AUGUST 2007

[KR 1011] **Sub. Code : 4702**

B.Sc. (Nursing) DEGREE EXAMINATION.

New Regulation for the candidates admitted from 2006–07 onwards

First Year

Paper II — NUTRITION AND BIOCHEMISTRY

Time : Three hours Maximum : 75 marks

Descriptive : Two hours and forty minutes Descriptive : 55 marks

Objective : Twenty minutes Objective : 20 marks

Answer ALL questions.

SECTION A

(NUTRITION)

I. Essay :

1. Define BMR and explain the factors affecting BMR in detail. (15)

II. Short notes : (3 × 5 = 15)

(a) Goitre

(b) Pellegra

(c) Classification of amino acids.

SECTION B

(BIOCHEMISTRY)

I. Essay Question :

1. Classify lipids. Write in detail about the functions of phospholipids. (15)

II. Short notes : (2 × 5 = 10)

(a) Glucose Tolerance Test

(b) Vitamin C.

———————

FEBRUARY 2008

[KS 1011] **Sub. Code : 4702**

B.Sc. (Nursing) DEGREE EXAMINATION.

(New Regulation for the candidates admitted from 2006–07 onwards)

First Year

Paper II — NUTRITION AND BIOCHEMISTRY

Q.P. Code : 664702

Time : Three hours Maximum : 75 marks

Descriptive : Two hours and forty minutes Descriptive : 55 marks

Objective : Twenty minutes Objective : 20 marks

Answer ALL questions.

Answer Section A and Section B Separately.

SECTION A

(NUTRITION)

I. Essay :

Write the RDA for a pregnant woman and plan a day's menu for a pregnant woman who is suffering from anaemia. (15)

II. Short notes : (3 × 5 = 15)

(a) Scurvy.

(b) Anthropometric measurement.

(c) Principles of meal planning.

SECTION B

(BIOCHEMISTRY)

I. Essay :

What is the normal fasting blood glucose level? Explain how the blood glucose level is regulated. (15)

II. Short notes : (2 × 5 = 10)

(a) Essential amino acid.

(b) Enzymes of clinical importance.

August-2008

[KT 1011] **Sub. Code : 4702**

B.Sc. (Nursing) DEGREE EXAMINATION.

(New Regulation for the candidates admitted from 2006–07 onwards)

First Year

Paper II — NUTRITION AND BIOCHEMISTRY

Q. P. Code : 664702

Time : Three hours Maximum : 75 marks

Answer ALL questions.

Answer Section A and Section B separately.

SECTION A

(NUTRITION)

I. Essay : (1 × 15 = 15)

(1) Explain the principles and methods of cooking and serving

II. Write short notes on : (3 × 5 = 15)

(1) Iron.

(2) Food groups.

(3) Assessment of nutritional status.

III. Short answer questions : (5 × 2 = 10)

(1) List out the basic five food group plan.

(2) List out two functions of carbohydrates.

(3) Enlist two properties of fat.

(4) List two functions of proteins.

(5) Write the classification of proteins.

SECTION B

(BIOCHEMISTRY)

I. Essay : (1 × 15 = 15)

(1) Describe the process of glycolysis. Explain how many ATP molecules are formed in anaerobic and aerobic glycolysis.

II. Write short notes on : (2 × 5 = 10)

(1) Describe the deficiency manifestation of thiamine.

(2) Phenylketonuria.

III. Short answer questions : (5 × 2 = 10)

(1) Name two reducing disaccharides.

(2) Name the two conditions in which blood sugar level is raised.

(3) Name the clearance tests used to assess the renal function.

(4) Name the antiegg white injury factor and which vitamin is inhibited from absorption.

(5) Classify the enzymes.

February 2009

[KU 1011] **Sub. Code: 4702**

B.Sc (Nursing) DEGREE EXAMINATION
(New Regulations for the candidates admitted from 2006-07 onwards)
First Year
Paper II – NUTRITION AND BIOCHEMISTRY
Q.P. Code : ***664702***

Time : Three hours **Maximum : 75 marks**

Answer ALL questions.
Answer Section A and Section B SEPARATELY.

SECTION – A
(NUTRITION)

I. Essay: **(1 x 15=15)**

1. How will you plan and conduct a nutrition education programme in a village with reference to vitamin A deficiency?

II. Write Short Notes on : **(3 x 5=15)**

1. Basic 5 food groups.
2. Functions of calcium and phosphorus.
3. Classification of lipids.

III. Short Answer Questions: **(5 x 2=10)**

1. Name 2 sources of carbohydrates.
2. Name two signs and two symptoms of PEM.
3. Mention two sources of proteins.
4. Define BMR.
5. Write two signs and two symptoms of rickets.

SECTION – B
(BIOCHEMISTRY)

I. Essay: **(1 x 15=15)**

1. Write in detail about the synthesis and break down of haem and the disorders associated with bilirubin metabolism.

II. Write Short Notes on : **(2 x 5=10)**

1. Ketone bodies.
2. Vitamin C

III. Short Answer Questions: **(5 x 2=10)**

1. Biuret test.
2. Vandenberg test.
3. Name the Lipotropic factors.
4. Creatine clearance test.
5. Name four lipoproteins.

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August 2009

[KV 1011] **Sub. Code: 4702**

B.Sc (Nursing) DEGREE EXAMINATION
(New Regulations for the candidates admitted from 2006-07 onwards)
First Year
Paper II – NUTRITION AND BIOCHEMISTRY
Q.P. Code : ***664702***

Time : Three hours **Maximum : 75 marks**

Answer ALL questions.
Answer Section A and Section B SEPARATELY.

SECTION – A
(NUTRITION)

I. Essay: **(1 x 15=15)**

1. Briefly explain about water soluble vitamins.

II. Write Short Notes on : **(3 x 5=15)**

1. Protein calorie malnutrition.
2. Vitamin "A" deficiency.
3. Dietary fibre.

III. Short Answer Questions: **(5 x 2=10)**

1. Two types of supplementary foods.
2. List out the two types of cooking method.
3. Write two functions of calcium.
4. List out the types of rancidity.
5. List out the essential fatty acids.

SECTION – B
(BIOCHEMISTRY)

I. Essay: **(1 x 15=15)**

1. Describe Urea cycle. What is the normal blood urea level?

II. Write Short Notes on : **(2 x 5=10)**

1. Metabolic Acidosis.
2. Metabolic role and deficiency manifestation of ascorbic acid.

III. Short Answer Questions: **(5 x 2=10)**

1. What is enzyme inhibition? Classify:
2. Mention the functions of lysosomes.
3. Give four examples for detoxification by conjugation.
4. Define clearance. How is it calculated?
5. What are Homopolysaccharides? Give Example.

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February 2010

[KW 1011] **Sub. Code: 4702**

B.Sc (Nursing) DEGREE EXAMINATION
(New Regulations for the candidates admitted from 2006-07 onwards)
First Year
Paper II – NUTRITION AND BIOCHEMISTRY
Q.P. Code : *664702*

Time : Three hours **Maximum : 75 marks**

Answer ALL questions.
Answer Section A and Section B SEPARATELY.

SECTION – A
(NUTRITION)

I. Essay: **(1 x 15=15)**

1. What is preservation? Explain methods of preservation.

II. Write Short Notes on : **(3 x 5=15)**

1. Essential aminoacids.
2. Role of fiber.
3. Anthropometry.

III. Short Answer Questions: **(5 x 2=10)**

1. Nutritional classification of food.
2. Two sources of vitamin C.
3. What is balanced diet?
4. Write any two functions of fat.
5. What is osteomalacia and osteoporosis?

SECTION – B
(BIOCHEMISTRY)

I. Essay: **(1 x 15=15)**

1. What is gluconeogenesis? How is glucose formed from alanine?

II. Write Short Notes on : **(2 x 5=10)**

1. Chylomicrons.
2. Transamination.

III. Short Answer Questions: **(5 x 2=10)**

1. Name the primary and secondary bile acids.
2. What is meth hemoglobin? What is its significance?
3. What are the different bases found in DNA? How are they paired?
4. What is the deficiency manifestation of Vitamin C?
5. What is the normal total serum bilirubin level? Mention the name of the test for it?

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February 2011

[KY 1011] **Sub. Code: 4702**

B.Sc (Nursing) DEGREE EXAMINATION

(New Regulations for the candidates admitted from 2006-07 onwards)
First Year

Paper II – NUTRITION AND BIOCHEMISTRY
Q.P. Code : 664702

Time : Three hours **Maximum : 75 marks**

Answer ALL questions.
Answer Section A and Section B SEPARATELY.

SECTION A
(NUTRITION)

I. Essay: **(1X15=15)**

1. Discuss the methods of cooking in detail.

II. Write Short Notes on : **(3X 5 =15)**

1. Dietary fibre.
2. Scurvy.
3. Bomb calorie meter.

III. Short Answer Questions: **(5X 2 =10)**

1. Define Malnutrition.
2. Write two properties of lipids.
3. Define nitrogen Equilibrium.
4. Define Health.
5. List two deficiency diseases of Vitamin – A.

SECTION B
(BIOCHEMISTRY)

I. Essay: **(1X15=15)**

1. Describe in detail steps, regulation, energetics and Amphibolic nature of Tricarboxylic acid cycle.

II. Write Short Notes on : **(2X 5 =10)**

1. Essential Amino Acids.
2. Gout.

III. Short Answer Questions: **(5X 2 =10)**

1. Clinically important Enzymes.
2. Beri-beri.
3. Mitochondria.
4. Renal function test.
5. Hypercholesterolaemia.

******

August 2011

[KZ 1011] **Sub. Code: 4702**

B.Sc (Nursing) DEGREE EXAMINATION

(New Regulations for the candidates admitted from 2006-07 onwards)
First Year

Paper II – NUTRITION AND BIOCHEMISTRY
Q.P. Code : 664702

Time : Three hours **Maximum : 100 marks**

Answer ALL questions.
Answer Section A and Section B SEPARATELY.

SECTION A
(NUTRITION)

I. Essay: **(1X20=20)**

1. Define BMR. How will you determine the BMR? List the factors affecting the BMR of a person.

II. Write Short Notes on : **(4X 5 =20)**

1. Food groups.
2. Nutritive valve of Proteins.
3. Importance of nutrition in nursing.
4. Regulation of blood glucose.

III. Short Answer Questions: **(5X 2 =10)**

1. Two types of weaning foods.
2. Two national organizations associated with nutrition.
3. Sources of Iron.
4. List out the essential amino acids.
5. List dry heat methods of cooking foods.

SECTION B
(BIOCHEMISTRY)

I. Essay: **(1X20=20)**

1. Write down the steps involved in Urea cycle and how it is regulated? What is the normal level of urea in an adult?

II. Write Short Notes on : **(4X 5 =20)**

1. Metabolic acidosis.
2. Role of Vitamin A in vision.
3. Renal function test.
4. Factors influencing enzyme action.

III. Short Answer Questions: **(5X 2 =10)**

1. Name two essential fatty acids.
2. Name two clinically significant transaminase measured in the laboratory.
3. Name two special products from tyrosine and their function.
4. What are the coenzymes of pyridoxine? Mention a reaction where it is used?
5. What is the end product of purine catabolism? What is its normal level?

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February 2012

[LA 1011] **Sub. Code: 4702**

B.Sc (Nursing) DEGREE EXAMINATION

(New Regulations for the candidates admitted from 2006-07 onwards)
First Year

Paper II – NUTRITION AND BIOCHEMISTRY
Q.P. Code : 664702

Time : Three hours **Maximum : 75 marks**

Answer ALL questions.
Answer Section A and Section B SEPARATELY.

SECTION A
(NUTRITION)

I. Elaborate on: **(1X15=15)**

1. Explain the digestion and absorption of carbohydrates. List the functions and characteristics of carbohydrates.

II. Write notes on : **(3X 5 =15)**

1. Anthropometric measurements.
2. Factors affecting BMR.
3. Ascorbic acid.

III. Short Answer: **(5X 2 =10)**

1. Define balanced diet.
2. Define Digestibility co-efficient.
3. Write two functions of lipids.
4. Classification of amino acids.
5. Write the classification of carbohydrates.

SECTION B
(BIOCHEMISTRY)

I. Elaborate on: **(1X15=15)**

1. Define Gluconeogenesis. Describe in detail about the pathway of Gluconeogenesis.

II. Write notes on : **(2X 5 =10)**

1. Urea cycle.
2. Metabolic acidosis.

III. Short Answer: **(5X 2 =10)**

1. Name four clinically important enzymes.
2. Write the reference range for serum electrolytes.
3. Laboratory findings in a case of obstructive jaundice.
4. Essential fatty acid.
5. Metabolic alkalosis.

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[LB 1011] **AUGUST 2012** **Sub. Code: 4702**

FIRST YEAR B.Sc – NURSING EXAM

Paper II – NUTRITION AND BIO CHEMISTRY

Q.P. Code : 664702

Time : Three hours **Maximum : 100 marks**

(180 Min) **Answer ALL questions in the same order.**

Answer Section A and Section B Separately

SECTION A
(NUTRITION)

I. Elaborate on:	**Pages (Max.)**	**Time (Max.)**	**Marks (Max.)**
1. Define preservation. Explain canning. Write domestic methods of preservation.	19	33	20
II. Short Answer on:			
1. Calcium deficiency.	3	8	5
2. Biochemical assessment.	3	8	5
3. Menu Planning.	3	8	5
4. Functions of protein.	3	8	5
III. Write Notes on:			
1. What is nutritional anaemia?	1	5	2
2. Write types of fibre.	1	5	2
3. List out some Essential amino acids.	1	5	2
4. Sources of potassium.	1	5	2
5. What is active transport?	1	5	2

SECTION B
(BIOCHEMISTRY)

IV. Essay:			
1. Describe the process of glycolysis. Explain How many ATP molecules are formed in anaerobic and aerobic glycolysis	19	33	20
V. Short Answers on:			
1. Essential Fatty Acids.	3	8	5
2. Plasma proteins.	3	8	5
3. GTT.	3	8	5
4. Enzymes related to cardiac diseases	3	8	5
VI. Write Notes on:			
1. Phagocytosis.	1	5	2
2. Lysosomes.	1	5	2
3. Hypercolesterolemia.	1	5	2
4. Anti oxidant vitamins.	1	5	2
5. Oxidative Phosphorylation.	1	5	2

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[LC 1011] **FEBRUARY 2013** **Sub. Code: 4702**

B.Sc (Nursing) DEGREE EXAMINATION

(New Regulations for the candidates admitted from 2006-07 onwards)
First Year

Paper II – NUTRITION AND BIOCHEMISTRY
Q.P. Code : 664702

Time : Three hours **Maximum : 100 marks**

Answer Section A and Section B SEPARATELY.

SECTION A
(NUTRITION)

I. Essay: **(1x20=20)**

1. Define nutritional assessment. Write methods of nutritional assessment

II. Write Short Notes on : **(4x5=20)**

1. Iron deficiency
2. Role of Vitamin C
3. Classification of carbohydrate
4. Plan a menu for pregnant women.

III. Short Answer Questions: **(5x2=10)**

1. Source of iodine
2. What is adulteration
3. Write types of lipoprotein
4. What is osteomalacia
5. Write any two foods to manage constipation.

SECTION B
(BIOCHEMISTRY)

I. Essay: **(1x20=20)**

1. Describe urea cycle and mention the formation of ammonia and its toxicity?

II. Write Short Notes on : **(4x5=20)**

1. Lipoprotein
2. Glycogen storage disease
3. Biochemical functions of Vit C
4. Enzyme inhibition.

III. Short Answer Questions: **(5x2=10)**

1. Sucrose is non reducing sugar why?
2. Alkaptonuria
3. Structure and functions of mitochondria
4. Essential amino acid
5. Name the purine and pyrimidine bases.

******

[LD 1011] **AUGUST 2013** **Sub. Code: 4702**

B.Sc (Nursing) DEGREE EXAMINATION

(New Regulations for the candidates admitted from 2006-07 onwards)

First Year

Paper II – NUTRITION AND BIOCHEMISTRY

Q.P. Code : 664702

Time : Three hours **Maximum : 100 marks**

Answer Section A and Section B SEPARATELY.

SECTION A
(NUTRITION)

I. Essay: **(1x20=20)**

1. Explain the methods of cooking in detail.

II. Write Short Notes on: **(4x5=20)**

1. Canning
2. Plan a day's menu for a patient who is obese.
3. List down the foods included and excluded by a diabetic patient.
4. Nutritional problems in India.

III. Short Answer Questions: **(5x2=10)**

1. Define dehydration
2. What is pellagra?
3. List down the sources of ascorbic acid
4. Define nutrition
5. Classification of proteins.

SECTION B
(BIOCHEMISTRY)

I. Essay: **(1x20=20)**

1. Describe the β-oxidation of fatty acids. Mention the Energetics and its deficiency?

II. Write Short Notes on : **(4x5=20)**

1. Phospholipids
2. Gout disease
3. Glycogen storage diseases
4. Phenylketonuria.

III. Short Answer Questions: **(5x2=10)**

1. Beri-beri
2. Glutathione
3. Significance of HMP shunt
4. Name the ketone bodies
5. Fluorosis.

******

[LE 1011] **FEBRUARY 2014** **Sub. Code: 4702**

B.Sc (Nursing) DEGREE EXAMINATION
(New Regulations for the candidates admitted from 2006-07 onwards)
First Year
Paper II – NUTRITION AND BIOCHEMISTRY
Q.P. Code : 664702

Time : Three hours **Maximum : 75 marks**

Answer Section A and Section B SEPARATELY.

SECTION A
(NUTRITION)

I. Elaborate on: **(1x15=15)**

1. Discuss about Protein Energy Malnutrition in detail.

II. Write Notes on : **(3x5=15)**

1. Functions of fats.
2. Vitamin – A deficiency
3. Bomb calorimeter

III. Short Answer Questions: **(5x2=10)**

1. Define balanced diet
2. Give two functions of carbohydrates
3. What is water intoxication?
4. Define positive nitrogen balance
5. Give four rich sources of calcium.

SECTION B
(BIOCHEMISTRY)

I. Elaborate on: **(1x15=15)**

1. What is Diabetes mellitus? Explain the hormonal regulation of glucose.

II. Write Notes on: **(2x5=10)**

1. t-RNA structure
2. Factors affecting enzyme action.

III. Short Answer Questions: **(5x2=10)**

1. Name the types of Immunoglobulins
2. Mention any two functions of Proteins
3. Mitochondria
4. Normal values of Blood urea and serum creatinine
5. Rickets

******

[LF 1011] **AUGUST 2014** **Sub. Code: 4702**

B.Sc (Nursing) DEGREE EXAMINATION
(New Regulations for the candidates admitted from 2006-07 onwards)
FIRST YEAR
PAPER II – NUTRITION AND BIOCHEMISTRY

Q.P. Code : 664702

Time : Three hours **Maximum : 75 marks**

Answer Section A and Section B Separately

SECTION A
(NUTRITION)

I. Elaborate on: **(1x15=15)**

1. Discuss any three National Nutrition Programmes.

II. Write notes on : **(3x5=15)**

1. Principles of menu planning
2. Goitre
3. Factors affecting food and nutrition intake.

III. Short Answers on: **(5x2=10)**

1. What is rickets?
2. Define health
3. List out four foods avoided by a diabetic patient
4. What are essential amino acid?
5. Define Basal Metabolic Rate

SECTION B
(BIOCHEMISTRY)

I. Elaborate on: **(1x15=15)**

1. Define Glycolysis. Describe in detail about the pathway and significance of Glycolysis.

II. Write notes on: **(2x5=10)**

1. Hypervitaminosis
2. Define and classify the enzymes.

III. Short Answers on: **(5x2=10)**

1. Osmosis
2. Name the water soluble and fat soluble vitamins.
3. Flurosis
4. Essential Amino Acids
5. Lysosomes

******

[LG 1011] **FEBRUARY 2015** **Sub. Code: 4702**

B.Sc (Nursing) DEGREE EXAMINATION
(New Regulations for the candidates admitted from 2006-07 onwards)
FIRST YEAR
PAPER II – NUTRITION AND BIOCHEMISTRY

Q.P. Code : 664702

Time : Three hours **Maximum : 75 marks**

Answer Section A and Section B Separately

SECTION A
(NUTRITION)

I. Elaborate on: **(1 x 15 = 15)**

1. Write about Nutrition Education in detail.

II. Write notes on : **(3 x 5 = 15)**

1. Plan a day's menu for a Pregnant mother
2. Iodine deficiency disorder(IDD)
3. Basic Five Food groups

III. Short answers on: **(5 x 2 = 10)**

1. Objectives of Applied Nutrition Programmes
2. Functions of protein
3. Dental fluorosis
4. Define Balanced diet
5. List out four sources of Vit-E

SECTION B
(BIOCHEMISTRY)

I. Elaborate on: **(1 x 15 = 15)**

1. Write the sources, RDA, Biochemical functions of Vitamin D and the clinical manifestation of its deficiency.

II. Write notes on: **(2 x 5 = 10)**

1. Regulation of Blood glucose
2. Enzymes of clinical importance

III. Short answers on: **(5 x 2 = 10)**

1. Cytoskeleton
2. Essential fatty acids
3. Difference between DNA and RNA(any two)
4. Write any two functions of calcium
5. Ribosomes

******

[LH 1011] **AUGUST 2015** **Sub. Code: 4702**

B.Sc. (Nursing) DEGREE EXAMINATION

(New Regulations for the candidates admitted from 2006-07 onwards)

FIRST YEAR

PAPER II – NUTRITION AND BIOCHEMISTRY

Q.P. Code: 664702

Time : Three Hours **Maximum : 75 marks**

Answer ALL questions

Answer Section A and Section B Separately

SECTION – A
(NUTRITION)

I. Elaborate on: **(1 x 15 = 15)**

1. Define Basal metabolism. Explain factors affecting basal metabolic rate and write the determination of basal metabolism.

II. Write notes on: **(4 x 5 = 20)**

1. Clinical examination.
2. Vitamin B2.
3. Classification of protein.
4. Types of preservatives.

III. Short answers on: **(5 x 2 = 10)**

1. Define kilocalorie.
2. Functions of vitamin 'C'.
3. Define Dietary fiber.
4. Objectives of cooking
5. Write three chemical preservatives.

SECTION – B
(BIOCHEMISTRY)

I. Elaborate on: **(1 x 15 = 15)**

1. Explain in detail about TCA cycle, its energetic and regulation.

II. Write notes on: **(1 x 5 = 5)**

1. Structure of the RNA.

III. Short answers on: **(5 x 2 = 10)**

1. Lipoproteins.
2. Define co-enzyme.
3. Types of Jaundice.
4. Name any 2 liver function tests.
5. Examples for disaccharides.

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[LI 1011] **FEBRUARY 2016** **Sub. Code: 4702**

B.Sc. (Nursing) DEGREE EXAMINATION

(New Regulations for the candidates admitted from 2006-07 onwards)

FIRST YEAR

PAPER II – NUTRITION AND BIOCHEMISTRY

Q.P. Code : 664702

Time : Three Hours **Maximum : 75 Marks**

Answer ALL questions

Answer Section A and Section B Separately

SECTION A
(NUTRITION)

I. Essay: **(1 x 15= 15)**

1. The classification, clinical manifestations and dietary management of Protein Energy Malnutrition.

II. Write notes on: **(4 x 5 = 20)**

1. Carbohydrate classification.
2. Basic five food groups.
3. Types of dietary assessments.
4. Digestion of fat.

III. Short answers on: **(5 x 2 = 10)**

1. Define Kilo Calorie.
2. Describe Bitot's spots.
3. Define Water intoxication.
4. List the food preservation methods
5. What are Therapeutic Diets?

SECTION B
(BIOCHEMISTRY)

I. Essay: **(1 x 15 = 15)**

1. Glycolysis – add a note on its Bioenergetics.

II. Write notes on: **(1 x 5 = 5)**

1. Gout.

III. Short answers on: **(5 x 2 = 10)**

1. Essential Fatty acids.
2. Power house of the cell.
3. Write the normal value of Serum Urea and Serum Creatinine.
4. Phenylketonuria.
5. Define Acidosis.

****

[LJ 1011] AUGUST 2016 **Sub. Code: 4702**

B.Sc. (Nursing) DEGREE EXAMINATION
(New Regulations for the candidates admitted from 2006-07 onwards)
FIRST YEAR
PAPER II – NUTRITION AND BIOCHEMISTRY

Q.P. Code : 664702

Time : Three hours **Maximum : 75 Marks**

Answer Section A and Section B Separately

SECTION A
(NUTRITION)

I. Elaborate on: **(1 x 15 = 15)**

1. Define balanced diet. What are the factors to be considered in preparing a menu?

II. Write notes on : **(4 x 5 = 20)**

1. Define BMR. What are the factors affecting BMR?
2. What is the need for preservation of nutrients? What are the methods followed in preserving nutrients?
3. Explain the role of nurse in nutritional programmes with reference to Vit A drops program.
4. Write in detail the electrolytic principle of sodium and potassium.

III. Short answers on: **(5 x 2 = 10)**

1. How are carbohydrates classified?
2. Protein energy malnutrition.
3. What are the deficiency manifestations of vitamin K?
4. What are the sources of iron?
5. Write the symptoms of osteomalacia.

SECTION B
(BIOCHEMISTRY)

I. Elaborate on: **(1 x 15 = 15)**

1. Write down the steps involved in Urea cycle and how it is regulated?

II. Write notes on: **(1 x 5 = 5)**

1. Metabolic acidosis.

III. Short answers on: **(5 x 2 = 10)**

1. Define glycolysis.
2. Normal values of serum electrolytes.
3. Two examples for isoenzymes.
4. Name the essential fatty acids.
5. Purine catabolism and its normal value.

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[LK 1011] FEBRUARY 2017 **Sub. Code: 4702**

B.Sc. (Nursing) DEGREE EXAMINATION
(New Regulations for the candidates admitted from 2006-07 onwards)
FIRST YEAR
PAPER II – NUTRITION AND BIOCHEMISTRY

Q.P. Code : 664702

Time : Three hours **Maximum : 75 Marks**

Answer Section A and Section B Separately

SECTION A
(NUTRITION)

I. Elaborate on: **(1 x 15 = 15)**

1. Describe briefly on any one national organization working towards nutrition.

II. Write notes on: **(4 x 5 = 20)**

1. Narrate the classification of food in detail.
2. Explain deficiency of vitamin A in children.
3. Write a note on PFA (Prevention of Food Adulteration Act).
4. Discuss the role of nutrition in maintaining health.

III. Short answers on: **(5 x 2 = 10)**

1. Name the five best sources of calcium.
2. Define balanced diet with example.
3. Give the clinical symptoms of iron deficiency.
4. What is oedema?
5. Discuss any four factors you will consider while planning a menu.

SECTION B
(BIOCHEMISTRY)

I. Elaborate on: **(1 x 15 = 15)**

1. Explain in detail about TCA cycle, its energetics and regulation.

II. Write notes on: **(1 x 5 = 5)**

1. Essential aminoacids.

III. Short answers on: **(5 x 2 = 10)**

1. Functions of lysosomes.
2. Significance of HMP shunt.
3. Name the specialized products formed from glycine.
4. Mention the types of immunoglobulins.
5. Define co-enzymes.

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[LL 1011] AUGUST 2017 **Sub. Code: 4702**

B.Sc. (Nursing) DEGREE EXAMINATION
(New Regulations for the candidates admitted from 2006-07 onwards)
FIRST YEAR
PAPER II – NUTRITION AND BIOCHEMISTRY

Q.P. Code : 664702

Time : Three hours **Maximum : 75 Marks**

Answer Section A and Section B Separately

SECTION A
(NUTRITION)

I. Elaborate on: **(1 x 15 = 15)**

1. Define malnutrition and write about the national nutritional problems in India.

II. Write notes on: **(4 x 5 = 20)**

1. Discuss the methods for the determination of basal metabolism.
2. Explain the clinical manifestations of Vitamin-A deficiency.
3. Classify the food additives and give its importance in food processing.
4. Enlist the International organisation working towards nutrition and explain any one of them.

III. Short answers on: **(5 x 2 = 10)**

1. Write the classification of food.
2. Mention the sources of calcium.
3. Define water intoxication.
4. Give four examples of supplementary foods.
5. List down the methods of nutrition education.

SECTION B
(BIOCHEMISTRY)

I. Elaborate on: **(1 x 15 = 15)**

1. Give a detailed account on glycogenesis and glycogenolysis. Add a note on its regulation.

II. Write notes on: **(1 x 5 = 5)**

1. Classification of proteins.

III. Short answers on: **(5 x 2 = 10)**

1. Cytoskeleton.
2. Metabolic acidosis.
3. Co-enzymes.
4. Name the ketone bodies.
5. Collagen.

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[LM 1011] FEBRUARY 2018 **Sub. Code: 4702**

B.Sc. (Nursing) DEGREE EXAMINATION
(New Regulations for the candidates admitted from 2006-07 onwards)
FIRST YEAR
PAPER II – NUTRITION AND BIOCHEMISTRY

Q.P. Code : 664702

Time : Three hours **Maximum : 75 Marks**

Answer Section A and Section B Separately

SECTION A
(NUTRITION)

I. Elaborate on: **(1 x 15 = 15)**

1. What are macronutrients? Discuss the digestion, absorption and utilization of carbohydrates in detail.

II. Write notes on: **(4 x 5 = 20)**

1. Importance of dietary fibre on health.
2. Explain the principles of cooking and its effects on foods.
3. Deficiency manifestations of water.
4. Write about the Iodine deficiency control (IDD) programme.

III. Short answers on: **(5 x 2 = 10)**

1. Define lathyrism and fluorosis.
2. Mention the clinical symptoms of Hypokalaemia and Hyponatremia.
3. Distinguish between overweight and obesity.
4. Write about the food guide pyramid for balanced diet.
5. What are the clinical features of Vitamin-D deficiency?

SECTION B
(BIOCHEMISTRY)

I. Elaborate on: **(1 x 15 = 15)**

1. Describe the β-oxidation of fatty acid and its energetics.

II. Write notes on: **(1 x 5 = 5)**

1. Cori cycle.

III. Short answers on: **(5 x 2 = 10)**

1. Ribosome.
2. Optimum pH.
3. Saturated fatty acids.
4. Elastin.
5. Write any two functions of lipids.

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[LN 1011] AUGUST 2018 **Sub. Code: 4702**

B.Sc. (Nursing) DEGREE EXAMINATION
(New Regulations for the candidates admitted from 2006-07 onwards)
FIRST YEAR
PAPER II – NUTRITION AND BIOCHEMISTRY

Q.P. Code : 664702

Time : Three Hours **Maximum : 75 Marks**

Answer Section A and Section B Separately

SECTION - A
(NUTRITION)

I. Elaborate on: **(1 x 15 = 15)**

1. Define cooking? Briefly explain the different methods of cooking for preserving nutrients.

II. Write notes on: **(4 x 5 = 20)**

1. Explain the proteins classification?
2. What are the general functions of minerals.
3. Clinical manifestations of vitamin-A deficiency.
4. Methods of assessment of nutritional status.

III. Short answers on: **(5 x 2 = 10)**

1. Define fatty acids.
2. Distinguish Osteoporosis and Osteomalacia.
3. Write the role of water and electrolytes in the body.
4. Define food adulteration.
5. Mention the malconsumption effects of carbohydrates in the body.

SECTION - B
(BIOCHEMISTRY)

I. Elaborate on: **(1 x 15 = 15)**

1. Write the Gluconeogenesis process in detail and explain the action of key enzymes on it?

II. Write notes on: **(1 x 5 = 5)**

1. Lipoproteins and their functions.

III. Short answers on: **(5 x 2 = 10)**

1. Difference between DNA and RNA (any two).
2. Serum proteins and their normal values.
3. What is semi-essential amino acid?
4. Induced fit model of enzyme activity.
5. Write any two functions of anti-oxidants.

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[LO 1011] FEBRUARY 2019 **Sub. Code: 4702**

B.Sc. (Nursing) DEGREE EXAMINATION
(New Regulations for the candidates admitted from 2006-07 onwards)

FIRST YEAR

PAPER II – NUTRITION AND BIOCHEMISTRY

Q.P. Code: 664702

Time : Three Hours **Maximum : 75 Marks**

Answer Section A and Section B Separately

SECTION - A
(NUTRITION)

I. Elaborate on: **(1 x 15 = 15)**

1. Briefly explain about water soluble vitamins.

II. Write notes on: **(4 x 5 = 20)**

1. Bomb calorimeter.
2. Canning.
3. Amino acids.
4. Nutritional anthropometry.

III. Short answers on: **(5 x 2 = 10)**

1. Give two functions of carbohydrate.
2. Sources of Iron.
3. Define BMI.
4. What is Trans Fat?
5. Scurvy.

SECTION - B
(BIOCHEMISTRY)

I. Elaborate on: **(1 x 15 = 15)**

1. Glycolysis – add a note on its Bio-energetics.

II. Write notes on: **(1 x 5 = 5)**

1. Glycogen storage disease.

III. Short answers on: **(5 x 2 = 10)**

1. Power house of the cell.
2. Essential amino acids.
3. Define coenzyme.
4. GTT.
5. List any four macro-minerals.

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[LP 1011] AUGUST 2019 **Sub. Code: 4702**

B.Sc. (Nursing) DEGREE EXAMINATION
(New Regulations for the candidates admitted from 2006-07 onwards)

FIRST YEAR

PAPER II – NUTRITION AND BIOCHEMISTRY

Q.P. Code: 664702

Time : Three Hours **Maximum : 75 Marks**

Answer Section A and Section B Separately

SECTION - A
(NUTRITION)

I. Elaborate on: **(1 x 15 = 15)**

1. Role of a nurse in National Vitamin A Deficiency programme.

II. Write notes on: **(4 x 5 = 20)**

1. Overconsumption of fats.
2. Functions of water.
3. Define and classify carbohydrates.
4. Protein Energy Malnutrition.

III. Short answers on: **(5 x 2 = 10)**

1. Define Balanced Diet.
2. Dietary Sources of Zinc.
3. List out two dry heat methods of cooking.
4. Give medicinal value of any two foods.
5. What is the energy requirement (RDA) for an adult man and adult women doing sedentary work?

SECTION - B
(BIOCHEMISTRY)

I. Elaborate on: **(1 x 15 = 15)**

1. Clinical applications of enzymes with normal ranges.

II. Write notes on: **(1 x 5 = 5)**

1. Liver Function Tests.

III. Short answers on: **(5 x 2 = 10)**

1. Name of the hormones regulating blood calcium level.
2. Phospholipids.
3. Glycosuria.
4. Fluorosis.
5. What are Hetero-polysaccharides? Give example.

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[LQ 0220] FEBRUARY 2020 **Sub. Code: 4702**

B.Sc. (Nursing) DEGREE EXAMINATION
(New Regulations for the candidates admitted from 2006-07 onwards)

FIRST YEAR

PAPER II – NUTRITION AND BIOCHEMISTRY

Q.P. Code: 664702

Time : Three Hours **Maximum : 75 Marks**

Answer Section A and Section B Separately

SECTION - A
(NUTRITION)

I. Elaborate on: **(1 x 15 = 15)**

1. Discuss the methods of cooking in detail.

II. Write notes on: **(4 x 5 = 20)**

1. Functions of calcium.
2. Functions and deficiency of vitamin C.
3. Mid-day meal programme.
4. Plan a menu for a pregnant woman.

III. Short answers on: **(5 x 2 = 10)**

1. Define BMR.
2. Two types of weaning foods.
3. What is pellagra?
4. Classification of food.
5. Sources and classification of dietary fibres.

SECTION - B
(BIOCHEMISTRY)

I. Elaborate on: **(1 x 15 = 15)**

1. Explain in detail about TCA cycle, its energetics and regulation.

II. Write notes on: **(1 x 5 = 5)**

1. Define lipoprotein and its classification.

III. Short answers on: **(5 x 2 = 10)**

1. Gout disease.
2. What is a suicide bag?
3. Hyper-vitaminosis.
4. Define osmosis.
5. Name the purine and pyrimidine bases.

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[BSCN 0321] MARCH 2021 **Sub. Code: 4702**

(AUGUST 2020 SESSION)

B.Sc. (Nursing) DEGREE EXAMINATION

(New Regulations for the candidates admitted from 2006-07 onwards)

FIRST YEAR

PAPER II – NUTRITION AND BIOCHEMISTRY

Q.P. Code: 664702

Time : Three Hours **Maximum : 75 Marks**

Answer Section A and Section B Separately

SECTION - A

(NUTRITION)

I. Elaborate on: **(1 x 15 = 15)**

1. Define Nutritional Assessment. Explain methods of Nutritional Assessments.

II. Write notes on: **(4 x 5 = 20)**

1. Protein Energy Malnutrition.
2. Five food Group Plan.
3. Dietary Fibre.
4. Write notes on Vitamin – A.

III. Short answers on: **(5 x 2 = 10)**

1. Define Balanced Diet.
2. Give four Rich Sources of Calcium.
3. Two functions of fat.
4. What is adulteration?
5. List out some Essential Amino Acids.

SECTION - B

(BIOCHEMISTRY)

I. Elaborate on: **(1 x 15 = 15)**

1. Glycolysis - add a note on its Bio-Energetics.

II. Write notes on: **(1 x 5 = 5)**

1. Digestion and Absorption of Proteins.

III. Short answers on: **(5 x 2 = 10)**

1. Examples for Monosaccharide's.
2. Write any two functions of Calcium.
3. ELISA.
4. Types of Vitamins.
5. What is HOLO enzymes and APO enzymes?

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[BSCN 0321] MARCH 2021 **Sub. Code: 4702**

(AUGUST 2020 SESSION)

B.Sc. (Nursing) DEGREE EXAMINATION

(New Regulations for the candidates admitted from 2006-07 onwards)

FIRST YEAR

PAPER II – NUTRITION AND BIOCHEMISTRY

Q.P. Code: 664702

Time : Three Hours **Maximum : 75 Marks**

Answer Section A and Section B Separately

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(NUTRITION)

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1. Protein Energy Malnutrition.
2. Five food Group Plan.
3. Dietary Fibre.
4. Write notes on Vitamin – A.

III. Short answers on: **(5 x 2 = 10)**

1. Define Balanced Diet.
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3. Two functions of fat.
4. What is adulteration?
5. List out some Essential Amino Acids.

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(BIOCHEMISTRY)

I. Elaborate on: **(1 x 15 = 15)**

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II. Write notes on: **(1 x 5 = 5)**

1. Digestion and Absorption of Proteins.

III. Short answers on: **(5 x 2 = 10)**

1. Examples for Monosaccharide's.
2. Write any two functions of Calcium.
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4. Types of Vitamins.
5. What is HOLO enzymes and APO enzymes?

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