

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]

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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]

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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.

(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.

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.

February 2009

[KU 1011]

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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.

August 2009

[KV 1011]

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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.

February 2010

[KW 1011]

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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?

February 2011

[KY 1011]

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First Year

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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

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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 value 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?

February 2012

[LA 1011]

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B.Sc (Nursing) DEGREE EXAMINATION

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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.

[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
(180 Min)

Maximum : 100 marks

Answer ALL questions in the same order.
Answer Section A and Section B Separately
SECTION A
(NUTRITION)

I. Elaborate on:

Pages Time Marks
(Max.) (Max.) (Max.)

1. Define preservation. Explain canning. Write domestic methods of preservation.

19 33 20

II. Short Answer on:

1. Calcium deficiency.
2. Biochemical assessment.
3. Menu Planning.
4. Functions of protein.

3 8 5
3 8 5
3 8 5
3 8 5

III. Write Notes on:

1. What is nutritional anaemia?
2. Write types of fibre.
3. List out some Essential amino acids.
4. Sources of potassium.
5. What is active transport?

1 5 2
1 5 2
1 5 2
1 5 2
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.
2. Plasma proteins.
3. GTT.
4. Enzymes related to cardiac diseases

3 8 5
3 8 5
3 8 5
3 8 5

VI. Write Notes on:

1. Phagocytosis.
2. Lysosomes.
3. Hypercholesterolemia.
4. Anti oxidant vitamins.
5. Oxidative Phosphorylation.

1 5 2
1 5 2
1 5 2
1 5 2
1 5 2

[LC 1011]

FEBRUARY 2013 Sub. Code: 4702
B.Sc (Nursing) DEGREE EXAMINATION

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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

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B.Sc (Nursing) DEGREE EXAMINATION
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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

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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
