

SEMESTER IV

PAPER FNTM 4.1 Human Resource and Institutional Management Credit 4 Hours 60

Unit A: Understanding catering operations:

- 1. A) Introduction to the Catering Industry**
 - a) History and the present status
 - b) Types of catering
 - c) Types of catering establishment
- 1. B) Menu**
 - a) Importance of menu
 - b) Types of menu
 - c) Factors affecting menu planning
 - d) Menu management
- 1. C) Basic understanding of Catering Operation**
 - a) Food production and food service basics
 - b) Types of service
 - c) Catering cycle and material management
 - d) Fuels
 - e) Food commodities – basic idea
- 1. D) Cost control**
 - a) Understanding food cost
 - b) Factors affecting cost
 - c) Budgetary aspects and cost control in catering operations
 - d) Framing a budget
 - e) Basics of accounting

Unit B: Design Infrastructure and Hygiene

- 2.A) Design and lay out of Catering Premises**
 - a) Infrastructure – Hospital kitchen, hostel kitchen and other intuitional kichen
 - b) Layout of kitchen and the restaurant (commercial and noncommercial)
- 2.B) Equipments**
 - a) Importance of selecting the correct equipment.
 - b) Selection criteria of equipment.
 - c) Different modes of classification of equipment.
 - d) Equipment maintenance procedure.
 - e) Safety in handling equipment.
 - f) Emphasis on details of some equipment of bulk cooking

Hygiene

- a) Importance of hygiene for food handlers.
- b) Cost of poor hygiene
- c) Food contamination and its classification
 - Bacterial and nonbacterial infection

- Chemicals (agricultural , chemical, rodenticide, hormones)
- Metals
- Miscellaneous – Nuclear contamination
- d) Prevention of contamination in catering operation
- e) HACCP

UNIT C: 15 MARKS

Managing Human Resource

Understanding the importance of Human Resource Management (HRM)

Various procedures involved in HRM.

- a) Recruitment- selection process
- b) Hiring
- c) Orientation-on the job performance
- d) Performance appraisal
- e) Career growth
- f) Grievance Redressal and disciplinary action
- g) Employee motivation and morale
- h) Motivation theories
- i) Employee benefits and perquisites
- j) TNA, Training and development
- k) Industrial relationship
- l) Laws pertaining HRM

PAPER FNTM 4.2 Public Health Epidemiology

Credit 4

Hours 60

Group A (10 marks)

1. Basic concept of health- Definition, Dimension & Determination of Health. Spectrum of health.
2. Epidemiology: Definition, aims and tools of measurement (rate etc.)
Descriptive Epidemiology: time, place- person, concept of epidemic and epidemic curve.
Analytical Epidemiology: (case control, cohort studies)
Experimental Epidemiology: (clinical, community based trials)
3. Natural health disease level of prevention . health indicator special reference to nutritional indicator, vital statistics, morbidity, mortality Epidemiological triad, Iceberg phenomenon of disease. Source of health & nutritional information- Primary & secondary data, demography

Group B (10 marks)

4. Causation of disease -communicable and non communicable diseases:

- a) Infectious disease epidemiology-concept, special reference to food and water borne disease.
 - b) Noncommunicable disease- Epidemiology, role of nutrition
5. Overview of Food and water borne disease-epidemiology, prevention & control. Nutritional waste management.

Group C (10 marks)

6. Quantitative Research Methods (observation, PGD, IDI)
7. Evaluation of national nutritional programme (ICDS, Vitamin A, IDD, Anaemia, Mid day meal etc.

PAPER 4.3a Clinical nutrition (special paper) Credit 4 Hours 60

Incidence, aetiology, pathology, clinical manifestations, complications and nutritional management of the following:

Group A (10 marks)

1. Burn & Trauma
2. AIDS
3. Inborn error of metabolism (PKU, Lactose intolerance, Maple Syrup disease, Galactosomia, Albinism, Alkaptonuria)
4. Cancer

Group B (10 marks)

1. Upper GI tract disorder
2. Liver cirrhosis and transplantation, Hepatic Encephalopathy
3. Surgery

Group C (10 marks)

1. Renal disorder: Kidney function test, Glomerulo nephritis, nephritic syndrome, Acute & Chronic renal failure, Renal calculi, Dialysis
2. Role of diet in communicable disease: Dengue fever, Mumps and Measles.
3. Role of diet in endocrine disorder: PCOD, Thyroid malfunction.

PAPER 4.3b (Food Safety Spl. Paper) Credit 4 Hours 60

Group A (10 marks)

1. Food allergy: Definition, Hypersensitivity, Mechanism reaction
2. Food Laws, Agencies- ISI, AGMARK, BIS, PFA, MMFPO etc.
3. Food Additives: Food Colours, flavours, emulsifiers, flour improver, stabilizer etc.

Group B (10 marks)

4. Food Safety: FSSAI, Hazard Analysis and Critical Control Point (HACCP), Sanitation, GMP (Goods manufacturing practice)
5. Food Adulterants: Definition, types, common adulterants, health hazards of food adulteration, detection of common adulterants in foods.
6. Genetically modified crops, overview, techniques involved, advantages and disadvantages.

Group C (10 marks)

7. Techniques related to Food industry: Rheology & viscometry. Basic idea of Fermenter (Designing & its working)
8. Basic idea of downstream processing of food and waste.
9. Application of Nanotechnology in Food Industry.

PAPER 4.4 Credit:4

Dissertation

Total Hours: 60

PAPER 4.5a Credit:4

Seminar & Journal club

Total Hours: 60

PAPER 4.5b Credit:4

Grand Viva