

KURUKSHETRA UNIVERSITY, KURUKSHETRA
SYLLABUS FOR CLINICAL NUTRITION & DIETETICS (FIRST YEAR)
w.e.f. 2011-12

SEMESTER - I

Sr. No.	Course No.	Paper Title	Exam Duration	Max. Marks		Max. Marks
				External	Internal	
1.	101	Human Nutrition	3 hrs.	40	10	50
2.	102	Human Physiology-I	3 Hrs.	40	10	50
		Lab-I**				

SEMESTER - II

Sr. No.	Course No.	Paper Title	Exam Duration	Max Marks		Max. Marks
				External	Internal	
1.	103	Advanced Human Nutrition	3 hrs.	40	10	50
2.	104	Human Physiology-II	3 Hrs.	40	10	50
3.	105	Lab-I**	3 Hrs.	50**		50**
	106	Lab-II**	3 Hrs.	50**		50**

** Practical examination of Lab-I of Semester-I and Lab-II of Semester –II will be held together at the end of Semester- II and maximum marks will be 50 for each lab.

B.SC. -I
CLINICAL NUTRITION & DIETETICS
SEMESTER-I
HUMAN NUTRITION

Course No 101

Duration of Exam: 3 Hrs.
M.M. 40 + 10 = 50

Instructions for the examiner : The examiner will set nine questions in all, selecting four questions from each unit and one compulsory objective type question.

Instructions for the candidates: The candidate will attempt five questions in all, selecting two questions from each unit and one compulsory question.

Unit - I

- 1 Introduction to Nutrition: Food as a source of nutrient, functions of food, definition of Nutrition, nutrients, adequate and good nutrition. Nutritional status –optimum and malnutrition
- 2 Carbohydrates –Composition, classification, functions RDA, food, sources.
3. Proteins- Composition, classification, functions RDA, food sources and deficiency (in brief)
- 4 Fats & Oils –Composition, classification, functions, RDA, food sources, essential fatty acids & effect of their deficiency

Unit – II

5. Vitamins –Classification, sources, RDA, functions and deficiency (in brief) of the following :
Fat soluble : A,D, E & K
Water Soluble : B₁, B₂ , Niacin, B₆, Folic acid and B₁₂
- 6 Minerals –functions, sources, RDA and deficiency of the following – (in brief) calcium, Iron, iodine, ?Fluorine, Sodium & Potassium).
- 7 Water as nutrients, functions, sources, requirement and effect of deficiency.
- 8 Fiber- types, Functions and Sources.

Books Recommended:

- 1 Modern Nutrition in; Health and Disease – Goodhearth, R. S.
- 2 Recommended dietary allowance for Indian – I.C.M.R., 1980
- 3 Nutrition and Development- Winick 1973, Univ. of Calombia.
- 4 Biology of Nutrition – Eclames 1972, Palaniuma Press
- 5 Foods & Nutrition – Krause 1972, Saunders.
- 6 Proteins and Human Foods 1970, Lowrie, Avi. Pub. Co.
- 7 Nut. & Physical; fitness-BoGert L.J.
- 8 Principles of Nut. – Wilson, L.D. and Fisher. K.H.

- 9 Standardised diets for Hospital – National Nut. Advisory Committee
- 10 Nutrition in Health & Disease – Cooper, L. Barber, L. Mitchell, Hand Rynheraen.
- 11 Nutrition A comprehensive: Beaton and McHanery, Treatise Vol-1, II, & III.
- 12 Human Nut. & Dietetics- Davidson S., Passmore, R., Brook, J.E. and Truswell.
- 13 Foods and Nut.- Rankin, W. Munn. Hildath E.N.
- 14 Iron deficiency – Holiberth, H.C. Harvorth, vannotti, N.Y.
- 15 Trace Elements in Human and Animal Nut. – Underwood, N.Y.

B.SC. -I
CLINICAL NUTRITION & DIETETICS
SEMESTER-I
HUMAN PHYSIOLOGY-I

Course No 102

Duration of Exam: 3 Hrs.
M.M. 40 + 10 = 50

Instructions for the examiner : The examiner will set nine questions in all, selecting four questions from each unit and one compulsory objective type question.

Instructions for the candidates: The candidate will attempt five questions in all, selecting two questions from each unit and one compulsory question.

Unit - I

1. Skelton system – Main bones of the body and their functions.
2. Digestive System - Structure and functions of various parts of alimentary canal and digestive glands - Mouth, buccal cavity, pharynx, oesophagus, stomach, small and large intestine and anus.
Salivary Glands, liver, pancreas, gastric glands, intestinal glands.

Unit – II

3. Circulatory system - Structure and functions of heart, blood composition, blood groups, clotting and its significance and ECG.
4. Respiratory system - Structure and function of respiratory system and tract, nose trachea, larynx, bronchi and lungs
Mechanism of respiration.
5. Skin - Structure and functions of skin.

Books Recommended:

1. Stand, F.L. Modern Physiology the Macmillan Company Latest Ed.
2. Guyton, A.C. Text Book of Medical Physiology W.S. Saunders
3. Davidson, B. and Smith E., Text book o Physiology and Biochemistry, 1972 (8th Ed)
4. Human Physiology _ A.J. Vander

B.SC. -I
CLINICAL NUTRITION & DIETETICS
SEMESTER-II
ADVANCED HUMAN NUTRITION

Course No 103

Duration of Exam: 3 Hrs.
M.M. 40 + 10 = 50

Instructions for the examiner : The examiner will set nine questions in all, selecting four questions from each unit and one compulsory objective type question.

Instructions for the candidates: The candidate will attempt five questions in all, selecting two questions from each unit and one compulsory question.

UNIT - I

1. Carbohydrates - Digestion, absorption and metabolism, (aerobic and anaerobic,) storage and utilization of carbohydrates.
2. Lipids - Digestion, absorption and metabolism, Storage and mobilization of fat stores during exercise, ketone bodies.
3. Proteins- Digestion, absorption and metabolism, Nitrogen balance and protein quality

Unit – II

4. Energy – Units of energy, energy value of food, Gross and physical energy BMR and factor affecting BMR.
5. Water and electrolyte balance – Water balance; Water and electrolyte losses; affect of low and high intake of electrolytes on water balance.

Books Recommended:

- 1 Modern Nutrition in; Health and Disease – Goodhearh, R. S.
- 2 Recommended dietary allowance for Indian – I.C.M.R., 1980
- 3 Nutrition and Development- Winick 1973, Univ. of Calombia.
- 4 Biology of Nutrition – Eclames 1972, Palaniuma Press
- 5 Foods & Nutrition – Krause 1972, Saunders.
- 6 Proteins and Human Foods 1970, Lowrie, Avi. Pub. Co.
- 7 Nut. & Physical; fitness-BoGert L.J.
- 8 Principles of Nut. – Wilson, L.D. and Fisher. K.H.
- 9 Standardised diets for Hospital – National Nut. Advisory Committee
- 10 Nutrition in Health & Disease – Cooper, L. Barher, L. Mitehell, Hand Rynheraen.
- 11 Nutrition A comprehensive: Beaton and McHanery, Treatise Vol-1, II, & III.

- 12 Human Nut. & Dietetics- Davidson S., Passmore, R., Brook, J.E. and Truswell.
13 Foods and Nut.- Rankin, W. Munn. Hildath E.N.
14 Iron deficiency – Holiberth, H.C. Harvorth, vannotti, N.Y.
15 Trace Elements in Human and Animal Nut. – Underwood, N.Y.

B.SC. -I
CLINICAL NUTRITION & DIETETICS
SEMESTER-II
HUMAN PHYSIOLOGY-I I

Course No 104

Duration of Exam: 3 Hrs.
M.M. 40 + 10 = 50

Instructions for the examiner : The examiner will set nine questions in all, selecting four questions from each unit and one compulsory objective type question.

Instructions for the candidates: The candidate will attempt five questions in all, selecting two questions from each unit and one compulsory question.

Unit – I

1. Excretory system –Organs, structure and functions, ureter, urinary bladder, formation of urine, composition of normal urine
- 2 Nervous System – Structure and functions of brain and spinal cord, reflex action.
- 3 Sense organs – (i) Eye- structure and functions, physiology of vision and its defects.
(ii) Ear – structure, functions; mechanism of hearing

Unit – II

- 4 Endocrine system –Hormones-endocrine glands- their structure and functions – pituitary, thyroid, parathyroid, adrenal, hormones of reproduction
- 5 Reproductive system- female reproductive organs- structure and functions- ovary, fallopian tubes, uterus, vagina, external genitiation.
Male reproductive organs – structure and functions of testis, vasdefrens, urethra, penis, prostate glands, menstruation, puberty, menopause, fertilization of ovum with sperm, placenta –its functions.

Books Recommended:

1. Stand, F.L. Modern Physiology the Macmillan Company Latest Ed.
2. Guyton, A.C. Text Book of Medical Physiology W.S. Saunders
3. Davidson, B. and Smith E., Text book o Physiology and Biochemistry, 1972 (8th Ed)
4. Human Physiology _ A.J. Vander

Course No 105

LAB-I

M. Marks: 50 + 50

Duration of Exam: 3 + 3 Hrs

Two sessions

1. Determination of following from foods:
Moisture, ash, Crude Protein, Fiber, fat and Vitamin C
- 2 Preparation of following (at least 2 items each)
 - Salads
 - Soups
 - Deserts
 - Cakes/Cookies
 - Main Course dishes

Course No 106

LAB-II

- 1 Demonstration of dissection of mammals and observation of digestive and reproductive systems (Male & Female)
- 2 Microscopic examination of prepared slides of different types of cells
- 3 Blood – Testing of blood groups, hemoglobin and RBC count
- 4 Observe the anatomy of sheep heart