

B.R.AMBEDKAR BIHAR UNIVERSITY, MUZAFFARPUR
DIRECTORATE OF DISTANCE EDUCATION

M. Phil. HOME SCIENCE (FOOD AND NUTRITION)
Syllabus (Regular Mode)

Semester I	Title of the Course	Marks			Credits
		IA	UE	Total	
Paper I	Research Methodology and Computer Application	30 (15+15)	70 (35+35)	100	4
Paper II	Advances in Food and Nutrition	30	70	100	4
Paper III	Clinical Nutrition	30	70	100	4

Paper - 1 : Group - A Research Methodology

Unit : I Research Methodology

1. Type of Research - Historical Survey, Experimental, Case Study, Social Research, Participative Research.
2. Questionnaire & Schedule : Types, Merits & Limitations
3. Interview Method : Types, Merits & Limitations
4. Observation : Types, Merits & Limitations.

Unit - II

5. Research Design
6. Sampling Methods
7. Hypothesis
8. Data Analysis ; Types of Data
9. Report Writing

Unit - III

10. Descriptive Statistics - Mean, Median, Mode.
11. Standard Deviation
12. Correlation

Handwritten signatures and dates:
15.12.18
15.12.18
15.12.18
15.12.18

Group - B Computer Application

Unit : I

1. Computer System : An Overview; Basic Applications of Computer in different fields.
2. Functional Components of a Computer
3. Benefits and limitations of Computers
4. Computer Virus and Cyber Crime

Unit - II

5. MS Window Operating System - features,
6. Getting started with windows; Managing files and folders - to create, Rename, Copy, Cut, Paste and Delete
7. Basic window accessories : Mouse pointer, Control Panel, Creating Shortcuts
8. Shutting down the computer

Unit - III

9. Introduction to MS Word and MS Excel
10. How to type, edit, format and save a document; Spell check, Page and Paragraph Setup, Inserting pictures
11. Creating Tables and Charts in Word and Excel
12. Printing and Closing the document
13. MS Power Point : Setup to Power Point Presentation, Physical Aspects of a Power Point Presentation
14. Creating New Presentation; Editing, Adding New Slides, Adding illustration to slides, Inserting Pictures; Creating Slide Shows,

Handwritten signatures and dates:
15.12.18
15.12.18
15.12.18
15.12.18
15.12.18

References

1. Ghai, O.P, Gupta. P, (1999), Essential Preventive Medicine - A Clinical and Applied Approach.
2. Hendrick. T.E., Bickmath and Rog. D.J. (1993), Applied Research Design - A Practical guide, California, Sage Publication, Inc.
3. Miles M.B., Huberman A.M. (1994), Qualitative Data Analysis - An Expanded Source Book, 2nd Edition, California, Sage Publication, Inc.
4. Wilson. K, Goulding. K.M., A Biologist's Guide To Principle And Techniques In Practical Biochemistry.
5. Proceeding of N & I, 1993, No 40
6. Suitor. C.W, and Crowley. H.F, Nutrition - Principles And Application In Health Promotion.
7. Pelleff. C.D. and Young. V.R., Nutritional Evaluation of Protein Foods.
8. Harrison Clacke, Application Of Measurements To Health and Physical Education, 5th Edition, Prentice Hall.
9. Keith Wilson and John Walker, Practical Biochemistry - Principles And Techniques.
10. George. E, Nutritional Bioavailability Of Zinc.
11. Earl. B, (1984), Practice Of Social Research, Wordsworth Publishing, California.
12. David. G. Alms, Basy. H, Katano Witz. Henry. L, Rcodiger, (1995). Research Methods In Psychology, West Publishing Company, New York.
13. Dumm Olive Jean, Virginia. A. Clark, (1990), Applied Statistics, John Wiley and Sons.
14. Snedecor. G.W, (1992), Statistical Methods, The Iowa State University Press, Iowa.
15. Deldert. C. Miller (1991), Handbook of Research Design And Social Measurement, 5th edition, Sage Publication, New Delhi.

She
15.12.18

M
15.12.18

(PK)
15.12.18

g
18.12.18

(S)
18.12.18

Paper - II : Advances in Foods and Nutrition

Unit : I Food Science and Application : Nutritional factors and anti nutritional factors and active principles and changes of active principles during cooking and their nutritional implications for the following : cereals, pulses, vegetables and fruits, nuts and oilseeds, milk and milk products, tea, coffee, and cocoa, spices and condiments, meat, fish, poultry and egg, fats and oils Food adjuncts - Applications of natural and synthetic flavours, colours, preservatives. Functional foods - Latest trends in the concept of functional foods; their role in designer foods, nutraceuticals and food analogues and as phytochemicals and antioxidants. Genetically modified foods - potential problems and solutions.

Unit : II Biochemical Aspects of Macro Nutrients : Carbohydrate : Digestion, absorption and metabolism, effects of deficiency and toxicity. Protein : Digestion, absorption and metabolism, effects of deficiency and toxicity. Protein quality evaluation - methods and application, Amino acids - Essential and non-essential amino acids, role of amino acids in health and diseases. Fat : Digestion, absorption and metabolism, types of fatty acids, their role in health and disease. Energy : Energy metabolism - BMR, SDA and energy requirement, respiratory quotient and metabolism in starvation, interrelationship between the nutrients. Fibre- Role of fibre in the body.

Unit : III Biochemical Aspects of Micro Nutrients: Vitamins : Function, digestion, absorption and metabolism of fat soluble and water soluble vitamins, effects of deficiency and toxicity, bio assay of fat and water soluble vitamins, interrelationship. Minerals and trace elements, function, absorption and metabolism, effects of deficiency and toxicity, interrelationship. Water and electrolyte balance.

Unit : IV Nutrition through life cycle : RDA and nutritional importance during pregnancy - complications, foetal mal development related to nutrition. Weight management. Teenage pregnancy and its complications. Lactation - special

Shu
15.12.18

Shu
15.12.18

PK
15/12/18

Shu
15.12.18

Shu
15.12.18

nutritional consideration during lactation. Infancy & childhood years - Pre term infants and nutritional needs - vitamins & minerals needs, protein foods, obesity, changing nutritional needs of preschoolers. Adolescents : Recent trends in growth and development and changing nutritional requirements. Eating disorders and changes in food habits and their effects. Adults - Nutritional importance for men and women, menstrual abnormalities and complications. Nutritional in post-menopausal women, osteoporosis and diet modification. Nutritional in Aging - Metabolic changes in aging, nutrition in aging process. Nutritional problems in changing society - Psychosocial influences on food habits, food and gender, Religion, moral ethics, cultism and quackery, myths, taboos and superstition, physiological aspects of food choice and demographic choice. Malnutrition in learning situation, global trends and policy approaches. Implications of new approaches for nutrition education. World food problem, food security in global & national level.

Unit : V Biochemical basis of health and diseases : Metabolic alteration in - obesity diabetes, cardiovascular disease, liver disorder, renal disorders, hereditary conditions, cancer, AIDS and burns. Nutritional in born error of metabolism, nutrition and immunity, drugs food-nutrient interaction, role of antioxidants in health and disease.

References

1. Journal of Food Science and Technology
2. Indian food packer
3. Processed Food
4. Food Technology
5. Proceedings of International Food convention
6. Douglas M., Cousidine P.E. and Glenn D. Comidine (1997) Food and food production Encyclopedia, CBS Publishers New Delhi.
7. Robin M. Philip Convenience Foods - Recent technology Boyes Data Corporation, New Jersey, USA.
8. Thomas Richards. M. John W. Finley Chemical changes in food during processing - AVI publication, West Port, Connecticut
9. Lal G. Sidappa, C.E. Tandon, Preservation of fruits and vegetables
10. Norman Desroisier (1970) Technology of preservation, The AVI Publishers Inc.

Handwritten signatures and dates:
15-12-18
15-12-18
15/12/18
15-12-18
15-12-18

Paper - III : Clinical Nutrition

Unit - I : Assessment of nutritonal status of the hospitalized patients, Diet counseling. Role of Dietitian in assessing patients' needs Based on Clinical, Bio clinical, Biophysical and personal data. Current trends in nutritional support : Parenteral and enteral nutrition - Feeding of permature and LBW babies - pre and post - operative diets. Incorporation of Novel Therapeutic foods in the exchange lists followed in Hospitals, Periodical nutritional screening of patients.

Unit - II : Etiopathophysiology, metabolic and clinical aberrations, diagnostic features, complications, prevention and recent advances in the nutritional management of - Weight imbalances, diabetes Mellitus and other metabolic disorders, Cardio-vascular disorders.

Unit - III : Etiopathophysiology, metabolic and clinical aberrations, diagnostic features, complications, prevention and recent advances in the nutritional management of - Renal disorder, Cancer, Neurological disorders, Infection & febrile conditions and Respiratory problems.

Unit - IV : Gastro intestinal tract disorders - ulcer, constipation, diarrhoea, dumping syndrome, irritable bowel syndrome, ulcerative colitis, Hitaus Hernia, Regional Enteritis, Diverticulosis, Malabsorption Syndrome. Liver, gallbladder and pancreatic disorders, Stress & trauma. Nutrition and mangement in - Musculo skeletal disorders, Immuno deficiency & AIDS disorders.

Unit - V : Herbs and medicinal plants - medicinal uses Functional foods : Types & medicinal uses Antioxidants - types role & mechanism of action in scavenging free radicals, role in health & disease Phytochemicals - Occurrence, types & role in health & disease Probiotic & prebiotic foods for health benefits.

Handwritten signatures and dates:
15.12.18
15.12.18
15/12/18
15.12.18
15.12.18

References

1. Bakhru. H.K. (2001), Indian Spices & Condiments As Natural Healers, Jaico Publishing, Mumbai.
2. Syed A.A. Sharma S.C. (2000) Herbal Cure For Common & Chronic Diseases, Pushtak Mahal, New Delhi.
3. Gala, R, Gala, D, Gala. S. (1999), NATURE Cure For Common Diseases, Navneet Publications (India) Ltd., Chennai.
4. Manohar Murali. C.H. (2000) Ayurveda For All, Pustrak Mahal, New Delhi Ppl 133-136
5. Nutrition Principals And Applications In Health Promotion By Suitir & Crowley.
6. Food, Nutrition & Dietetics By Krause & Mahan, W.B. Saunders Co., Philadelphia, 1979.
7. Normal & Therapeutic Nutrition By Corinne H Robinson. Merlyn. R. Lawley. Mac Million Publishers & Co.
8. Maurice Shils, James Olson & Noshe (1994), Modern Nutrition In Health & Disease 8th Edition, Vol I & II, Lea & Febiger Co, USA.
9. Human Nutrition And Dietetics By Davidson And Passmore. English Language Book Society, 1985.
10. Garrow, J.S., James W.P.T., And Rajph, A, (2000), Human Nutrition And Dietetics, 10th Edition, Churchill Livingston.

Journals

1. Nutrition Update Series.
2. World Review Of Nutrition And Dietetics.
3. Journal Of The American Dietetic Association
4. American Journal Of Clinical Nutrition
5. Nutrition Review

stu
15.12.18

37
15.12.18

(2) K
15.12.18

8
15.12.18

SP
15.12.18