVI-018 Dairy Management & Entrepreneurship	38	5. Designing of milk collecting route based on data. 6. Preparation of ledger, trial balance and balance sheet of dairy cooperative society. 7. Identification of Entrepreneurial skills.	Dr. R.K. Atrey
20.	05.05.2024 Sunday 8:30-12:30 Noon	BPVI-018 Dairy Management and Entrepreneurship	39	8. Prepare a project report to set up small dairy plant. 9. Assessment of strength and weakness of milk and milk product marketing. 10. Preparation of check list of problem in procurement and distribution of milk 11. Study of store keeping practices, inventory control and maintenance of various records.	Dr. Sudhir Kumar
	1:00 – 5:00 PM	BPVI-018 Dairy Management & Entrepreneurship	40	12. Preparation of check list for evaluation of performance of a dairy plant. 13. Steam load estimation of dairy plant. 14. Refrigeration load estimation of dairy plant. 15. Electrical load estimation of dairy plant.	Dr. R.K. Atrey

21.	12.05.2024 Sunday 8:30-12:30 Noon	BPVI-011 Milk Production and Quality of Milk	01	UNGUIDED PRACTICAL	
	1:00 – 5:00 PM	BPVI-012 Dairy Equipment and Utilities	02	UNGUIDED PRACTICAL	
22.	19.05.2024 Sunday 8:30-12:30 PM	BPVI-013 Milk Processing and Packaging	03	UNGUIDED PRACTICAL	
	1:00-5:00 PM	BPVI-014 Dairy Products-I	04	UNGUIDED PRACTICAL	
23.	23.05.2024 Thursday 8:30-12:30 Noon	BPVI-015 Dairy Products-II	05	UNGUIDED PRACTICAL	
	1:00-5:00 PM	BPVI-016 Dairy Products-III	06	UNGUIDED PRACTICAL	
24.	26.05.2024 Sunday 8:30-12:30 Noon	BPVI-017 Quality Assurance	07	UNGUIDED PRACTICAL	
	1:00-5:00 PM	BPVI-018 Dairy Management & Entrepreneurship	08	UNGUIDED PRACTICAL	

In case of absence of any of the counselor in any session, class will be taken by programme incharge.

(12:30 – 1:00 Noon) Lunch Break



Programme Incharge

Principal