INDIRA GANDHI NATIONAL OPEN UNIVERSITY.
REGIONAL CENTRE, INSTITUTIONAL AREA, MITHAPUR, PATNA – 800 001

MASTER OF SCIENCE IN FOOD SAFETY AND QUALITY MANAGEMENT (MSCFSQM)
POST GRADUATE DIPLOMA IN FOOD SAFETY AND QUALITY MANAGEMENT (PGDFSQM)

VENUE: INDIAN COUNCIL OF AGRICULTURAL RESEARCH
RESEARCH COMPLEX FOR EASTERN REGION
ICAR PARISAR, POST B.V. COLLEGE, PATNA 800 014 BIHAR

TERM END PRACTICAL EXAMINATION SCHEDULE -   IN FACE TO FACE MODE

A. Guided Practical

S.No	Practical (Days)	Course code and Title	Session	S.No. of the Experiment and Name
1.	1 02/05/2023	Course VII (MVPL-002)Chemical analysis and Quality assurance	1 \n\n 2	**Orientation to Practical Counselling** \n **and** \n 1. Calibration of glassware \n 2. Preparation of standard volumetric solutions. \n 3. Moisture in Food products by hot-air oven –drying method. \n 4. Moisture in food products using Karl Fischer Titration method
2.	2 03/05/2023	Course VII (MVPL-002) Chemical analysis and Quality assurance	2	6. Protein content in food products by kjeldahl method. \n 7. Crude fat in food products by soxhlet extraction method. \n 15. pH of food products by using pH meter. \n 19. Refractive index of oil and fats. \n 23. Iodine value in oils & fats.
3.	3 04/05/2023	Course VII (MVPL-002) Chemical analysis and Quality assurance	2	5. Moisture in food products by Dean & stark method \n 8. Total fat in food by rose Gotteib method. \n 9. Volatile Oil in spices. \n 26. AllyI is othiocyanate in mustard oil. \n 28. Peroxide value of oil and fats. \n 30. Gluten content in wheat flour.
4.	4 05/05/2023	Course VII (MVPL-002) Chemical analysis and Quality assurance	2	16. Free fatty acids and acid value in oil and fats. \n 12. Crude fiber in food sample. \n 20. Specific gravity of oils and fats. \n 22. Colour of oils and fats by Lovibond Tint meter. \n 29. Sodium chloride content in butter.
5.	5 06/05/2023	Course VII (MVPL-002) Chemical analysis and Quality assurance	2	10. Starch in cereal grains by acid hydrolysis method. \n 11. Starch in cereal grains by glucoamylase method. \n 13. Total ash content in food products. \n 14. Acid insoluble ash in food products. \n 21. Titer value of oils and fats.
6.	6 07/05/2023	Course VII (MVPL-002) Chemical analysis and Quality assurance	2	17. Unsaponifiable matter in oils and fats. \n 18. Melting point of oils and fats. \n 24. Specification value in oil and fats. \n 25. Acetyl Value and Hydroxyl Value in Oils and Fats \n 27. Reichert meissl (RM) value and potenske value (PV) in oil and fats. \n 31. Sorbic acid in food products.
7.	7 08/05/2023	Course VII (MVPL-002) Chemical analysis and Quality assurance	2	34. Vitamin A content in ghee and vegetable fat by HPLC.
8.	8 09/05/2023	Course VII(MVPL-002) Chemical analysis and Quality assurance	2	32. Copper, Zinc, lead and cadmium in food products by Atomic Absorption Spectroscopy.
9.	9 10/05/2023	Course VII (MVPL-002) Chemical analysis and Quality assurance	2	33. Cholesterol content in ghee by GC.
10.	10 11/05/2023	Course VII (MVPL-002) Chemical analysis and Quality assurance	2	35. Sensory Evaluation Laboratory \n 36. Selection of sensory panelist \n 37. Sensory Evaluation of Food products-Hedonic rating test \n 38. Judging of milk

11.	11 12/05/2023	Course II (MVPI-001)Food microbiology	2	1. Introduction to the Basic Microbiology Laboratory practices. 2. Cleaning and method of sterilization 4. Staining Techniques 6. Direct Microscopic Examination of Foods.
12.	12 13/05/2023	Course II (MVPI-001)Food microbiology	2	3. Cultivation and Sub-culturing of microbes 5. Standard Plate Count Method 7. Enumeration of Fungi (yeasts and Molds 8. Assessment of Air using Surface Impingement Method
13.	13 14/05/2023	Course II (MVPI-001)Food microbiology	2	10. Detection of Coli forms and Indicator Organisms. (1) Most probable Number
14.	14 15/05/2023	Course II (MVPI-001)Food microbiology	2	11. Detection of Coli forms and Indicator Organisms. (2) Confirmed and Completed Tests, Membrane Filter Techniques.
15.	15 16/05/2023	Course II (MVPI-001)Food microbiology	2	12. Interpretations of Microbiological Data and its inferences 9. Assessment of surface sterilization using swab and rinse method
16.	16 17/05/2023	Course VI (MVPL-001) Food Safety and Quality management	1	1. Development of GHP and GMP plan for a food factory (Module1) a. Identifying the key focus areas for GHP & GMP b. Identifying gaps in its implementation and closure plans for identified gaps in a food factory/ food outlet
		Course VI (MVPL-001) Food Safety and Quality management	1	3. Development of GHP and GMP plan for a food factory (Module2) a. Identifying gaps in its implementation and closure plans for identified gaps in a food factory/food outlet.
17.	17 18/05/2023	Course VI (MVPL-001) Food Safety and Quality management	1	2. Visit to the nearby Food establishment (e.g. Food factory)
		Course VI (MVPL-001) Food Safety and Quality management	1	4. Development of the process flow for the food establishment including all the inputs, outputs & interim loops.
18.	18 19/05/2023	Course VI (MVPL-001) Food safety and Quality management	1	5,6 Development of FSMS (Module 1) (a) Data Collection and hazard identification (physical, chemical and microbiological) (b) Hazard analysis.(Usage of FMEA technique for risk assessment)
		Course VI (MVPL-001) Food safety and Quality management	1	7. Development of methodology (decisions tree) as per clause 7.4.4 of ISO 22000 for a food establishment
19.	19 20/05/2023	Course VI (MVPL-001) Food safety and Quality management	1	8,9 Development of FSMS (Module-2) (a) Development of OPRP (operational perquisite programme) and development of HACCP plan (critical limits including rationale for limits), monitoring procedure, correction and corrective measures) (b) Managing unsafe product.
		Course VI (MVPL-001) Food safety and Quality management	1	10. Development of FSMS (Module 3) (a) Verification and validation of control measures (OPRP and HACCP Plan) as per codex guidelines on Validation (b) emergency situation, preparedness and response plan (c) communication (improvement)
20.	20 21/05/2023	Course VI (MVPL-001) Food safety and Quality management	1	11. Developing FSMS (Model 4) Traceability System as a tool for, Recall/ Withdrawal (ISO 22005:2007
		Course VI (MVPL-001) Food safety and Quality management	1	12,13 Application of ISO 9001 model a. Understanding process approach b. defining quality policy and objectives, c. Correction Corrective action and preventive action Continual improvement

21.	21 22/05/2023	Course VI (MVPL-001) Food safety and Quality management	1	14. Food laws (Module 1) Identification of legal requirement for following food groups product standards : (a) Fruit/ vegetables, (b) Dairy (c) Meat & Meat products (d) cereal, Pulses and (e) fish and sea foods (f) and ready to eat foods (specific legal requirement)
		Course VI (MVPL-001) Food safety and Quality management	1	15. Food laws (Module 2): Hygienic requirements for manufacturing premises as per legal requirements
22.	22 23/05/2023	Course VI (MVPL-001) Food safety and Quality management	1	16. Matrix preparation to find correspondence between ISO 22000, HACCP series and BRC and any other related standard (Food Retail Management basic requirement)
		Course VI (MVPL-001) Food safety and Quality management		17. Understanding ISO 17025 requirement for FSMS and QMS Audits relating to clause 7.6 in ISO 9001 and clause 8.3 in ISO 22000(Establishing traceability to national /International standards
		Course VI (MVPL-001) Food safety and Quality management		18. Auditing: Planning (1,2) Module 1: Role and responsibilities of auditors and lead auditors and pre-audit information required to plan the audit Module 2: Preparation of an on site audit plan that is appropriate to the audit scope (Stage 1 and Stage 2 (ISO: 22003 and 17021)
		Course VI (MVPL-001) Food safety and Quality management		19. Module 3 : Produce and audit checklist including salient Features of ISO 9001 and FSMS
		Course VI (MVPL-001) Food safety and Quality management		20. Module 4: Document Review as per the Case study
		Course VI (MVPL-001) Food safety and Quality management		21. Module 5: a. Conducting the opening meeting and closing meeting (as per ISO: 19011) B. Establishing qualification criteria for auditors and lead auditors (ISO 17021 & ISO 22003 for a food industry)
		Course VI (MVPL-001) Food safety and Quality management		22. Module 6: Mock Audit exercises to develop interpersonal skills, information gathering techniques and exercising objectivity in the review of evidence collected.
		Course VI (MVPL-001) Food safety and Quality management		23. Module 7: Post Audit activities a. Report writing including writing valid, factual and value adding non- conformity report b. Proposals for corrective action and follow up

B. Unguided Practical

S.NO.	Practical (Day)	Course Code and Title	Session
23.	26 23/05/2023	Course II (MVPI-001) Food Microbiology	2
24.	27 24/05/2023	Course VI (MVPL-001) Food Safety and Quality Management	2
25.	28 25/05/2023	Course VII (MVPL- 002) Chemical Analysis and Quality Assurance	2

DR. SHAILINI DIXIT
ASSISTANT REGIONAL DIRECTOR
IGNOU, RC PATNA

DR ABHILASH NAYAK
SR. REGIONAL DIRECTOR
IGNOU, RC PATNA