M.Sc IN CLINICAL NUTRITION AND DIETITICS
I-SEMESTER
EXAMINATION- JUNE 2012
COURSE-I HUMAN PHYSIOLOGY

Time: 3hours
Max Marks: 80

Answer the questions from all parts following their internal choice

Part A

Answer any ten of the following: \(3 \times 10 = 30\)

1. Cell membrane proteins
2. Nephron
3. Thymus
4. Blood pressure and pulse rate
5. Mitochondria
6. Spleen
7. Pharynx and larynx
8. \(PO_2\) and \(CO_2\) of inspired and expired air
9. Bone disorders
10. Taste buds
11. Muscle cells
12. Local hormones
13. Reticuloendothelial system
14. Ureters

Part B

Answer any four of the following \(4 \times 5 = 20\)

1. Explain the stages of erythropoiesis and nutritional factors which influence it.
2. Draw a neat structure of liver and gall bladder and explain their functions briefly.
3. Illustrate the structure of skin and explain the layers of epidermis and their functions.
4. Explain the olfactory components and their functions.
5. List the endocrine glands and briefly explain their functions.
6. What are the components of active immunity? Give their functions

Part C

Answer any three of the following \(3 \times 10 = 30\)

1. Explain respiratory system under the following heads:
   a. Structural details of lungs
   b. Respiratory cycle and exchange of gases

2. Give an account of chemical digestion and absorption of foods.

3. Explain the formation of urine and re-absorption of water and other salts

4. Write notes on -
   a) Nerve cells
   b) Fore brain and the components
   c). Synaptic transmission of nerve impulses

5. Explain:
   a. Structural details of brain and their brief functions
   b. Physiology of transmission of nerve impulses

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III Sem M.Sc in Clinical Nutrition and Dietetics
Examination, December 2013
Course - IX: Medical Nutrition Therapy - I

Time: 3 Hours
Max. Marks: 80

INSTRUCTION: Answer the Questions from All Parts following their internal choices.

PART - A

Answer any TEN questions from the following: (10 x 3 = 30)

1. List the disorders of stomach.
2. Give the nutrition therapy for pyloric stenosis.
3. What is dumping syndrome?
4. What is Gluten restricted diet?
5. What is myocardial infraction?
6. Define albuminurea.
7. List the symptoms of hepatitis.
8. What is maple syrup urine disease?
9. What is genetic hyperlipidemias?
10. What is Macular degeration?
11. Give the objectives of dietary management of Cardiac patients.
12. Give the causes for steatorrhoea.
13. What is the role of lipids in dyslipidemia.

PART - B

Write briefly on any FOUR of the following: (4 x 5 = 20)

1. "Food habits play significant role in the onset of gastro intestinal disorders” Justify.
2. What is dyspepsia? Give reasons for indigestion and dietary advice to over come this.
3. Explain the pathophysiology of irritable bowel syndrome.
4. Explain the nutrient therapy given for CRF.
5. Discuss the dietary advice given to cataract patient.
6. Discuss on long-term treatment of coronary disease.

PART - C

Answer any THREE of the following: (3 x 10 = 30)

1. Elaborate on nutrition therapy for diarrhoea.
2. How is lactose intolerance diagnosed? Explain the nutritional disturbances that develops lactose intolerance.
3. Discuss nephritis under: (a) Symptoms, (b) Dietary management.
4. Explain the etiology and your dietary recommendation for nephrosis.

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PART - A

Answer any TEN questions from the following: (10 x 3 = 30)

1. List the disorders of stomach.
2. Give the nutrition therapy for pyloric stenosis.
3. What is dumping syndrome?
4. What is Gluten restricted diet?
5. What is myocardial infraction?
6. Define albuminurea.
7. List the symptoms of hepatitis.
8. What is maple syrup urine disease?
9. What is genetic hyperlipidemias?
10. What is Macular degeneration?
11. Give the objectives of dietary management of Cardiac patients.
12. Give the causes for steatorrhoea.
13. What is the role of lipids in dyslipidemia.

PART - B

Write briefly on any FOUR of the following: (4 x 5= 20)

1. "Food habits play significant role in the onset of gastro intestinal disorders" Justify.
2. What is dyspepsia? Give reasons for indigestion and dietary advice to over come this.
3. Explain the pathophysiology of irritable bowel syndrome.

4. Explain the nutrient therapy given for CRF.

5. Discuss the dietary advice given to cataract patient.

6. Discuss on long-term treatment of coronary disease.

PART - C

Answer any THREE of the following: (3 x 10 = 30)

1. Elaborate on nutrition therapy for diarrhoea.

2. How is lactose intolerance diagnosed? Explain the nutritional disturbances that develop lactose intolerance.

3. Discuss nephritis under: (a) Symptoms, (b) Dietary management.

4. Explain the etiology and your dietary recommendation for nephrosis.


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III Sem M.Sc in Clinical Nutrition and Dietetics  
Examination, December 2013  
Course - XI: Food and Nutrition Services in Hospital

Time: 3 Hours 
Max. Marks: 80

INSTRUCTION: Answer the Questions from All Parts following their internal choices.

PART - A

Answer any TEN questions from the following:  
(10 x 3 = 30)

1. List the types of records.
2. Write about biomedical waste management.
3. What is quality in medical care?
4. Define 3 'Ms'.
5. What is Popularity index?
6. Define personal management.
7. Define finance and management.
8. Give the objectives of nutrition education.
9. List the theories of nutrition education.
10. Differentiate dieticians and nutrition councilsors.
11. Differentiate boiling and simmering.
12. What are perishable and partially perishable foods.
13. What are commercial and non-commercial FSI.

PART - B

Write briefly on any FOUR of the following:  
(4 x 5= 20)

1. Write note on classifications of food service.
2. Explain the different types of processed foods.
1. Discuss the role of governing body or board in hospital management.
2. Discuss the importance of hospital food service.
3. Elaborate: a) Style of food service.  
   b) Legal aspects of the personnel management.
4. Explain nutrition care in critical and ICU patients.
5. Plan, Execute and evaluate a nutrition education program on Vitamin-A.

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Course I

I Semester M.Sc. in Clinical Nutrition and Dietetics
Examination, May 2014
HUMAN PHYSIOLOGY

Time : 3 Hours
Max. Marks : 80

Instruction: Answer the questions from all Parts following their internal choices.

PART – A

Answer any four of the following: (4x5=20)

1. Write on stages of pregnancy.
2. Write note on:
   a) Thymus
   b) Spleen
3. What are organelles? List the organelles present in the cytoplasm of cell.
4. Write a note on hemoglobin.
5. Explain pharynx and larynx.
6. Discuss the functions of epidermis.

PART – B

Answer any three of the following: (3x10=30)

7. Elaborate on nervous tissue.
8. Discuss the cascade of coagulation.
10. Illustrate the structure of a skin.
11. Explain the structure and functions of liver.

P.T.O.
Part-C

Answer any two of the following:

12. What is endocrine system? List the endocrine glands and explain the major functions of them.

13. Discuss:
   a) Neurotransmitters and
   b) Reflex actions.

14. What are the two types of immunity? Explain the active in innate immunity and their functions.

15. Elaborate on respiratory disorders.
II Semester, M.Sc. CLINICAL NUTRITION AND DIETICS  
Examination January 2014  
PAPER – M.Sc. CND 203: Nutrition Through Life Cycle  
TIME: 3 Hours  
Max. Marks: 80  

Instruction: Answer the questions from all parts following their internal choices.

PART - A

Answer any TEN Questions from the following:  

1. What are the approaches used for determining the requirement for energy, vitamin A and the water-soluble vitamins?  
2. Define the terms Adequate Intake and Tolerable Upper Intake Level.  
3. Describe the term weaning.  
4. What is meant by Failure to Thrive?  
5. What are the endocrine changes that take place during middle adulthood?  
6. What are the factors that influence physiological changes in late adulthood?  
7. What is osteoporosis?  
8. Why is additional protein required during pregnancy.  
9. List the antinutritional factors during pregnancy.  
10. What is the ‘let-down’ process during lactation.  
11. What are the advantages of colostrums feeding.  
12. What is the 24-hour recall method of diet survey?  
13. What are the biochemical tests used for determining thiamine status?  
14. What are biological indices in nutritional assessment?

PART - B

Answer any FOUR Questions from the following:  

1. The value for RDA is higher than that of requirement of a nutrient. Explain why.  
2. Write a note on the steps involved in computing RDA for energy.  
3. Explain why the RDA for Beta-carotene is 8 times higher than the RDA for vitamin A.  
4. Write a note on the requirement and RDA for vitamin C for Indians.  
5. What are the types of supplementary foods suitable for infants 4 to 6 months of age?  
6. Discuss briefly the food habits of adolescents.
PART - C

Answer any THREE Questions from the following:  \(10 \times 3 = 30\)

1. Discuss in detail the factors that are considered while computing RDA for Indians.
2. Discuss the nutrient requirements of infants.
3. Describe the health risks of young adults, and their solutions.
4. Discuss in detail the nutritional problems of women in middle adulthood.
5. Describe the physiological changes that take place in the elderly and explain how these changes influence their nutritional requirements.
II Semester, M.Sc. CLINICAL NUTRITION AND DIETICS
Examination January 2014

PAPER – M.Sc. CND 202 : Basics of Diet Therapy

TIME: 3 Hours

Max. Marks: 80

Instruction: Answer the questions from all parts following their internal choices.

PART - A

Answer any TEN Questions from the following: (10 x 3 = 30)

1. Define dietetics.
2. Secondary health care setup
3. “Nutritionally vulnerable” hospital patients.
4. Dietary goals.
5. Modified diets.
6. Objectives of diet therapy
7. General information related to the nutritional status
8. Role of pharmacist in nutritional support
11. Medical foods.
12. Nutrition screening
13. Ketogenic diet
14. Food intolerance and food allergy.

PART - B

Answer any FOUR Questions from the following: (4 x 5 = 30)

1. Write a note on chemical composition of foods.
2. Discuss tertiary health care.
3. What is balanced diet? Give its importance.
4. Discuss the prevalence rate of hospital malnutrition
5. Explain the fat modified diet.
6. List the aims and objectives of nutritional support team.
PART - C

Answer any THREE Questions from the following:

1. Discuss the history of dietetics.
2. Discuss on the factors affecting food choices.
3. Explain texture and consistency of modified diets.
4. Discuss on rehabilitation and nutrition.
5. Elaborate legal considerations in nutritional support.

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II Semester, M.Sc. CLINICAL NUTRITION AND DIETICS
Examination January 2014

PAPER – M.Sc. CND 204 : Public Health Nutrition

TIME: 3 Hours

Max. Marks : 80

Instruction : Answer the questions from all parts following their internal choices.

PART - A

Answer any TEN Questions from the following:  
(10 x 3 = 30)

1. What is a communicable disease?
2. How does hookworm lead to anaemia?
3. Mention the arthropod borne infections.
5. What are the roles of intentional food additives?
6. ICDS and UNICEF
7. How is personal hygiene achieved?
8. Fortification and supplementation
9. GIS
10. Tetanus and rabies.
11. Myotoxins and aflotoxins
12. Prevalence of under nutrition
13. WHR and BMI
14. How is obesity determined.

PART - B

Answer any FOUR Questions from the following:  
(4 x 5 = 30)

1. What is a food borne disease? How does it occur?
2. What is the role of toxicants in food borne infection?
3. Write short note on leprosy.
4. What are the non specific and specific mechanisms that impart protection to the host?
5. What measures can be taken to protect the susceptible host from contact infections.
6. How is VAD assessed from public health point of view?
PART - C

Answer any THREE Questions from the following: \(10 \times 3 = 30\)

1. **What measures need to be taken to control the microbial food borne illness?**

2. **How are different body parts of a food handler responsible for illness? Why is food handler implicated in the disease outbreak?**

3. **How is regulatory quality control in food safety achieved.**

4. **What is the public health consequence of VAD? How can vitamin A deficiency be prevented?**

5. **Describe the non-intentional chemical hazards in food chain.**

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IV Semester M.Sc. in Clinical Nutrition and Dietetics Examination, 
June 2014
CRITICAL CARE AND SPECIAL FEEDING TECHNIQUES

Time : 3 Hours
Max. Marks : 80

Instruction: Answer all the Parts following their internal choice.

PART – A

Answer any four of the following:

1. List the benefits of parenteral nutrition.

2. What is the purpose of nutritional support?

3. Mention the components of pediatric nutritional assessment.

4. What is domiciliary care? What are its objectives?

5. What are the indications for palliative care in COPD patients?

6. What is the common form of dementia and what are the causes?

PART – B

Answer any three of the following:

7. Discuss the problems involved in self feeding and nutrition intake of Alzheimer’s disease.

8. Explain different administration methods in internal feeding.


10. How do you nutritionally assess hepatic failure patients? Write note on nutritional requirements for them.

11. What are the metabolic consequences seen in critically ill pediatric patients? Discuss the two phases involved in it.

P.T.O.
PART – C

Answer **any two** of the following:  

(2×15=30)

12. Elaborate on the etiology and prevention of any five metabolic complications of parenteral nutrition.

13. Explain:
   a) Decision making processes in the selection of feeding.
   b) Disease specific feeds and conditionally essential nutrient.

14. Elaborate on enteral nutrition as better option than parenteral nutrition.

IV Semester M.Sc. in Clinical Nutrition and Dietetics Examination, June 2014
CRITICAL CARE AND SPECIAL FEEDING TECHNIQUES

Time: 3 Hours
Max. Marks: 80

Instruction: Answer all the Parts following their internal choice.

PART – A

Answer any four of the following: (4x5=20)

1. List the benefits of parenteral nutrition.
2. What is the purpose of nutritional support?
3. Mention the components of pediatric nutritional assessment.
4. What is domiciliary care? What are its objectives?
5. What are the indications for palliative care in COPD patients?
6. What is the common form of dementia and what are the causes?

PART – B

Answer any three of the following: (3x10=30)

7. Discuss the problems involved in self feeding and nutrition intake of Alzheimer's disease.
8. Explain different administration methods in internal feeding.
10. How do you nutritionally assess hepatic failure patients? Write note on nutritional requirements for them.
11. What are the metabolic consequences seen in critically ill pediatric patients? Discuss the two phases involved in it.

P.T.O.
PART – C

Answer any two of the following: (2×15=30)

12. Elaborate on the etiology and prevention of any five metabolic complications of parenteral nutrition.

13. Explain:
   a) Decision making processes in the selection of feeding.
   b) Disease specific feeds and conditionally essential nutrient.

14. Elaborate on enteral nutrition as better option than parenteral nutrition.

IV Semester M.Sc. in Clinical Nutrition and Dietetics Examination, 
June 2014
NUTRITION COUNSELLING

Time: 3 Hours

Max. Marks: 80

Instruction: Answer all Parts following their internal choice.

PART – A

Answer any four of the following: (4×5=20)

1. Define counselling and communication.
2. How important is social and behaviour change for communication?
3. What are the significance of communication?
4. Who is a professional and how are they different?
5. What is team collaboration?
6. Write on process of listening.

PART – B

Answer any three of the following: (3×10=30)

7. Develop a questionnaire to obtain information from hypertension patient.
8. Explain the basic communication skills required for leadership.
9. Discuss on criteria for success with organizational communication.
10. Discuss planning learning experience.
11. Explain professional competence and team collaboration.

P.T.O.
MSC CND 2

PART – C

Answer any two of the following:

12. Elaborate on the communication skills.

13. Discuss:
   a) Importance of NCP
   b) Assessment component of NCP

14. Explain data analysis in counselling.

15. Plan NCP for obese patient.

(2×15=30)
M.Sc. IN CLINICAL NUTRITION AND DIETETICS
I-SEMESTER
EXAMINATION- MAY 2015
COURSE-I HUMAN PHYSIOLOGY

Time: 3 hours
Max Marks: 80

Answer the questions from all parts following their internal choice

Part A
Answer any four of the following: 4x5=20
1. List the female hormones and write note on menstrual cycle
2. Explain the functions of plasma membrane
3. Describe cardiac cycle
4. Explain the functions of kidney
5. Describe the structure of brain
6. Explain bronchitis, laryngitis and rhinitis

Part B
Answer any three of the following: 3x10=30
7. Describe the structure of skin and explain the components of dermis layer
8. Discuss the process of digestion and absorption of carbohydrates in GI tract.
9. Describe the structure of cell with a neat diagram
10. Explain the process of gestation
11. Explain- a) Components of blood, b) Formation of RBC

Part C
Answer any two of the following questions: 2x15=30
12. List the endocrine glands and explain pituitary gland with a neat diagram, highlight its functions
13. Discuss: a) Structure of spinal cord, b) Physiology of immune functions
14. Describe the formation and resorption of bone
15. Elaborate on hormones and enzymes that regulate water and electrolyte balances

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M.Sc IN CLINICAL NUTRITION AND DIETITICS
I-SEMESTER
EXAMINATION- JUNE 2012
COURSE-II PRINCIPLES OF BIOCHEMISTRY

Time: 3hours
Max Marks: 80

Answer the questions from all parts following their internal choice

Part A

Answer any ten of the following: 3X10=30

1. Write a note on blood buffers.
2. What are covalent and ionic bonds?
3. Mention the significances of HMP pathway.
4. Write a note on rancidity of oil.
5. What are compound lipids? Give examples for each.
7. Write a note on competitive inhibition of an enzyme with a suitable example.
8. What is the effect of HNO2 on DNA?
9. Define induced fit hypothesis.
10. List the types and functions of RNA.
11. What are free radicals?
12. Define reverse transcription.
13. List the types of motifs.

Part B

Write briefly on any four of the following: 5X4=20

1. Explain the special properties of water.
2. Explain the fate of pyruvate under anaerobic condition.
3. How are enzymes classified? Explain
4. Discuss on lipoproteins.
5. Describe the structure of a typical human antibody molecule.
6. Explain the concept of Lac operon.
Part C

Answer any three of the following questions: 10X3=30

1. Define polysaccharides. Describe the structure of any three homopolysaccharides.
2. Discuss cooperativity binding.
3. Scheme urea cycle and give its significance.
4. Elaborate on the role of antioxidants in health and disease.
5. Discuss enzyme assay methods.

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M.Sc. IN CLINICAL NUTRITION AND DIETETICS
I-SEMESTER
EXAMINATION- MAY 2015
COURSE-II PRINCIPLES OF BIOCHEMISTRY

Time: 3 hours
Max Marks: 80

Instructions: Answer the questions from all parts following their internal choice.

Part A

Answer any four of the following:

1. Describe the role of blood buffers in biological system
2. Discuss RNA isolated from a biological source
3. Explain the role of free radicals in health and disease
4. Describe the Watson and Crick model of DNA
5. Write the steps of β-oxidation of fatty acids and give the energetic of palmitic acid
6. Define enzyme inhibition. Give examples

Part B

Answer any three of the following:

7. Explain Enzymes under - a) Chemical nature, b) Enzyme activity
8. Write short notes on: a) Practical significance of kinetic constants
   b) Functions of membranes
9. Discuss cerebraside disorders
10. Schemate TCA cycle and add a note on its significance
11. Explain the chemical synthesis of peptides

Part C

Answer any two of the following questions:

12. Define and classify carbohydrates with suitable examples
13. Explain different types of purification of proteins
14. How are lipids classified? Discuss on structured lipids. Add a note on saturated and unsaturated fatty acids
15. Explain water under - a) Biological importance, b. Physical and chemical properties
c. Ionization of water

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M.Sc. IN CLINICAL NUTRITION AND DIETETICS
I-SEMESTER
EXAMINATION- MAY 2015
COURSE-III RESEARCH METHODS AND BIOSTATISTICS

Time: 3 hours
Max Marks: 80

Instructions: Answer the questions from all parts following their internal choice
Part A

Answer any four of the following:
1. Defines different measures of central tendency?
2. What is the difference between Ordinal and Interval data type.
3. Define Sample and standard error.
5. Write a short note on one tailed and two tailed hypothesis tests.
6. State the different types of sampling errors.

Part B

Answer any three of the following:
7. Explain measures of dispersion and its uses in clinical research.
8. State probability sampling methods and compare with non-probability samples with examples
9. Explain Cross-sectional and cohort study design.
10. Write a note on Chi-Square test for homogeneity and independence.
11. What is Confidence interval and Quartile deviation? Explain their use in research.

Part C

Answer any two of the following questions:
12. Write the steps involved in developing scientific project for conducting specific research on evaluating the nutrition formulation for diabetic patients.
13. Number of physiotherapy sessions observed among 10 patients was 10,9,10,13,14,10,8,6,7, and 12. Compute Mean, Median, Mode, Range and Standard deviation.
14. Write a flow diagram for writing scientific article and explain the same in detail.
15. The following are the percentage marks in Mathematics and Statistics of 10 students.

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Find the simple linear regression.

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M.Sc IN CLINICAL NUTRITION AND DIETITICS
I-SEMESTER
EXAMINATION- MAY 2015
COURSE-IV HUMAN NUTRITION

Time: 3hours
Max Marks: 80

Instructions: Answer the questions from all parts following their internal choice

Part A

Answer any four of the following: 4X5=20

1. Write note on body fluid and its compartment.
2. How proteins are used in the regulation of body functions?
3. Write briefly note on antioxidants.
4. List any six general functions of minerals.
5. Discuss the role of dietary fibre in human being
6. Write note on path to improved performance and protein needs.

Part B

Answer any three of the following: 3X10=30

7. Discuss the role of the following phytochemicals:
   a) Lignans, b) Saponins, c) Flavonoids, d) Allicin
8. Explain the causes and consequences of iron and iodine deficiency.
9. In what ways ascorbic acid is related to the functioning of collagen, tryptophan, cholesterol and as antioxidant.
11. Explain the digestion and absorption of fat.

Part C

Answer any two of the following questions: 2X15=30

12. How proteins are useful in the body functions.
13. Explain diagrammatically the Kreb's cycle.
14. Enumerate the functions of carbohydrate
15. Elaborate on the activity of thermogenesis and its contribution to TEE.

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Course V

II Semester M.Sc. (In Clinical Nutrition and Dietetics) Examination,
January 2015
NUTRITIONAL BIOCHEMISTRY

Time : 3 Hours Max. Marks : 80

Instruction: Answer the questions from all Parts following their internal choices.

PART – A

Answer any four of the following. (4×5=20)
1. Discuss the fate of pyruvate under anaerobic condition.
2. Explain Ketosis.
3. Mention the significances of HMP-pathway.
4. Write a note on fatty liver.
5. Explain decarboxylation reaction of an amino acid.

PART – B

Answer any three of the following. (3×10=30)
7. Schemate TCA cycle.
8. Give the energetic of glycolysis and Kreb’s cycle.
10. Give an account of fates of pyruvate.
11. Explain the components of ETC.

PART – C

Answer any two of the following. (2×15=30)
12. Write briefly on inherited disorders of amino acid metabolism.
14. Discuss metabolic disorders of nucleic acid metabolism.
15. Write note on
   a) SCID
   b) Orotic aciduria
   c) Gout.
II Semester M.Sc. in Clinical Nutrition and Dietetics
Examination, January 2015
NUTRITION THROUGH LIFE CYCLE

Time : 3 Hours
Max. Marks : 80

Instruction: Answer the questions from all Parts following their internal choice.

PART - A

Answer any four of the following: (4x5=20)
1. List the various organizations involved in computing dietary recommendations.
2. What is colostrum?
3. List the various eating disorders among adolescents.
4. What are the hormones involved in the process of lactation?
5. Define Body Mass Index.
6. List the various anthropometric measurements.

PART - B

Answer any three of the following: (3x10=30)
7. Discuss on anorexia nervosa.
8. Explain the biochemical tests used for determining riboflavin status.
9. Discuss standards for anthropometric indices.
10. Explain the difference between the physiological requirements of a nutrients and the RDA.
11. Discuss the computation of fat-soluble vitamins.

PART - C

Answer any two of the following: (2x15=30)
12. Discuss the advantages and disadvantages of anthropometry.
13. Explain biological indices.
14. Discuss the physiological modifications and importance of nutrients during old age.
15. Elaborate on the growth and development of infants and the nutrients requirements in this age group.
II Semester M.Sc. in Clinical Nutrition and Dietetics
Examination, January 2015
BASICS OF DIET THERAPY

Time : 3 Hours
Max. Marks : 80

Instruction : Answer the questions from all Parts following their internal choices.

PART – A

Answer any four of the following. (4x5=20)

1. Interpersonal relation in patients care.
2. Malnutrition syndrome.
5. Antioxidants.

PART – B

Answer any three of the following. (3x10=30)

7. Factors to be considered in patient care.
8. Discuss :
   a) Medical ethics        b) Environmental factors in disease causation
9. Discuss dietetic care at health care setup.
10. Discuss hospital diet.
11. Explain any four types of diets.

PART – C

Answer any two of the following. (2x15=30)

12. Elaborate rehabilitation and nutrition.
13. Discuss on rehabilitation services and nutrition in hospital services.
14. Explain :
   a) Effect of illness on food acceptance and utilization.
   b) Factors to be considered during diet therapy in chronic patients.
15. Describe the Rationale for modification done for nutrients, texture and consistency.
Course VIII

II Semester M.Sc. in Clinical Nutrition and Dietetics Examination,
January 2015
PUBLIC HEALTH AND DEMOGRAPHY

Time : 3 Hours
Max. Marks : 80

Instruction: Answer the questions from all Parts following their internal choices.

PART – A

Answer any four of the following: \((4 \times 5 = 20)\)

1. How is under nutrition defined?
2. Differentiate between Kwashiororkor, marasmus and marasmic Kwashiororkor.
3. What are the common symptoms of respiratory tract infection?
4. Why is hand washing by food handlers considered the most important factor in food safety?
5. What is an arthropod?
6. List the signs and symptoms of VAD in usual order of appearance.

PART – B

Answer any three of the following: \((3 \times 10 = 30)\)

7. Explain (a) communicable infections (b) common food toxins.
8. Discuss the causes of over nutrition.
9. How are different body parts of a food handler responsible for illness?
10. Discuss food safety regulations and quality assurance systems.
11. Explain approaches in VAD and IDD intervention.

PART – C

Answer any two of the following: \((2 \times 15 = 30)\)

12. Describe the public health consequences of Malnutrition.
13. Explain the various approaches for the prevention and control of Vitamin A deficiency.
14. Elaborate on food additives.
15. Discuss infections through skin and mucous membranes acquired from non-human sources.
M.Sc. IN CLINICAL NUTRITION AND DIETETICS
III-SEMESTER
EXAMINATION- MAY 2015
COURSE-IX MEDICAL NUTRITION THERAPY-I

Time: 3 hours
Max Marks: 80

Instructions: Answer the questions from all parts following their internal choice

Part A
Answer any four of the following: 4X5=20
1. Define esophageal reflux disease. Give causative factors
2. Explain Crohn’s disease for its pathophysiology, diagnosis and nutrition therapy
3. Discuss on the nutrition therapy for nephrotic syndrome
4. Explain pancreatitis in detail
5. Write on clinical changes and nutrition therapy for PKU
6. List the risk factors of atherosclerosis

Part B
Answer any three of the following: 3X10=30
7. Elaborate diarrhea for – pathophysiology, etiology, types and nutrition therapy
8. Explain the short-term treatment of coronary disease
9. Discuss the nutrition therapy for nephritic syndrome
10. Explain-Homocystinuria, MSUD and galactosemia
11. Elaborate on steatorrhea

Part C
Answer any two of the following questions: 2X15=30
12. Discuss: a. Role of specific nutrients in the control of hypertension
    b. Cerebral infarction
13. Elucidate on age-related muscular degeneration
14. Explain the causes of constipation. What dietary changes will you suggest for the patient with constipation
15. Elaborate on alcoholic liver disease

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M.Sc. IN CLINICAL NUTRITION AND DIETETICS

III-SEMESTER

EXAMINATION- MAY 2015

COURSE-X MEDICAL NUTRITION THERAPY-II

Time: 3 hours

Max Marks: 80

Instructions: Answer the questions from all parts following their internal choice

Part A

Answer any **four** of the following:

1. What are the symptoms of metabolic disorders?
2. Explain nephropathy and parathesia.
3. Define grave’s disease and crushing disease.
4. Explain the clinical stages of fever.
5. What are the causes for spastic cerebral palsy?
6. Define food allergy. List the types of food allergies.

Part B

Answer any **three** of the following:

7. Elaborate on etiology and classification of obesity.
8. Explain symptoms and causes of hypothyroidism.
10. Elaborate on GMFCS.
11. Discuss nutritional factors in tooth development and maintenance.

Part C

Answer any **two** of the following questions:

12. Elaborate on complications and recommended nutrition therapy of diabetes mellitus.
14. Explain the symptoms, causes and dietary management in epilepsy.

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M.Sc. IN CLINICAL NUTRITION AND DIETETICS

III-SEMESTER

EXAMINATION- MAY 2015

COURSE-XI FOOD AND NUTRITION SERVICES

Time: 3 hours
Max Marks: 80

Instructions: Answer the questions from all parts following their internal choice

Part A

Answer any four of the following: 4X5=20

1. Discuss on the record maintenance.
2. Define medical care. Write on different types of medical care setups.
3. How important is ISO standards for medical care set ups. Write note on ISO14000.
4. Explain any two food service institutions.
5. Define the characteristics of food. Give the principles of cooking large quantity.
6. Write on grievance management in food service institutions.

Part B

Answer any three of the following: 3X10=30

7. Discuss the challenges in nutrition education programme.
8. Explain the approaches that help institutions to improve quality services.
9. Discuss the managerial activities for effective hospital functioning.
10. Discuss application of principles of management in dietetic department
11. Explain the quality control methods in food production

Part C

Answer any two of the following questions: 2X15=30

12. Elaborate on “Books of accounts”
13. Discuss the roles and responsibilities of dietician
14. Explain food purchasing in food service institutions and food delivery systems
   c. Indenting

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M.Sc IN CLINICAL NUTRITION AND DIETITICS
I-SEMESTER
EXAMINATION- JUNE 2012
COURSE-III RESEARCH METHODS AND BIOSTATISTICS

Time: 3 hours
Max Marks: 80

Answer the questions from all parts following their internal choice

Part A

Answer any ten of the following: 3X10=30

1. Define Sample space
2. Define mutually independent events
3. Explain measures of dispersion and is use in clinical research
4. What is Confidence interval?
5. Explain the content validity in the context of developing questionnaire.
6. Explain the Internal consistency reliability and its use in developing questionnaire
7. State the different types of sampling errors
8. Explain generalizability and its importance in clinical research
9. List the methods of data collection
10. Write a note on minimum detectable difference in the context of sample size estimation
11. Explain the usefulness of randomization in clinical research.
12. Define Regression and its use in clinical nutrition research.
13. Write short note on graphs.
14. Write on confounding.

Part B

Write briefly on any four of the following: 5X4=20

1. Explain one tailed and two-tailed research hypothesis and give two examples in each
2. What is sampling? Give the principles of sampling.
3. State the different levels of scale development and explain
4. Explain Population and sample with examples.
5. Explain computerized documentation in detail.
6. Explain hypothesis test on difference between two means
Part C

Answer any three of the following questions: 10X3=30

1. How do you plan research project in clinical nutrition to formulate specific diet for HIV patients?
2. Explain the criteria of good research and define research problem.
3. Explain correlation and regression with merits and demerits
4. Explain Systematic sampling method and give two merits and demerits.
5. Elaborate on genome analysis.

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Course XII

IV Semester M.Sc. in Clinical Nutrition and Dietetics
Examination, January 2015
CRITICAL CARE AND SPECIAL FEEDING TECHNIQUES

Time : 3 Hours  Max. Marks : 80

Instruction : Answer the questions from all Parts following their internal choices.

PART – A

Answer any four of the following : (4×5=20)

1. What is the difference between nasogastic and nasoenteral feeding? When are they advocated?

2. Explain about the types of proteins used in the enteral formula.

3. What is refeeding syndrome and how can it be prevented in critically ill patients?

4. How does endogenous antioxidant activity help during critical illness?

5. Write the benefits of Parenteral Nutrition.

6. What are the recommendations for Supplementation of micronutrients?

PART – B

Answer any three of the following : (3×10=30)

7. Discuss on nutrition care in acid-base disorders.

8. Explain the characteristics of a catheter.

9. Discuss on: (a) Nutrition care support in pre-operative malnourished patients.
   
   (b) Immune enhancing formulas.


11. Enteral nutrition is better option than parenteral nutrition – Discuss.

P.T.O.
PART – C

Answer any two of the following:  

(2×15=30)

12. Elaborate on the advantages and disadvantages of total nutrient admixtures.

13. What is Hyperglycemia? Write the causes, symptoms, treatment and prevention of it in parenteral nutrition.

14. Give the etiology and prevention of any five metabolic complications of parenteral nutrition.

15. What are the nutrients focused on primarily in immuno nutrition for the critically ill?
Course XIII

IV Semester M.Sc. in Clinical Nutrition and Dietetics
Examination, January 2015
NUTRITIONAL COUNSELLING

Time : 3 Hours
Max. Marks : 80

Instruction: Answer the questions from all Parts following their internal choices.

PART – A

Answer any four of the following: (4×5=20)

1. Define the goals and objectives of NCP.
2. List the different types of approaches to counselling.
3. How do you end counselling sessions?
4. Define verbal and non-verbal communication.
5. Write note on communication and conflict management.
6. What is counselling therapies?

PART – B

Answer any three of the following: (3×10=30)

7. Prepare an outline for NCP.
8. Discuss the mastery in the subject and language command in communication.
9. Discuss the importance of body language in communication.
10. Elaborate on the types of listening.
11. Explain the assessment component of nutrition counselling program.

P.T.O.
Course XIII

PART – C

Answer any two of the following:

(2\times15=30)

12. Discuss:
   a) Organisational communication.
   b) Professional communication.

13. Explain different models for learning in nutrition counselling.


15. Explain the evaluation of learning.
I Semester M.Sc. in Clinical Nutrition and Dietetics
Examination, September 2016
HUMAN PHYSIOLOGY

Time: 3 Hours
Max. Marks: 60

Instruction: Answer the questions from all Parts following their internal choice.

PART - A

Answer any four of the following: (4×5=20)

1. Write on the functions of plasma membrane.
2. Bring out the difference between a cell and a tissue.
3. Write a note on role of hormones on calcium level.
4. Explain the cascade of coagulation.
5. Discuss the functions of thymus and spleen.
6. Write a note on protein needs to improve sports performance.

PART - B

Answer any three of the following: (3×10=30)

7. Explain connective tissues with microscopic image.
8. Explain any four types of bone classification based on shape.
9. Discuss the phases of cardiac cycle.
10. Write note on:
    a) hemopoiesis
    b) lymphopoiesis.
11. Explain the mechanism of respiration.

P.T.O.
COURSE 1

PART - C

Answer any two of the following questions: 

12. Illustrate the structure of a cell and explain its parts.

13. Explain the systematic circulation.

14. Enumerate the functions of stomach and large intestine.

15. Elaborate on:
   a) Olfactory lobe
   b) Photoreceptors
   c) Medulla oblongata.
I Semester M.Sc. in Clinical Nutrition and Dietetics
Examination, September 2016
RESEARCH METHODS AND BIOSTATISTICS

Time : 3 Hours
Max. Marks : 80

Instruction: Answer the questions from all Parts following their internal choice.

PART – A

Answer any four of the following: (4×5 = 20)

1. Explain Qualitative vs Quantitative and Discrete vs Continuous variables.
2. State probability sampling methods and explain.
3. Define Type-I and Type-II errors.
4. Explain in brief on Histogram and Q-Q plot.
5. Write a short note on ANOVA.
6. What is sampling errors?

PART – B

Answer any three of the following: (3×10 = 30)

7. Write a note on Chi-Square test for Goodness of fit and independence.
8. Write a note on Student’s t-test.
9. Range of movement of 10 frozen shoulder patients were
   38, 42, 45, 36, 40, 44, 40, 45, 34, 36. Compute Mean, Median and Mode.
10. Discuss about Stratified Random Sampling and Cluster Random Sampling with example.
11. Explain different types of correlation and measures of coefficient of correlation.

P.T.O.
PART - C

Answer any two of the following questions: \((2 \times 15 = 30)\)

12. Write a flow diagram for writing scientific article and explain the same in detail.

13. Write the steps involved in developing scientific project for conducting specific research on evaluating the nutrition formulation for diabetic patients.

14. Calculate the production moment coefficient of correlation between the following marks (out of 10) in Statistics and Mathematics of 5 students.

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COURSE IV

I Semester M.Sc. in Clinical Nutrition and Dietetics
Examination, September 2016
HUMAN NUTRITION

Time : 3 Hours
Max. Marks : 80

Instruction : Answer the questions from all Parts following their Internal choice.

PART – A

Answer any four of the following : (4x5=20)

1. Write note on lead poisoning.
2. What are the characteristics of rickets ?
3. Write briefly on fluid imbalance.
4. List any six general functions of water soluble vitamins.
5. Discuss the role of sodium, chloride and potassium in maintenance of osmotic pressure.
6. Write note on nitrogen balance.

PART – B

Answer any three of the following : (3x10=30)

7. Discuss :
   a) Body water
   b) MRI
   c) Douglas bag
   d) Chemical score.

8. Explain in detail the use of anthropometric methods in measuring body fat mass and muscle mass.

9. Enumerate the role of sulfur in the body and how it is measured.
COURSE IV

10. What are the advantages of carbohydrate loading for sports personnel?
11. Discuss the role of free radical scavengers and enzymes in human body.

PART - C

Answer any two of the following questions:

12. Explain the functions of water in human body.
13. Explain the absorption, storage, transport and functions of Vitamin A.
14. Enumerate the functions of carbohydrate.
15. Elaborate on nutritional importance of protein.

(2×15=30)
COURSE II

I Semester M.Sc. in Clinical Nutrition and Dietetics Examination.
September 2016
PRINCIPLES OF BIOCHEMISTRY

Time : 3 Hours

Max. Marks : 80

Instruction: Answer the questions from all parts following their internal choice.

PART – A

Answer any four of the following:

1. Explain the classification of carbohydrates with suitable examples.
2. Discuss ATP dependent and independent mechanism of protein degradation.
3. Give an account of enzyme specificity.
4. What is melting point of DNA? Explain the factors affecting Tm.
5. Explain transamination reaction of an amino acid with suitable example.
6. Describe the semi conservative replication of DNA.

(4x5=20)

PART – B

Answer any three of the following:

7. Schemate glycolysis pathway.
8. Explain the biological role of lipids.
9. Describe the structure of Watson and Crick model of DNA.
10. Explain the structure, classification and functions of lipoproteins.
11. Explain the concept of Lac operon.

(3x10=30)

PART – C

Answer any two of the following questions.

12. Explain glycogen metabolism and add a note on its regulation.
14. Explain the role of free radicals and antioxidants in health and diseases.
15. Describe the steps involved in prokaryotic RNA synthesis. Add a note on reverse transcription.

(2x15=30)
PART A

Answer any FOUR of the following

1. Niemann-Pick disease.
2. What is cellular respiration?
3. Write a note on galactosemia.
4. Explain ATP-dependent mechanism of protein degradation.
5. Explain the synthesis of AMP and GMP from IMP.
6. What is nitrogen balance?

PART B

Answer any TWO of the following.

7. Schematic glycolysis
8. Schematic electron coupling in ETC and explain.
9. Differentiate substrate level phosphorylation and oxidative phosphorylation with an example for each.
10. Explain Lysch Nyhan syndrome.
11. Give an account of salvage pathways

PART C

Answer any THREE of the following

15. Discuss: a. Triacylglycerol synthesis, b. Regulation of cholesterol biosynthesis.
M.Sc. IN CLINICAL NUTRITION AND DIETETICS
II- SEMESTER EXAMINATION- JANUARY 2016

COURSE -VI BASICS OF DIET THERAPY

Time: 3 hours

Max. Marks: 80

Answer the questions from all parts following their internal choices

PART A

Answer any FOUR of the following

1. Food habits
2. “Nutritionally well” hospital patients
3. General diet
4. Elimination diet
5. Foods to be included and excluded in moderately low protein diet.
6. Nutritional support team

PART B

Answer any THREE of the following

7. Write note on food health relationship
8. Discuss dietetic care at health care setup
9. Explain the characteristics of a normal diet
10. Discuss on : (a) Aims and objectives of IDA  
    (b) Biochemical indicators
11. Explain hospital malnutrition

PART C

Answer any TWO of the following

12. Elaborate on evidence based diet practice.
13. Discuss the principles followed for meeting nutrient requirement for a healthy individual.
14. Explain the importance of nutritional care in hospitalized patients.
15. Explain sodium modified diet.

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PART A
Answer any **FOUR** of the following:  \(4 \times 5 = 20\)
1. Define the terms requirement and RDA of a nutrient.
2. List the factors to be considered while computing RDA.
3. What are the units of energy?
4. Define Basal Metabolic Rate
5. Write the formula for calculating Niacin Equivalents.
6. What are the sources of vitamin D other than dietary sources?

PART B
Answer any **THREE** of the following:  \(3 \times 10 = 30\)
7. Elaborate on the various approaches to determine nutrient requirements?
8. Explain how RDA are fixed so as to meet the requirement of 98% of the individuals in a population.
9. How do you calculate Physical Activity Ratio?
10. Discuss the relationship between vitamin A and \(\beta\)-carotene?
11. Explain the pattern of weight gain in a normal infant?

PART C
Answer any **TWO** of the following:  \(2 \times 15 = 30\)
12. Explain how the RDA for energy and protein are computed for Indian adults.
13. Discuss the importance of human milk with reference to the nutritional composition and anti-infective factors.
14. Discuss the nutritional problems in young adults.
15. Explain the increased nutrient requirement during pregnancy.
M.Sc. IN CLINICAL NUTRITION AND DIETETICS
II- SEMESTER EXAMINATION- JANUARY 2016

COURSE -VIII PUBLIC HEALTH AND DEMOGRAPHY

Time: 3 hours

Max. Marks: 80

Answer the questions from all parts following their internal choices

PART A

Answer any FOUR of the following

4x5=20

1. What are the causes of TB? Write note on DOTS programme
2. How is personal hygiene achieved? List the important factors to be considered by food handlers.
3. Define BMI, WHR & IBW. Give the normal range or values for the same.
4. Mention the different stages of epidemiological transitions.
5. Write note on natural toxicants.
6. What are the important components of HACCP?

PART B

Answer any THREE of the following.

3x10=30

7. What are contagious diseases? Write about the global prevalence of AIDS.
8. Explain the concept of food chain.
9. Differentiate between kwashiorkor, Marasmus and Marasmic kwashiorkar. List the symptoms for all.
10. Explain the salient features of ongoing national nutrition programmes.
11. Enumerate the seven steps of HACCP.

PART C

Answer any TWO of the following

2x15= 30

12. Discuss on the epidemiological studies with examples
13. Explain the different types of data used to study demography
14. Enumerate the consequence of under nutrition on public health. How can it be prevented?
15. Discuss non-intention chemical hazards.
CHAPTER 5

SUMMARY OF FINDINGS

SUGGESTIONS AND CONCLUSION
III Semester M.Sc. in Clinical Nutrition and Dietetics
Examination, September 2016
FOOD AND NUTRITION SERVICES IN HOSPITALS

Time: 3 Hours
Max. Marks: 80

Instruction: Answer the questions from all Parts following their internal choice.

PART – A

Answer any four of the following: (4×5=20)

1. Define nutrition counseling.
2. Define Dietitian. Write on the characteristics of a Dietitian.
3. How are health clubs different from nutrition clinics?
4. List the goals of hospital services.
5. Define inpatient and outpatient services.
6. Write on roles of ICU dietitian.

PART – B

Answer any three of the following: (3×10=30)

7. Discuss:
   a) Importance of feeding care of the patients,
   b) Speciality nutrition clinics.
8. Explain the nutritional assessment in critically ill patients.
9. Discuss the advantages and disadvantages in quality food production.
10. Discuss food purchasing activity in FSI.
11. Explain the financial management of a health care unit.

P.T.O.
PART - C

Answer any two of the following questions:

(2x15=30)

12. Elaborate on:
   a) The principles of personal management,
   b) Different methods of cooking.

13. Discuss the role and responsibilities of dietician.

14. Explain the factors influencing the quality medical care services and the improvement process.

15. Explain:
   a) Cash transaction records
   b) Biomedical waste management
   c) ISO standards.
M.Sc. IN CLINICAL NUTRITION AND DIETETICS
IV- SEMESTER EXAMINATION- JANUARY 2016

COURSE −XII CRITICAL CARE AND SPECIAL FEEDING TECHNIQUES

Time: 3 hours
Answer the questions from all parts following their internal choices
Max. Marks: 80

PART A
Answer any FOUR of the following

1. Differentiate polymeric and oligomeric formulae
2. What are the causative factors and symptoms of spastic cerebral palsy?
3. Explain total nutrient admixtures.
4. Mention the foods that minimize inflammation and oxidative stress in cancer.
5. Expand SIRS. How is it diagnosed?
6. Explain nutrition support and enteral nutrition.

PART B
Answer any THREE of the following.

7. Explain the feed care in severely traumatized patient,
8. What is cachexia? Explain about dietary management in anorexia.
9. Explain the different types of parenteral infusions.
10. Discuss the nutrient needs of patients who have undergone transplantation.
11. Discuss the nutritional risk factors used to identify the patient’s risk of malnutrition.

PART C
Answer any TWO of the following

12. Explain advantages and disadvantages of peripheral access.
13. Elaborate on Protein requirements and formulas recommended for patients with parenteral nutrition.
14. Discuss the nutrition care for acute renal failure and respiratory failure.
15. Discuss on post operative management for malnourished surgical patients.

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any other document in the custody, the contents of which can be proved by the
legal proceedings to which he is not a party, be compiled by the Register or
The Register or any officer of the Geographical Indications Registry shall make any
70. Register or other officers not competent to produce Register, etc.
the order of the matter of things having been done or not done.
be prima facie evidence of the charge having been done, and of the contents
matter or thing having been authorised by this Act or the Rules or the Register as to any entry;
production of the original
evidence in all cases and in all proceedings without further proof or
concerns an appearance and takes part in the proceedings. 69 Evidence of entries
made in a party to the proceedings shall not be liable for any cause unless he
Evidence of entries
shall be made a party to the proceedings.
whereof in any proceeding under Chapter VI, every authorised
1. In any proceeding under Chapter VI or under section 70, every authorised
68. Authorised user to be impledale in certain proceedings.
that the geographical indication relating to the geographical indication referred to in
if, when he becomes aware of the existence and nature of the
the geographical indication referred to in the geographical indication relating to the
complaint for the infringement of the geographical indication referred to in the

Registration and Protection of Geographical Indications from the Perspective of Community Members.
M.Sc. IN CLINICAL NUTRITION AND DIETETICS
IV- SEMESTER EXAMINATION- JANUARY 2016

COURSE -XIII NUTRITIONAL COUNSELING

Time: 3hours
Max. Marks: 80

Answer the questions from all parts following their internal choices

PART A

Answer any FOUR of the following

1. Explain the components of communication.
2. What is communication space?
3. Differentiate between general and professional communication
4. Explain the need for reinstallation of an intervention
5. What is Culmination of the assessment process?
6. What are the methods for assessing client needs?

4x5=20

PART B

Answer any THREE of the following.

7. Discuss the factors to be considered in oral communication.
8. Elaborate on criteria for success with organizational communication.
9. Discuss communication needs in healthcare.
10. Describe the factors influencing effective message delivery.
11. Explain the treatment strategies in obesity.

3x10=30

PART C

Answer any TWO of the following

13. Explain the Evaluation of the counselor progress and of client progress
14. Elaborate on writing goals and objectives.
15. Discuss on assessing Food intake data, Environmental data and behavior data

2x15=30

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M.Sc IN CLINICAL NUTRITION AND DIETITICS
I-SEMESTER
EXAMINATION- JUNE 2012
COURSE-II: HUMAN NUTRITION

Time: 3 hours
Max Marks: 80

Answer the questions from all parts following their internal choice
Part A

Answer any ten of the following: 3x10=30

1. Body density
2. TOBEC
3. Differentiate between free energy and potential energy
4. NEAT
5. Compound lipids
6. Ketogenesis
7. Electrolytes in physiological system
8. Acidosis
9. Functions of water
10. Hyper vitaminosis A
11. Deficiency of vitamin K
12. Symptoms of Beri Beri
13. Food sources of B12
14. Osteomalacia

PART B

Answer any four of the following 4x5=20

1. Explain the thermic effect of food. What is activity hermogenesis?
2. Write the concept of two and three compartment models is measuring body composition.
3. Write a note on nitrogen balance?
4. Explain the role of liver in fat metabolism

5. Define glycemic index. Give the food sources of carbohydrate and their GI

6. What is the role of kidney in maintaining electrolyte balance

PART C

Answer any three of the following

1. Discuss calcium under the following heads: a. physiological functions of calcium
   b. factors influencing absorption and excretion.

2. Write notes on: Folic acid and vitamin B12

3. Discuss the body compositional changes during life cycle

4. Discuss the terms trace elements and micro nutrients. Indicate the physiological
   changes during deficiency states of Mg and copper.

5. What are phytochemicals? Discuss their physiological importance and food
   sources.
PART - A

Answer any four of the following: [4 × 5 = 20]

Q1) Formation of red blood cells

Q2) Regulation of heart beat and blood pressure

Q3) Functions of lymphatic system

Q4) Stomach

Q5) Composition of urine

Q6) Fertilization
PART - B

Answer any three of the following: [3 \times 10 = 30]

Q7) Explain with the neat diagram structure of eye.

Q8) Elaborate on endocrine disorders.

Q9) Discuss on innate immunity.

Q10) Discuss the parts of heart.

Q11) Explain stages of pregnancy.

PART - C

Answer any two of the following: [2 \times 15 = 30]

Q12) Explain
   a) blood group
   b) melanocytes

Q13) Elaborate forebrain

Q14) Discuss
   a) functions of plasma membrane.
   b) role of hormones in homeostasis of calcium levels.

Q15) Write on
   a) salivary glands.
   b) nephrons.
I Semester M.Sc. Degree Examination, July/August 2019
(SLM Scheme)
CLINICAL NUTRITION AND DIETETICS
Paper - II : Principles of Biochemistry

Time : 3 Hours
Max. Marks : 80

Instruction : Answer the questions from all parts following their internal choice.

PART - A

Answer any four of the following: \[4 \times 5 = 20\]

Q1) Explain the irreversible steps in glycolysis.

Q2) How amino acids are deaminated? Explain.

Q3) Write a note on oxidoreductases and transferases.

Q4) Explain the types and functions of lipoproteins.

Q5) Give an account of termination of transcription in prokaryotes.

Q6) Explain central dogma of molecular biology and its modification.
PART - B

Answer any three of the following: [3 x 10 = 30]

Q7) Explain the competitive, non competitive and uncompetitive inhibition with LB plot.

Q8) What are eicosanoids? Discuss the biological importance of prostaglandins.

Q9) Differentiate between prokaryotic and eukaryotic cell.

Q10) Write the structure and IUPAC names of linoleic acid, palmitic acid, oleic acid and arachidonic acid.

Q11) Explain the initiation and elongation steps involved in a prokaryotic translation.

PART - C

Answer any two of the following questions: [2 x 15 = 30]

Q12) Discuss the chemical composition and functions of biological membrane.

Q13) Explain the reactions of TCA cycle and add a note on its regulation.

Q14) Describe the role of free radicals and antioxidants in health and diseases.

Q15) Explain the mechanism of DNA replication with a neat labelled diagram.

★ ★ ★

O-311-2-
I Semester M.Sc. Degree Examination, July/August 2019
(SLM Scheme)
CLINICAL NUTRITION AND DIETETICS
Paper - III : Research Methods and Bio-Statistics

Time : 3 Hours
Instructions : 1) Answer the questions from all parts following their internal choice.
               2) Answer to the point and according to the awarded marks.
               3) Scientific calculators are allowed.

PART - A

Answer any four of the following: [4 × 5 = 20]

Q1) What is sample size? What are the factors that affect the sample size? [5]

Q2) What is secondary data? Discuss methods of collecting secondary data along with its relative merits and demerits. [5]

Q3) Name any four measures of variation? What is the need for measures of variation when we have measures of central tendency? [1+4]

Q4) State a property of AM. Compute mean and SD of the data 16, 22, 19, 21, 17, 19, 26, 23. [5]

Q5) What is a pmf give an example? The average number of decayed teeth observed in patients is 2.3, using suitable pmf compute the probability that a random selected patient will have more than 2 decayed teeth.(e^{-2.3} = 0.1003). [2+3]

Q6) What are statistic and parameter? Obtain an estimate standard error of sample proportion \( p = 0.6 \) with \( n = 100 \). [2+3]

O-312 -1- P.T.O.
PART - B

Answer any three of the following: [3 × 10 = 30]

Q7) Discuss the role of statistics in the field of social sciences. [10]


Q9) What is a Q-Q plot how is it constructed? How is Q-Q plot used to check normality of the data? Compute quartiles for the data 8, 2, 19, 12, 3, 6, 13, 9. [2+3+5]

Q10) What are t tests? What are its applications? Carry out a suitable t test for the case: “A sample of 20 rats were diagnosed for weight of their hearts and the average weight is observed to be 2.25 grams with an SD of 0.56gms. If the weight is more than 2.5 grams then a drug has to be tested on them. Is there any evidence to administer the drug to the rats. (Use α = 0.01, some critical values $t_{(0.01,20)} = 2.528$, $t_{(0.01,19)} = 2.539$) [1+3+6]

Q11) a) What is Chi square distribution, how is it derived?
   b) Discuss the chi-square test for goodness of fit?
   c) Test whether the attributes ‘Gender’ and ‘Result’ are independent from the following data

<table>
<thead>
<tr>
<th>Gender</th>
<th>Male</th>
<th>Female</th>
</tr>
</thead>
<tbody>
<tr>
<td>Result of exam</td>
<td>Pass</td>
<td>46</td>
</tr>
<tr>
<td>Fail</td>
<td>29</td>
<td>12</td>
</tr>
</tbody>
</table>

Some critical values are $\chi^2_{(0.01,1)} = 6.6349$, $\chi^2_{(0.01,3)} = 11.3449$. [2+3+5]
PART - C

Answer any two of the following questions: [2 ×15 = 30]

Q12) a) State the properties of regression lines and regression coefficients?
   b) Carry out regression analysis and obtain regression equation of X on Y from the following data:

   | X (cost of treatment in Rs. lakhs) | 12.6 | 12.8 | 13 | 12 | 12.2 |
   | Y (age in years)                   | 22   | 26   | 31 | 12 | 7    |

   [6+9]

Q13) a) What is correlation? Mention the types of correlation? How is scatter plot used in measuring correlation?
   b) Compute Karl Pearson's coefficient of correlation and interpret it, for the following bivariate data:

   | X  | 9.5 | 8.5 | 8.0 | 7.0 | 6.0 | 7.5 |
   | Y  | 8.5 | 9.5 | 7.0 | 6.5 | 7.0 | 6.5 |

   [7+8]

Q14) a) What is one way ANOVA? What are the assumptions?
   b) Carry out ANOVA for the following data:

   Four different training methods for applied for a total of 12 students and their performance scores are as follows. Test whether the average score across different training methods are same.

<table>
<thead>
<tr>
<th>Method 1</th>
<th>Method 2</th>
<th>Method 3</th>
<th>Method 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>15</td>
<td>22</td>
<td>18</td>
<td>22</td>
</tr>
<tr>
<td>18</td>
<td>27</td>
<td>24</td>
<td>21</td>
</tr>
<tr>
<td>19</td>
<td>18</td>
<td>19</td>
<td>16</td>
</tr>
</tbody>
</table>

   Some critical values: at 1% loss, \( F_{(3,8)} = 7.59, F_{(3,9)} = 6.99 \)

   [5+10]

Q15) a) Write a note on questionnaire and its designing?
   b) Explain different types of research with a suitable example.

   [7+8]
I Semester M.Sc. Degree Examination, July/August 2019  
(SLM Scheme)  
CLINICAL NUTRITION AND DIETETICS  
Paper - IV : Human Nutrition  

Time : 3 Hours  
Max. Marks : 80  

Instruction :  Answer the questions from all parts following their internal choice.  

PART - A  

Answer any four of the following:  

[4 x 5 = 20]  

Q1) What are the regulations and disorders of water balance?  

Q2) Write the factors influencing Basal metabolism.  

Q3) Write the role of sodium in Human nutrition.  

Q4) What are Essential and Non-essential fatty acids? Give example.  

Q5) Write the dietary sources and deficiency disorders of Vitamin K.  

Q6) Explain the deficiency and toxicity of Iodine.  

O-313  

-1-  

P.T.O.
PART - B

Answer any three of the following: [3 × 10 = 30]

Q7) Elaborate on different methods of evaluating protein quality.

Q8) Discuss on intake, deficiency and toxicity of Copper.

Q9) Explain the utilization of Vitamin D in Human Body.

Q10) Discuss the deficiency and toxicity of Pantothenic acid and biotin.

Q11) Elaborate on Nutraceuticals.

PART - C

Answer any two of the following: [2 × 15 = 30]

Q12) Explain the physiological functions of Carbohydrates and factors influencing carbohydrate metabolism.

Q13) Describe Lipids under the following heads:
   a) Physiological functions
   b) Sources
   c) Requirement

Q14) Elaborate on water soluble and fat soluble Vitamins. Add a note on their toxicity.

Q15) Describe the physiological functions of Zinc and Calcium. Add a note on their sources.
I Semester M.Sc. in Clinical Nutrition and Dietetics Examination
July 2013
Course – I HUMAN PHYSIOLOGY

Time: 3 Hours

Max. Marks: 100

Instruction: Answer the questions from all Parts following their internal choices.

PART – A

Answer any ten of the following:

1. Functions of plasma membrane.
2. Centrioles and cell vesicles.
3. Compact bones.
4. Erythrocytes.
5. Blood pressure and pulse rate.
6. Functions of respiratory system.
7. Sweat glands and sebaceous glands.
8. Functions of liver.
9. Lingual papillae.
11. Functions of T-cells.
14. Falloplian insemination.
PART - B

Write briefly on any four of the following. (5x4=20)

1. Describe the transport methods which occur in a semi-permeable cell membrane.
2. Explain the functions of epithelial tissues.
3. Discuss the features and shapes of bone.
4. Illustrate structural details of hemoglobin.
5. Explain cardiac cycle.
6. Draw a neat diagram of nose and explain the structure.

PART - C

Answer any three of the following. (10x3=30)

1. Elaborate on physiological activities in bone tissue.
2. Explain: a) Lymphopoiesis b) Systemic circulation
3. Write note on: a) Formation of hydrochloric acid b) Ovarian cycle
4. Discuss the role of hormones and other enzymes in the regulation of water and electrolytes.
5. Explain the structure of ear and its functions.
I Semester M.Sc. in Clinical Nutrition and Dietetics Examination,
July 2013
Course – II : PRINCIPLES OF BIOCHEMISTRY

Time : 3 Hours

Max. Marks : 30

Note : Answer the questions from all parts following their internal choices.

PART – A

Answer any ten of the following : (3x10=30)

1. What are buffers?
2. What are epimers and anomers? Give an example for each.
3. Write a note on cori cycle.
4. Write a note on Zwitter ion.
5. Differentiate transamination and deamination of amino acids.
6. What are fatty acids? Give examples.
7. What is the effect of temperature on enzyme catalyzed reaction?
8. What is Chargaff’s rule?
9. Write a note on motifs.
10. Write on the point and frame shift mutations.
11. Write Michaelis-Menton equation.
12. Give the significance of $V_{\text{max}}$ and $K_{\text{M}}$.
13. Write a note on active site of an enzyme.
14. Write on the effect of UV radiation on DNA.

P.T.O.
PART - B

Write briefly on any four of the following: \( (5 \times 4 = 20) \)

1. Explain the classification of amino acids.
2. Differentiate between prokaryotic and eukaryotic cells.
3. What are ketone bodies? How are they synthesized and utilized?
4. Explain glycolysis and add a note on its regulation.
5. Give the clinical significances of free radicals in diseases.
6. Describe the secondary structure of tRNA.

PART - C

Answer any three of the following questions: \( (10 \times 3 = 30) \)

1. Sketch a glycolysis.
2. Discuss on specificity of enzymes.
3. Explain the mechanism of replication.
4. Discuss the levels of protein structure.
5. Explain the structure and functions of DNA.
Instruction: Answer the questions from all Parts following their internal choices.

PART – A

Answer any ten of the following: (3×10=30)

1. State the difference between qualitative and quantitative variables.

2. What is null hypothesis with example.

3. Explain multi-stage sampling method for conducting survey to assess the malnutrition in a state.

4. Write short note on standard error and its use in hypothesis testing.

5. Explain the content validity in the context of developing questionnaire.

6. Explain the Inter-rater reliability and its use in developing questionnaire.

7. State the different types of sampling errors.

8. Explain role of random number generator in sampling.

9. Write a note on Voluntary and Convenience sampling methods.

10. What is the difference between interval scale data and ratio scale data?

11. State the role of multiplication in probability theory.

12. Define statistical hypothesis testing in clinical research.

13. State the power of study.

PART – B

Write briefly on any four of the following: (5×4=20)

1. Write a short note on one tailed and two tailed hypothesis tests.
2. Explain mean, median and mode for measuring central tendency.
3. Explain the effect of size and power of the study.
4. State probability sampling methods and explain.
5. Explain in brief the Histogram and Box plot.
6. A researcher uses a regression equation to predict home heating bills (dollars cost), based on home size (square feet). The correlation between predicted bills and home size is 0.70. What is the correct interpretation of this finding?

PART – C

Answer any three of the following: (10×3=30)

1. Suppose the Acme Drug Company develops a new drug, designed to prevent cold. The company states that the drug is equally effective for men and women. To test this claim, they chose a simple random sample of 100 women and 200 men from a population of 1,00,000 volunteers. At the end of the study, 38% women and 51% men caught cold. Based on these findings, can we reject the company's claim that the drug is equally effective for men and women? Use a 0.05 level of significance.
2. Explain the usefulness of randomization and blinding in clinical research.
3. Explain correlation and regression highlighting their merits and demerits.
4. Write a note on Chi-Square test for homogeneity.
5. State and explain the hypothesis on differences between two proportions.
I Semester M.Sc. in Clinical Nutrition and Dietetics Examination, July 2013
Course – IV : HUMAN NUTRITION

Time : 3 Hours
Max. Marks : 80

Instruction : Answer the questions from all Parts following their internal choices.

PART – A

Answer any ten of the following : (3×10=30)

1. Plethysmograph
2. Fat free mass
3. Kcals and Kj
4. Differentiate between soluble and insoluble fiber
5. Digestive enzymes that hydrolyse carbohydrates
6. Where is lactic acid formed?
7. ATP
8. Essential amino acids
9. Chemical classification of proteins
10. NDP cal% 
11. Fatty acids
12. Nutritional importance of zinc
13. Deficiency of riboflavin
14. Functions of selenium.
PART -- B

Write briefly on any four of the following: (5x4=20)

1. What is NEAT? How important is it in computing energy requirements?
2. Write briefly the application of MUAC in assessing body composition.
3. Explain the hexose monophosphate shunt pathway.
5. Describe the nutritional importance of Vitamin A.
6. Write the sources and functions of iodine.

PART -- C

Answer any three of the following: (10x3=30)

1. Discuss the physiological functions of iron and its deficiency.
2. What is density measurement? Discuss the methods of measurement.
3. What is BMR? Explain the factors affecting BMR.
4. Elaborate fats on the functions, the mode of its transport and catabolism.
5. Discuss chromium and fluoride.
PART A

Answer any TEN of the following

1. Give the oxidative decarboxylation steps of TCA cycle.
2. Discuss carnitine shuttle.
3. How HMP-pathway helps in erythrocytes?
4. Mention the regulatory steps of TCA cycle.
5. Explain oxidative phosphorylation with an example.
6. What is gluconeogenesis.
7. What is nitrogen turnover?
8. Mention the significances of urea cycle.
9. What is glycogenesis? How it is regulated?
10. Write a note on fatty liver.
12. What are ketone bodies and ketosis?

PART B

Write briefly on any FOUR of the following.

1. Explain ETC and indicate the sites of energy conservation.
2. Discuss the energetic of beta- oxidation of fatty acids.
3. How is tyrosine degraded?
4. Outline the degradation of guanine.
5. How is triglycerides synthesized?
PART C

Answer any THREE of the following

1. Schematic the steps of glycolysis.
2. How is ammonia detoxified in our body? Outline the reactions involved.
3. Explain the Regulation of cholesterol biosynthesis.
4. Give an account of Gout.
5. Write a note on biosynthesis of proteins.
M.Sc IN CLINICAL NUTRITION AND DIETETICS
II- SEMESTER EXAMINATION- APRIL 2013
COURSE –VI BASICS OF DIET THERAPY

Time: 3 hours
Max. Marks: 80

Answer the questions from all parts following their internal choices

PART A

Answer any TEN of the following

1. Dietary pattern based on diet type
2. Quaternary care setup
3. Food pyramid
4. Paleolithic diet
5. Potassium restricted diet
6. Goals of the nutritional support team
7. Phytochemical
8. Recall method
9. Macrobiotic diet
10. Soft moderately high fibre diet
11. Skin fold measurements
12. Biological indicators
13. Socioeconomic factors as cause for sickness
14. Anxiety and depression management

3 x 10 = 30

PART B

Write briefly on any FOUR of the following.

5 x 4 = 20

1. Discuss primary health care.
2. Discuss on nutritional requirements of hospital patients.
3. Explain the salient features of the dietary guide.
4. Briefly write the causes for hospital malnutrition
5. Discuss effect of illness on food acceptance and utilization.
6. Write note on nutrition and medical ethics.
PART C

Answer any THREE of the following 10 x 3 = 30

1. Discuss the importance of hospital dietaries.
2. Explain -- (a) Comprehensive care services
   (b) Guidelines for withdraws or withhold of nutritional support care
3. Discuss on modification in nutrients.
4. Explain body measurements.
5. Discuss the interpersonal relational relationship with the patient
M.Sc. IN CLINICAL NUTRITION AND DIETETICS
II-SEMESTER EXAMINATION – APRIL 2013
COURSE- VII NUTRITION THROUGH LIFE CYCLE

Time: 3 hours

Max Marks: 80

Answer the questions from all parts following their internal choice

PART A

Answer any ten of the following:

1. What is the PDCAAS value considered while computing the RDA for proteins for Indians?
2. What are the sources of energy in Indian diets?
3. What are visible and invisible fats? Give examples.
4. How is the RDA for calcium computed? Give the RDA for calcium for Indian man and woman.
5. What is the physiological requirement and RDA for iron for an Indian adult man?
6. List the parameters used in developing DRIs.
7. List the nutrition related health concerns during infancy.
8. What are the situations that call for special nutrient needs in adolescents?
9. List the common health problems in the middle aged adult.
10. What is the energy requirement during lactation?
11. What is the ideal age for weaning infants?
12. List the various methods of diet survey.
13. What are the biochemical tests used for determining vitamin A status?
14. Name the indices used in nutritional assessment.

PART B

Write briefly on any four of the following:

1. What are the conditions where the RDA for nutrients will be higher than normal?
2. Write a note on the application of RDA.
3. What are the different types of fatty acids? Give examples.
4. What are the criteria used for computing the RDA for iron?
5. Write a note on the desirable qualities of weaning foods.
6. What are the factors that affect the nutritional status of women in India?

PART C

Answer any three of the following:

1. What are the various agencies that are involved in making nutrient recommendations? Elaborate the role of ICMR.
2. Discuss the factors that influence the food habits of pre-school children.
3. Describe the physiological changes that take place during middle adulthood.
4. Describe the physiology of lactation.
5. What are the different types of anthropometric measurement? Explain in detail the measurement procedure for body weight and height.
M.Sc IN CLINICAL NUTRITION AND DIETETICS
II-SEMESTER EXAMINATION- APRIL 2013
COURSE-VIII PUBLIC HEALTH AND DEMOGRAPHY

Time: 3 hours
Answer the questions from all parts following their internal choices
Max. Marks: 80

PART A

Answer any TEN of the following

1. List down the bacterial food borne disease
2. Mention the infections acquired from non-human contact.
3. How do arthropods participate in spreading infections?
4. Write about insecticides and public health.
5. Dengue Viruses
6. What is DPT vaccine?
7. Explain aflatoxins and algal toxins
8. How is under nutrition defined?
9. Infective agents and host factors.
10. Chelating agents.
11. Objectives of indirect intervention.
12. How is personal hygiene achieved?
13. Why is hand washing by food handlers considered the most important factor in food safety?
14. List the symptoms of IDD.

2 x10=30

PART B

Write briefly on any FOUR of the following.

5 x4=20

1. How do infections occur?
2. How does diarrheal disease lead to malnutrition?
3. How do microorganisms gain entry to the respiratory tract?
4. What are the non specific and specific mechanisms that impart protection to the host?
5. What measures can be taken to protect the susceptible host from contact infections?
6. Enumerate the forms of micronutrient deficiency disorder.
PART C

Answer any **THREE** of the following 10 x3 = 30

1. Explain the concept of food chain. How can you classify environmental hazards in food chain? What are the factors that modify the hazards along the food chain?

2. What are the important components of HACCP? Enumerate the seven steps of HACCP. What are the key aspects of hygiene control systems?

3. List down the major public health consequences of undernutrition. How can one prevent undernutrition?

4. What are the causes of overnutrition? What is the prevalence of obesity in India? What are the public health implications of obesity? How can obesity be controlled?

5. Why is it important to study the transitions? Mention the different stages of epidemiological transitions.

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