514. NUTRITION

Unit 1: Nutritional Science

- Classification, functions and sources of proximate principles
- Carbohydrates: Glycolysis, TCA cycle, HMP Shunt Pathway, Gluconeogenesis, Glycogenolysis, Glycogenesis.
- Lipids, Biosynthesis of fatty acids and Beta - Oxidation Amino Acids, decarboxylation, transamination and urea synthesis
- Proteins translation and protein synthesis
- Nucleic acids, DNA, RNA and transcription Requirements of macro and micronutrients for various age groups including pregnancy and lactation
- Sports nutrition
- Functions and deficiencies of Vitamins, minerals and Protein energy malnutrition

Unit II: Clinical & Community Nutrition

- Assessment of Nutritional status: Anthropometric measurements, Biochemical, Clinical, and Diet surveys.
- Liver and Renal Function Tests
- Nutrition in critical care, Burns and Surgery
- Obesity, Leanness
- Disorders of Gastrointestinal tract, Kidney, Pancreas, cardiovascular
- Nutrition education -Tools and Techniques
- Diet counseling for Athletes, community and patients
- Occupational hazards: Physical, chemical and Biological

Unit III: Food science and quality control.

- Factors affecting the gelatinization of starch, gluten formation, cooking quality of legumes and pulses,
- Factors affecting sugar crystallization, properties of proteins in milk and milk products and plant pigments,
- Factors affecting absorption of fat and changes in animal and animal foods during cooking.
- Principle and methods of food preservation
- Food toxicants and Food borne diseases.
- Contamination and spoilage of cereals and cereal products, milk, milk products, white and red meat and their products, fruits and vegetables and canned products

Unit IV: Research Methodology and Computer Applications

- Methods of data collection and compilation
- Statistical evaluation: Measures of central tendency, Dispersion
- Correlation and regression
- Chi square test and T-test
- Components of MS OFFICE – Introduction, different types of MS OFFICE packages
- Network and data communication LAN, WAN, MAN, Types of communication network
- Internet protocol (TCP/IP), Types of protocol
- Important features and essential requirements of internet, steps in starting internet

Unit V:Dietetics

- DIET Therapy:
- Dietary management of Hepatic disorders: Jaundice, Viral Hepatitis, Fatty liver,Alcoholic liver,Cirrhosis, Liver Transplant
- Gall Bladder disorders: Cholecystitis and Cholelithiasis
- Dietary managementfor Renal disorders:Acute and Chronic Glomerulonephritis,Urinary calculi
- Acute Renal Failure, Chronic Renal Failure, Kidney Transplant
- Dietary managementfor Hormonal disturbances:Acute Pancreatitis, Chronic Pancreatitis
- Diabetes Mellitus
- Addison's diseases and Cushing's syndrome
- Hypothyroidism and Hyperthyroidism
- Dietary managementforDegenerative and Chronic Disorders:
- Cardiovascular diseases:Hypotension, Hypertension
- Ischemic Heart Disease, Atherosclerosis, Arteriosclerosis, Non- Ischemic heart disease-Cardiac Myopathy, Congenital Heart Disease
- Disorders of Musculo-Skeletal system: Rheumatoid Arthritis, Osteoarthritis&Gout
- Cancer&AIDS

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