ANDHRA PRADESH

RECRUITMENT OF ASSISTANT PROFESSORS IN THE UNIVERSITY

SYLLABUS FOR THE SCREENING TEST

Paper – II

Paper II will cover 180 Objective Type Questions (Multiple Choice, Matching type, True/False, Assertion – Reasoning type) carrying 180 marks of 3 hours duration. Each question carries 1 mark. There will be negative marks for wrong answers. Each wrong answer will be penalized @ 1/3rd of the marks prescribed for the question.

FOOD TECHNOLOGY

Unit 1: Food Science


(b) Nutrition: balanced diet, essential amino acids and essential fatty acids, protein efficiency ratio, water soluble and fat soluble vitamins, role of minerals in nutrition, co-factors, anti-nutrients, nutraceuticals, nutrient deficiency diseases. Chemical and biochemical changes: changes occur in foods during different processing.
Unit 2: Food Technology

(a) Technology of Foods of Plant Origin


(iii) Spices Processing: Oleoresin and essential oil extraction.

(b) Technology of Foods of Animal Origin


(c) Industrial Fermentation: Fermentation technology, fermented food products (animal and plant based), microbial spoilage of foods, bacterial growth curve, hurdle technology. Single cell proteins, Food
contaminants viz. Aflatoxins. Food intoxication and infection. Consumer concerns about risks and values, Biotechnology and food safety. Fermented foods and beverages: curd, yoghurt, cheese, pickles, soya-sauce, sauerkraut, idli, dosa, vinegar, alcoholic beverages and sausage.

Unit 3: Food Engineering

(a) Food Engineering and advances
Unit operations of food processing viz. grading, sorting, peeling and size reduction machineries for various unit operations, energy balance in food processing. Heat transfer: heat transfer by conduction, convection, radiation, heat exchangers. Mass transfer: molecular diffusion and Fick's law, conduction and convective mass transfer, permeability through single and multilayer films. Use of non-thermal technologies (microfiltration, bacteriofugation, ultra-high voltage electric fields, pulse electric fields, high pressure processing, irradiation, thermosonication), alternate-thermal technologies (ohmic heating, dielectric heating, infrared and induction heating) and biological technologies (antibacterial enzymes, bacteriocins, proteins and peptides) in food processing.


Unit 4: Food Safety and Quality Management