SYLLABUS FOR THE RECRUITMENT OF

FOOD SAFETY OFFICER

Subject and Syllabus

1. Indian and International Food Laws (An Overview)

- Food Safety and Standards Act of India, 2006: Provision, definitions and different sections of the Act and implementation.
- FSS Rules and Regulations.
- Overview of other relevant national bodies (e.g. APEDA, BIS, EIC, MPEDA, Spice Board etc.).
- International Food Control Systems/Laws, Regulations and Standards/Guidelines with regard to Food Safety – (i) Overview of CODEX Alimentarius Commission (History, Members, Standard setting and Advisory mechanisms: JECFA, JEMRA, JMPR); WTO agreements (SPS/TBT); Important national and international accreditation bodies.

2. FSSAI – Role, Functions, Initiatives (A General Understanding)

- Genesis and Evolution of FSSAI.
- Structure and Functions of Food Authority.
- Overview of systems and processes in Standards, Enforcement, Laboratory, ecosystem, Imports, Third Party Audit etc.
- Promoting safe and wholesome Food (Eat Right India, Food Fortification, snf, Clean Street Food Hub, RUCO and various other social and behavioural change initiatives).
- Training and capacity building.
- Role of State Food Authorities.

3. Food Safety Eco System in India:

Indian Scenario of Food Safety: Food Safety and Standards Act, 2006 and its Background, The Food Safety and Standards Regulations (FSSR) 2011: Licensing and Registration, Schedule 4 requirements, Recent advances in Packaging and Labelling Requirements, Regulations related to Nutraceuticals and Foods for Special Dietary Uses, Provisions on Organic Food and Non-Specified Food/Food Ingredients, Central Advisory committee and scientific Committee/panels, Food Import Clearance system,

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Notified labs and adjudications. Initiatives of FSSAI: Eat Right India, FoSTaC, Food Fortification, Detect Adulteration with Rapid Test (DART), Clean Street Food, BHOG (Blissful Hygienic Offering to God), Food Safety on Wheels, Food Smart Consumer, Codex, Diet for Life etc.,

4. Principles and Basics of Food Chemistry and their role in Human Nutrition

- Structure and functions of macro- and micro nutrients.
- Role of macro and micronutrients in human nutrition.
- Overview of food additives with respect to their technological functions.
- Overview of anti-nutritional factors and their removal from foods.
- Overview of enzymes as food processing aids.
- Overview of nutraceuticals and functional foods.
- Overview of food contaminants and adulterants and their effects on human health.
- Food allergens and allergenicity.
- Importance of diet in alleviating health risks, especially non-communicable diseases.

5. Food Microbiology & General principles of Food Hygiene

- General principles of food microbiology and overview of food borne pathogens.
- Overview of sources of microorganisms in food chain (raw materials, water, air, equipment etc.) and microbiological quality of foods.
- Microbial food spoilage and Food borne diseases.
- General principles and techniques in microbiological examination of foods.
- Overview of beneficial microorganisms and their role in food processing and human nutrition.
- General principles of food safety management systems including traceability and recall – sanitation, HACCP, Good production and processing practices (GMP, GAP, GHP, GLP, BAP, etc).

6. Food Science and Nutrition:

Understanding food hazard, food borne illnesses, water and sanitation, GHP, GAP, HACCP, food allergies, Food Adulteration, Food Nutrition and Food Consciousness, Supplementation, Fortification, Bio-fortification, Poor Diet and Consequences:

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Stunting, wasting & anaemia, Life style diseases, Food testing and rapid detection methods.

7. Food Quality:

GMP Auditing and inspections, Food Surveillance, Food Recall, Quality control of food at all stages processing, Safety issues in food packaging materials, Sampling from a lot or process line, Non-destructive food quality evaluation methods.

8. General concepts of Food Analysis and Testing.

- Fundamentals of field level and laboratory sampling with reference to importance of statistical tools.
- Overview of basic/classical methods of food analysis.
- Overview of modern analytical techniques including mass spectrometry and molecular techniques.
- Principles of Quality assurance and Quality control with reference to food analysis and testing.

9. Food Processing and Preservation:

Basic principles and methods of Food Preservation: Heat processing, pasteurization, canning, dehydration, freezing, freeze drying, fermentation, microwave, irradiation and chemical additives. Refrigerated and modified atmosphere storage. Aseptic preservation, hurdle technology, alternate-thermal technologies and non thermal processing, New/Novel food additives and preservatives. Safety issues of processed foods available in market.

10. Principles of Food Preservation, Processing and Packaging

- Food Processing Operations, Principles, Good Manufacturing Practices.
- Overview of food preservation methods and their underlying principles including novel and emerging methods/Principles.
- Overview of food packaging methods and principles including novel packaging materials/techniques.

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