Madhya Pradesh Public Service Commission Commission MPPSC Syllabus

KPSC Food Safety Officer Selection Procedure

✓ Written Exam

MPPSC Food Safety Officer Exam Pattern 2020

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MPPSC Food Safety Officer Exam Syllabus 2020

Unit-I

- Phenols
- Aldehydes
- Ketones
- Carboxylic acids
- Nitro compounds and amines.
- Different methods of purification
- Chemical bonds and forces
- Concept of pH and buffer
- Thermochemistry
- Chemical equilibrium
- Chemical kinetics.
- Aliphatic and Aromatic hydrocarbons-concept of aromaticity
- Methods of preparation and chemical properties of alcohols
- Qualitative and quantitative analysis.
- Solutions-concentration terms
- Liquid-properties surface tension
- Viscosity and its applications.
- Surface chemistry-adsorption homogeneous and heterogeneous catalysis colloids and suspension.

Unit-II

- Fermentation-definition and types
- Microorganisms used in food fermentation
- Dairy fermentation
- Fermented foods-types
- Methods of manufacture for vinegar
- Types of microorganism associated with food their morphology and structure
Factors affecting their growth
Microbiological standards
Sources of microorganisms in food
Some important food spoilage microorganisms
Sauerkraut
Soya sauce
Beer
Wine and traditional Indian foods.

Unit-III

- Enzymes used during food processing
- Modification of food by endogenous enzymes.
- Vitamins and their types.
- Minerals-important minerals and their functions in the human body.
- Plant alkaloids and their uses.
- Animal and plant toxins.
- Toxic substances and their metabolism-pesticides
- Metals food additives
- Biomolecules – carbohydrates
- Proteins
- Lipids and nucleic acids
- Their classification
- Structure
- Biosynthesis
- Metabolism and calorific value.
- Enzymes-classification
- Kinetics factors controlling enzyme activities

Unit-IV

- Excretion-structure of kidney and urine formation.
- Circulatory system-Heart Blood vascular system blood and its components.
- Nervous system-conduction of impulses.
- Muscular system-types of muscles and muscle contraction.
- Reproductive system. Endocrine system-hormones and their role.
- Immune system-types of immunity antigen-antibody reaction.
- Classification-five kingdom system up to phylum plants and animal products used as food by a human.
- Culture of animals used as food.
- Eukaryotic and Prokaryotic cells.
- Types of cells animal tissues and organs.
- Human physiology-Nutrition and Digestion.
- Respiration-respiratory pigment transport and gaseous exchange.
- Diseases-deficiency diseases communicable diseases and diseases caused by animals (protozoans helminths arthropods).

Unit-V

- Statistical analysis-mean
• Median
• Mode
• Standard deviation
• Regression and correlation
• T-test variance
• Genetically modified plants and animals
• Plant and animal tissue culture and its application
• Importance of GM-crops and their products
• Environmental bio technology-pollutants
• Biomagnification and microbial bioremediation.

Unit-VI

• Horticultural crops (Citrus, Mango, Guava, Ber, Onion, Tomato, Cucurbits, Chilli, Rose, etc.)
• Spices and Medicinal crops (Cumin, Fenugreek, Fennel, Coriander, Isabgol, Aloe vera, etc.)
• Important diseases and Pests of major Crops and their Management.
• Importance of agriculture marketing.
• General awareness about Seed science and Crop Physiology.
• Salient features of agriculture with special reference to Rajasthan.
• Soil Fertility and Management of Problematic Soils in Rajasthan.
• Introduction to Dryland Farming and Agro-forestry.
• Introductory knowledge about Production Techniques of important field crops (Wheat, Mustard, Groundnut, Pulses, Bajra, Maize).

Unit-VII

• Laboratory diagnostics
• Important diseases of livestock and their management.
• Present status of Milk and Milk Products.
• Milk production and quality of milk.
• Milk processing and packaging.
• Dairy equipment and utilities. Introduction to livestock products.
• Importance of Livestock in Economy of Rajasthan.
• Fundamentals of Livestock and Poultry Production.
• Artificial insemination and Pregnant animal management.

Unit-VIII

• Postharvest Physiology and handling of fruits and vegetables.
• Types and functions of Packaging materials used in fresh and processed food.
• Food laws - a brief review of regulatory status in India (FPO Prevention of Food adulteration Act Food Safety and Standard Act Testing Food for its Safety AGMARK).
• Hygiene and Sanitation (HACCP Good Manufacturing Practices Good Laboratory Practices etc.)
• Present status of Food Technology in India and Rajasthan.
• General methods of food preservation and food processing.
• Importance of Postharvest technology of fruits and vegetables.
• Technology for processed products like Squash Jelly Sauce Pickles etc.

Unit-IX
• The emergence of Modern Rajasthan: factors of Socio-Political awakening of 19th century
• Peasants and tribal movements of 20th century
• The political struggle of the 20th century and the integration of Rajasthan.
• Pre & Early history of Rajasthan.
• Age of Rajput: Major dynasties of Rajasthan and the achievements of prominent rulers.

Unit-X

• Performing Art of Rajasthan - Folk music and musical instruments of Rajasthan
• Folk dance and folk drama of Rajasthan.
• Visual Art of Rajasthan - Architecture of forts and temples of Rajasthan
• Sculpture traditions of Rajasthan and various schools of painting of Rajasthan.

Unit-XI

• Saints and folk deities of Rajasthan.
• Various dialects and their distribution in Rajasthan literature of the Rajasthani language.
• Various religious cults

Unit-XII

• Demographic characteristics
• Desertification
• Droughts & Floods
• Deforestation
• Environmental Pollution and Ecological Concerns.
• Broad physical features - Mountains
• Plateaus Plains & Desert
• Major rivers and lakes
• Climate and Agro-climatic regions
• Major soil types and distribution
• Major forest types and distribution

Unit-XIII

• Major agro-based industries - Textile Sugar Paper & Vegetable oil
• Poverty and Unemployment
• Agro-food parks.
• Major Minerals-Metallic & Non-Metallic
• Power Resources-Renewable and Non-Renewable

Unit-XIV

• Important Persons
• Places and Current events of the State.
• National and International events of importance.