

62502

First Basic B.Sc. Nursing Examination, Summer 2013
NUTRITION AND BIOCHEMISTRY

Duration: Section A + B + C = 3 Hours

Section B & C Marks: 60

SECTION – B & SECTION – C

Instructions:

- 1) All questions are **compulsory**.
- 2) The number to the right indicates **full marks**.
- 3) Draw diagrams wherever necessary.
- 4) **Do not write anything on the blank portion of the question paper.** If written anything, such type of act will be considered as an attempt to resort to unfair means.

SECTION – B

Nutrition

Answer the following (any four out of five) :

(4×5=20)

- Factors affecting food and nutrition.
- Methods of cooking.
- Protein energy malnutrition.
- Functions of fat.
- Basal metabolic rate.

AQ's

Define lipids its classification and function in detail.

(1×7=7)

Enlist the nutritional programmes and role of nurse in nutritional programmes in detail.

(1×8=8)

SECTION – C

Biochemistry

Answer the following (any 3 out of 4) :

(3×5=15)

- What are lipoproteins ? Classify them and give their functions.
- Metabolic changes in diabetes mellitus.
- Protein-energy malnutrition.
- Principle and applications of electrophoresis.

Long answer question.

(1×10=10)

- What are blood buffers ? Describe the factors maintaining acid-base balance in the body.

OR

- Define enzymes. Classify enzymes and give one example of each class. Add a note on isoenzymes giving their clinical applications.

SECTION - C

Biochemistry

(3x5=15)

5. Answer the following (any three out of four) :

- Write any five functions of vitamin C.
- Write five factors affecting rate of enzyme catalysed reaction.
- Describe the fluid mosaic structure of cell membrane.
- Write functional classification of proteins with suitable example for each class.

6. a) Write a note on aerobic glycolysis and its energetics.

(1x10=10)

OR

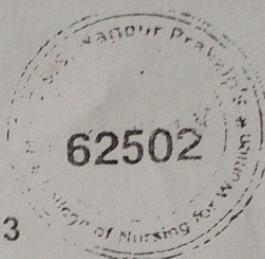
b) Describe the urea cycle. Explain its importance.

(1x10=10)

(25 Marks)

(3x5=15)

First Basic B.Sc. Nursing Examination, Winter 2013
NUTRITION AND BIOCHEMISTRY



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SECTION - B & SECTION - C

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SECTION - B

(35 Marks)

Nutrition

2. Answer the following (any four out of five) : (4x5=20)
 - a) Describe in detail the functions of fat.
 - b) Write the features of diet and sample menu for school children.
 - c) ICDS programme.
 - d) Discuss the role of nurse in Nutrition Education.
 - e) Discuss the safe food preparation practices.

3. Write in details the function and deficiencies of Vitamin A. (1x7=7)

4. Describe the clinical features, causes and preventive measures of Marasmus and Kwashiorkor. (1x8=8)

SECTION - C

(25 Marks)

Biochemistry

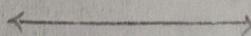
5. Answer the following (any three out of four) : (3x5=15)
 - a) Write any five factors affecting iron absorption. (2x8)
 - b) Write significance of Hexose Monophosphate (HMP) shunt. (1x8)
 - c) Classify enzymes with suitable examples. (4) (D, H, L, T)
 - d) Write functional classification of proteins with suitable examples. (2)

6. Write on Krebs cycle with energetics. (1x10=10)

OR

7. Name lipoproteins and mention one function of each. Add a note on atherosclerosis. (1x10=10)

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- 7) Use a common answer book for **all** Sections.

SECTION – B

(35 Marks)

Nutrition

2. Answer the following (any four out of five) : **(4x5=20)**
 - a) Mid day meal programme
 - b) Functions and deficiency of Vitamin C
 - c) Protein energy malnutrition
 - d) Food preservation
 - e) Basal Metabolic Rate.
3. Explain the classification, sources and functions of carbohydrates. **(1x7=7)**
4. Explain the role of nurse in nutritional programmes. **(1x8=8)**

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SECTION – C

(25 Marks)

Biochemistry

5. Answer the following (any three out of four) : (3x5=15)

- Write any five functions of vitamin C.
- Write five factors affecting rate of enzyme catalysed reaction.
- Describe the fluid mosaic structure of cell membrane.
- Write functional classification of proteins with suitable example for each class.

6. a) Write a note on aerobic glycolysis and its energetics. (1x10=10)

OR

b) Describe the urea cycle. Explain its importance. (1x10=10)

First BASIC B.SC. NURSING, Winter 2014

Nutrition and Biochemistry

Duration: Section A+B = 3 Hours

Total Marks : 75

Section - A & Section - B

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- 7) Use a common answer book for all section.

Section-A (45 marks)

Nutrition

(5x5=25)

Short answer questions (any five out of six):

10) Classify foods according to their functions in the body.

Functions and requirements of water.

Importance of vegetables and fruits in a daily diet.

Meaning and importance of balance diet.

Soft diet.

List the principles and reasons for cooking.

Long answer questions (any two out of three):

(2x5=10)

1) Plan a balance diet for female adolescent.

2) Methods of enriching the family diet.

3) National Nutritional programme in India.

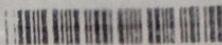
Short answer questions (any two out of three):

(2x5=10)

1) Food adulteration.

2) Functions of Carbohydrate.

3) Factors Influencing basal metabolic rate (BMR).



2. Long answer questions (any two out of three) : (2×5=10)

- a) Write the sources, deficiency manifestation of vitamin A.
- b) Discuss the effect of deficiency of protein and its preventive measures.
- c) Define basal metabolic rate and factors affecting basal metabolic rate.

3. Short answer questions (any two out of three) : (2×5=10)

- a) Describe the classification of carbohydrate.
- b) Food fortification.
- c) List the uses of recommended dietary allowances.

SECTION – B (30 marks)

Biochemistry

4. Long answer questions (any four out of five) : (4×5=20)

- a) Define proteins, classify them giving suitable examples.
- b) Outline the pathway of glycolysis with its energetics.
- c) Classify lipoproteins with their functions.
- d) Describe competitive and non-competitive inhibition of enzymes with their examples.
- e) Functions and deficiency manifestations of calcium.

5. Long answer questions (any one out of two) : (1×10=10)

- a) Describe sources, recommended daily allowance, biological functions and deficiency manifestations of vitamin D .
- b) Define oxidative and non-oxidative deamination. Describe urea cycle with its metabolic disorders.

First Basic B.Sc. (Nursing) Examination, Summer 2015
NUTRITION AND BIOCHEMISTRY

Total Duration : Section A + B = 3 Hours

Total Marks : 75

SECTION – A & SECTION – B

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- 7) Use a common answer book for **all** Section.

SECTION – A (45 Marks)

Nutrition

1. Short answer questions (any five out of six) :

(5×5=25)

- a) Write the factors interfering in absorption of calcium.
- b) Methods of food preservation and storage.
- c) Describe the effect of deficiency of water and its management.
- d) Describe the effect of deficiency and excess of fat in diet.
- e) Classify minerals and write some general functions of minerals.
- f) Define food and classify.



2. Long answer questions (any two out of three) : (2×5=10)

- a) Write the sources, deficiency manifestation of vitamin A.
- ✓ b) Discuss the effect of deficiency of protein and its preventive measures.
- ✓ c) Define basal metabolic rate and factors affecting basal metabolic rate.

3. Short answer questions (any two out of three) : (2×5=10)

- ✓ a) Describe the classification of carbohydrate.
- ✓ b) Food fortification.
- c) List the uses of recommended dietary allowances.

SECTION – B (30 marks)

Biochemistry

4. Long answer questions (any four out of five) : (4×5=20)

- ✓ a) Define proteins, classify them giving suitable examples.
- b) Outline the pathway of glycolysis with its energetics.
- ✓ c) Classify lipoproteins with their functions.
- ✓ d) Describe competitive and non-competitive inhibition of enzymes with their examples.
- ✓ e) Functions and deficiency manifestations of calcium.

5. Long answer questions (any one out of two) : (1×10=10)

- a) Describe sources, recommended daily allowance, biological functions and deficiency manifestations of vitamin D .
- ✓ b) Define oxidative and non-oxidative deamination. Describe urea cycle with its metabolic disorders.



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First BASIC B.Sc. NURSING, Winter 2015

Nutrition and Biochemistry

Total Duration: Section A+B = 3 Hours

Total Marks : 75

Section - A & Section - B

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- 7) Use a common answer book for **all** Sections.

Section-A (45 marks)

Nutrition

1: Short answer questions (**any five** out of six) : (5x5=25)

- a) Discuss food adulteration. 3
- b) Explain Mid day meal programme. 4
- c) Discuss Micro and Macro nutrients.
- d) Classification of Carbohydrate. 4
- e) Explain factors affecting Basal Metabolic Rate. 4
- f) Explain the functions of Vitamin D. 2

2. Long answer questions (**any two** out of three) : (2x5=10)

- a) Discuss principles of Menu-planning. 4
- b) Describe the effect of cooking on carbohydrates.
- c) Explain the deficiency disorders of Vitamin A. 4

3. Short answer questions (**any two** out of three) : (2x5=10)

- a) Explain the factors to be considered while serving food to the patient.
- b) Explain factors affecting nutrition.
- c) Discuss the use of heat for food preservation. 2

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Section-B (30 marks)

Biochemistry

4. Short answer questions (any four out of five) : (4 x 5=20)

- a) Write diagnostic significance of enzymes. 3
- b) Write a note on essential fatty acids. 3
- c) Describe Cori's cycle.
- d) Enumerate fat soluble vitamins. Give an account of biochemical functions of Vitamin A.
- e) What are immunoglobulins? Give their types along with functions. 2

5. Long answer questions (any one out of two) : 59G) (1x10=10)

- a) Describe oxidation of fatty acids with its energetics.
- b) Give sources and functions of calcium. Describe serum calcium regulation.

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First Basic B.Sc. Nursing Examination, Summer 2016
NUTRITION AND BIOCHEMISTRY

Total Duration : Section A+B = 3 Hours

Total Marks : 75

SECTION – A & SECTION – B

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- 3) **All questions are compulsory.**
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- 7) **Use a common answerbook for all Sections.**

SECTION – A

(45 Marks)

(Nutrition)

1. Short answer question (**any five** out of six) : **(5×5=25)**
 - a) Role of nutrition in maintaining health of geriatric client.
 - b) Classification of foods.
 - c) Difference between kwashiorkar and marasmus.
 - d) Deficiency diseases of Iron and its rich dietary sources.
 - e) Integrated Child Development Scheme (ICDS).
 - f) Therapeutic purposes of Naturopathy - Diet.
2. Long answer question (**any two** out of three) : **(2×5=10)**
 - a) Nutritional problems in India.
 - b) Absorption, synthesis and metabolism of minerals.
 - c) Principles of weaning and foods included.



3. Short answer question (any two out of three) :

(2x5=10)

- a) Safe food preparation practices.
- b) Role of nurse in nutritional education.
- c) Food additives and its principles.

SECTION – B

(30 Marks)

(Biochemistry)

4. Short answer question (any four out of five) :

(4x5=20)

- a) Classify carbohydrates with suitable example.
- b) Functions of proteins.
- c) Digestion and absorption of Lipids.
- d) Classify enzymes with suitable examples.
- e) Factors affecting calcium absorption.

5. Long answer question (any one out of two) :

(1x10=10)

- a) Describe sources, biochemical functions and deficiency manifestation of Vitamin A.
- b) Explain in detail different types of buffers and role of buffers in maintaining acid base balance.

First Basic B.Sc. (Nursing) Examination, Winter 2016
NUTRITION AND BIOCHEMISTRY

Total Duration : Section A+B = 3 Hours

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SECTION – A & SECTION – B

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SECTION – A (45 Marks)
(Nutrition)

1. Short answer question (any five out of six) : (5x5=25)
 - a) Functional classification of proteins and write functions of proteins.
 - b) Factors affecting food and nutrition.
 - c) Principles and methods of cooking.
 - d) Mid-day meal programme.
 - e) Digestion of fat.
 - f) Role of Nurse in Nutrition education.
2. Long answer question (any two out of three) : (2x5=10)
 - a) Explain balance diet its important.
 - b) State importance of vitamins in diet.
 - c) Prepare a menu plan for diabetic patient.



3. Short answer question (**any two out of three**) :

($2 \times 5 = 10$)

- a) Food Adulteration Act. 3
- b) Protein energy malnutrition. 3
- c) Electrolyte imbalances and its effect.

SECTION – B (30 Marks)
(Biochemistry)

4. Short answer question (**any four out of five**) :

($4 \times 5 = 20$)

- a) Describe Urea cycle. 3
- b) Write any four factors affecting enzyme activity. 2
- c) Diagrammatic representation of immunoglobulins and state functions of IgG and IgM. 2
- d) Enumerate various transport mechanisms. Add note on active transport.
- e) Write five biochemical functions of calcium. 2

5. Long answer question (**any one out of two**) :

($1 \times 10 = 10$)

- a) Describe aerobic and anaerobic glycolysis with its energetics.
- b) Describe beta-oxidation of palmitic acids with its energetics.

First Basic B.Sc. Nursing Examination, Summer 2017
NUTRITION AND BIOCHEMISTRY

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SECTION – A and SECTION – B

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- 7) Use a common answerbook for **all Sections**.

SECTION – A (45 Marks)
(Nutrition)

1. Short answer questions (any five out of six) : (5x5=25)
 - a) Describe the deficiency diseases of vitamin D.
 - b) Factors affecting food and nutrition.
 - c) Composition of body fluids.
 - d) Describe the functions of protein.
 - e) Methods of cooking and effect of cooking on food constituents.
 - f) Integrated Child Development Scheme.
2. Long answer questions (any two out of three) : (2x5=10)
 - a) Define and classify fat.
 - b) Write the sources and effect of deficiency of iron.
 - c) List sources of thiamine and effect of its deficiency.

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(2×5=10)

3. Short answer questions (any two out of three) :

- a) Prevention of Food Adulteration Act, 1954.
- b) Define balanced diet and write the steps in planning balanced diet.
- c) Define BMR and write the factors affecting energy requirement.

SECTION – B (30 Marks)

(Biochemistry)

(4×5=20)

4. Short answer questions (any four out of five) :

- a) Write any five functions of cholesterol.
- b) Draw urea cycle mentioning enzymes, coenzymes, substrate and product formed in the cycle.
- c) Factors regulating blood calcium level.
- d) Diagnostic and clinical significance of enzymes.
- e) What are blood buffers ? Explain their role in maintaining blood pH.

(1×10=10)

5. Long answer questions (any one out of two) :

- a) Define and classify vitamins. Write sources, daily requirement, functions and deficiency manifestation of vitamin A.
- b) Define carbohydrate. Explain glycolysis in detail with its energetics.

First Basic B.Sc. Nursing Examination, Winter 2017
NUTRITION AND BIOCHEMISTRY

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SECTION – A (45 Marks)

Nutrition

1. Short answer question (**any five out of six**) : **(5x5=25)**
 - a) Integrated Child Development Scheme.(ICDS).
 - b) Classification of fats.
 - c) Discuss principles of cooking.
 - d) Factors affecting iron absorption.
 - e) Weaning.
 - f) National Iodine Deficiency Disorder Programme.
2. Long answer question (**any two out of three**) : **(2x5=10)**
 - a) Define malnutrition. Describe the clinical features of severe protein energy malnutrition.
 - b) Describe the Classification and functions of fats.
 - c) Write classification of vitamins, functions and deficiency of vitamin C.



3. Short answer questions (any two out of three) : (2x5=10)

- a) Food adulteration and its prevention.
- b) Therapeutic diet for a patient with hypertension.
- c) Dietary management of patient with dehydration.

SECTION – B (30 marks)

Biochemistry

4. Short answer question (any four out of five) : (4x5=20)

- a) Structure and functions of Mitochondria.
- b) Functions and deficiency manifestations of Vitamin A.
- c) Transamination reactions.
- d) Classification of Enzymes with suitable examples.
- e) Functions of Iron.

5. Long answer question (any one out of two) : (1x10=10)

- a) Describe regulation of Blood Sugar levels.
- b) Describe steps in beta oxidation of fatty acids.

First Basic B.Sc. Nursing Examination, Summer 2018
NUTRITION AND BIOCHEMISTRY

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SECTION – A (45 Marks)
(Nutrition)

1. Short answer question (**any five** out of six) : **(5×5=25)**
 - a) Factors affecting calcium absorption.
 - b) Factors affecting Basal metabolic rate.
 - c) Assessment of nutritional status in children.
 - d) Classification of Carbohydrates.
 - e) Balanced diet.
 - f) Food Adulteration.
2. Long answer question (**any two** out of three) : **(2×5=10)**
 - a) Role of nurse in nutritional program.
 - b) Malnutrition.
 - c) Functions of Proteins.

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3. Short answer question (any two out of three) : (2×5=10)

- a) Functions of Vitamin D.
- b) Regulations of water metabolism.
- c) Methods of Cooking.

SECTION – B (30 Marks)
(Biochemistry)

4. Short answer question (any four out of five) : (4×5=20)

- a) Factors affecting absorption of Calcium. — *fun & ion*
- b) Structure and functions of cell membrane.
- c) Write a note on transamination and deamination reactions in protein metabolism.
- d) Functions and deficiency manifestations of Vitamin C.
- e) Factors regulating blood sugar level.

5. Long answer question (any one out of two) : (1×10=10)

- a) Describe in detail about beta oxidation of fatty acid. Add a note on its energetics.
- b) Define enzymes. Explain in detail factors affecting enzyme action.



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First Basic B.Sc. Nursing Examination, Winter 2018
NUTRITION AND BIOCHEMISTRY

Total Duration: Section A+B = 3 Hours

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SECTION – A and SECTION – B

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- 7) Use a common answerbook for all Sections.

SECTION – A (45 marks)
(Nutrition)

1. Short answer questions (any five out of six) : (5×5=25)
 - a) Functions and absorption of fats.
 - b) Principles of serving food.
 - c) Body Mass Index.
 - d) Kwashiorkor.
 - e) Fluid Diet.
 - f) Over hydration.
2. Long answer questions (any two out of three) : (2×5=10)
 - a) Vitamin 'A' deficiency program.
 - b) Write in brief about Energy.
 - c) Importance of protein in children.

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(2×5=10)

3. Short answer questions (any two out of three) :

- a) Functions and deficiencies of Vitamin 'C'.
- b) Role of nurse in nutrition education.
- c) Digestion, absorption, storage and metabolism of carbohydrates.

SECTION – B (30 marks)
(Biochemistry)

(4×5=20)

4. Short answer questions (any four out of five) :

- a) Structure and functions of Cell Membrane.
- b) Functions and deficiency manifestations of Vitamin D.
- c) Role of buffers in maintaining acid base balance.
- d) Functions of cholesterol.
- e) Competitive inhibition of enzymes.

(1×10=10)

5. Long answer questions (any one out of two) :

- a) Describe Pentose Phosphate Pathway of Glucose oxidation. What is its Significance ?
- b) Describe steps of Urea cycle.

First Basic B.Sc. Nursing Examination, Summer (Phase - II) 2019
NUTRITION AND BIOCHEMISTRY

Total Duration : 3 Hours

Total Marks : 75

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- 7) **Use a common answerbook for all sections.**

SECTION - A (45 Marks)

(Nutrition)

1. Short answer questions (**any five** out of six) : **[5 × 5 = 25]**
 - a) Describe the factors affecting nutrition.
 - b) Discuss classification of carbohydrates.
 - c) Explain the role of dietary fibers in human body.
 - d) Note on Kwashiorkor & its prevention.
 - e) Enlist essential amino acids.
 - f) Enlist sources and functions of potassium.
2. Long answer questions (**any two** out of three) : **[2 × 5 = 10]**
 - a) Explain the various methods of cooking.
 - b) Explain the deficiency disease associated with vitamin B1 (Thiamine).
 - c) Discuss role of nutrition in maintaining health of geriatric people.
3. Short answer questions (**any two** out of three) : **[2 × 5 = 10]**
 - a) Define dehydration and water intoxication.
 - b) Enlist the factors affecting iron absorption.
 - c) Enlist the functions of fat.

62502

SECTION - B (30 Marks)

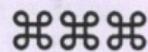
(Biochemistry)

4. Short answer questions (**any four** out of five) : **[$4 \times 5 = 20$]**

- a) Write Structure and Functions of Cell Membrane.
- b) Give classification of Enzymes.
- c) Discuss Acid Base Balance.
- d) Give Types and Functions of Lipoproteins.
- e) Write Functions and deficiency manifestations of Vitamin A.

5. Long answer questions (**any one** out of two) : **[$1 \times 10 = 10$]**

- a) Describe the steps of Tricarboxylic acid (TCA) cycle
- b) Describe the various steps of Urea Cycle and its importance.



**First BASIC B.Sc. Nursing Examination, Winter
(Phase - III All Other Remaining UG/PG Course) - 2019**
NUTRITION AND BIOCHEMISTRY

Total Duration of Section A+B = 3 Hours Total Marks : 75

SECTION - A & SECTION - B

Instructions :

- 1) Use **blue/black ball point pen only**.
- 2) Do not write anything on the **blank portion of the question paper**. If written anything, such type of act will be considered as an attempt to resort to **unfair means**.
- 3) **All questions are compulsory.**
- 4) The number to the **right** indicates **full marks**.
- 5) Draw diagrams **wherever necessary**.
- 6) **Distribution of syllabus in Question Paper is only meant to cover entire syllabus within the stipulated frame. The Question paper pattern is a mere guideline. Questions can be asked from any paper's syllabus into any question paper. Students cannot claim that the Question is out of syllabus. As it is only for the placement sake, the distribution has been done.**
- 7) Use a common answer book for all sections.

SECTION - "A" (45 Marks)

(Nutrition)

1. Short answer questions (any five out of six) : **[5 × 5 = 25]**
 - a) Functions of food.
 - b) Vitamin A deficiency programme.
 - c) Assessment of nutritional status of pre-schooler.
 - d) Factors influencing food selection.
 - e) Principles of cooking.
 - f) Prevention of food adulteration Act (PFA).

62502

[2 × 5 = 10]

2. Long answer questions (any two out of three) :

- a) Deficiencies of vitamin D and its Dietary sources.
- b) Dietary sources and Functions of carbohydrates. 3,
- c) Factors affecting basal metabolic rate. 2

3. Short answer questions (any two out of three) :

[2 × 5 = 10]

2.5 a) National iodine deficiency disorders (IDD). control programme

~~b)~~ Nutrition education and role of nurse in adolescent Anemia.

c) Maintenance of fluid and electrolyte balance for toddler with Diarrhea.

SECTION - "B" (30 Marks)**(Biochemistry)**

4. Short answer questions (any four out of five) :

[4 × 5 = 20]

- a) Transamination reactions.
- b) Functions and Deficiency manifestations of Vitamin C. 2.5
- c) Structure and Functions of Cell membrane.
- d) Classification of Enzymes with suitable examples.
- e) Functions and Deficiency manifestations of Iron. 2

5. Long answer questions (any one out of two):

[1 × 10 = 10]

2 a) Describe various steps of Glycolysis. Add a note on its Energetics.

b) Describe steps of Beta-oxidation of Fatty acids. Add a note on its energetics.



**First BASIC B.Sc. Nursing Examination, Summer
(Phase - III All other Remaining UG/PG Courses) - 2020**
NUTRITION AND BIOCHEMISTRY

Total Duration : Section A + B = 3 Hours

Total Marks : 75

SECTION - A & SECTION - B

Instructions :

- 1) Use **blue/black ball point pen only.**
- 2) **Do not write anything on the blank portion of the question paper.**
If written anything, such type of act will be considered as an attempt to resort to unfair means.
- 3) **All questions are compulsory.**
- 4) **The number to the right indicates full marks.**
- 5) **Draw diagrams wherever necessary.**
- 6) **Distribution of syllabus in Question Paper is only meant to cover entire syllabus within the stipulated frame. The Question paper pattern is a mere guideline. Questions can be asked from any paper's syllabus into any question paper. Students cannot claim that the Question is out of syllabus. As it is only for the placement sake, the distribution has been done.**
- 7) **Use a common answer book for all sections.**

SECTION - A (45Marks)
(NUTRITION)

1. Short answer questions (any five out of Six) **[5 × 5 = 25]**
 - a) Marasmus.
 - b) Methods of cooking.
 - c) Vitamin 'D' deficiency.
 - d) Enumerate Food groups.
 - e) Basal Metabolic Rate.
 - f) National Nutritional Policy.
2. Long answer questions (any two out of three): **[2 × 5 = 10]**
 - a) Mid-Day meal program.
 - b) Functions and absorption of calcium.
 - c) Describe nutritional problems in India.

3. Short answer questions (any two out of three):

 $[2 \times 5 = 10]$

- a) Digestion of proteins.
- b) Role of the nurse in nutritional programmes.
- c) Write in short about the elements of nutrition.

SECTION - B (30 Marks)

(BIOCHEMISTRY)

4. Short answer questions (any four out of five):

 $[4 \times 5 = 20]$

- a) Define and classify enzymes.
- b) Lipoproteins and their functions.
- c) Functions, sources and deficiency manifestations of vitamin 'C'
- d) Digestion and absorption of fat.
- e) Maintenance acid base balance.

5. Long answer questions (any one out of two):

 $[1 \times 10 = 10]$

- a) Enumerate the pathway of glycolysis. Discuss its energetics. write a note on regulation of blood sugar.
- b) Describe functional classification of proteins with examples. Discuss the biosynthesis of urea and its biological significance.



First Basic B.Sc. Nursing Examination, Winter - 2020
NUTRITION AND BIOCHEMISTRY

Total Duration : Section A+B = 3 Hours

Total Marks : 75

SECTION - A & SECTION - B

Instructions :

- 1) Use blue/black ball point pen only.
- 2) Do not write anything on the blank portion of the question paper. If written anything, such type of act will be considered as an attempt to resort to unfair means.
- 3) All questions are compulsory.
- 4) The number to the right indicates full marks.
- 5) Draw diagrams wherever necessary.
- 6) Distribution of syllabus in Question Paper is only meant to cover entire syllabus within the stipulated frame. The Question paper pattern is a mere guideline. Questions can be asked from any paper's syllabus into any question paper. Students cannot claim that the Question is out of syllabus. As it is only for the placement sake, the distribution has been done.
- 7) Use a common answerbook for all sections.

SECTION - A (45 Marks)

(Nutrition)

1. Short answer questions (any five out of six) : $[5 \times 5 = 25]$
 - a) Explain the factors affecting food and nutrition.
 - b) Discuss the functions of proteins.
 - c) Iron deficiency anemia.
 - d) Explain role of a nurse in nutritional programme.
 - e) Discuss factors affecting iron absorption.
 - f) Classify lipids with examples. Write functions of lipids.

62502

2. Long answer question (**any two out of three**) : [2 × 5 = 10]

- a) Explain principles of cooking.
- b) Define carbohydrates and classify it with examples.
- c) Explain different methods of food preparation.

3. Short answer question (**any two out of three**) : [2 × 5 = 10]

- a) Explain principles of weaning.
- b) Describe clinical features of severe protein energy malnutrition.
- c) Explain role of fibre in diet.

SECTION - B (30 Marks)
(Biochemistry)

4. Long answer question (**any four out of five**) : [4 × 5 = 20]

- a) Describe deficiency manifestations of vitamin D.
- b) Write a note on homopolysaccharides.
- c) Describe regulation of blood calcium level.
- d) Describe hormonal regulation of water and electrolyte balance.
- e) Discuss nitrogen balance.

5. Long answer question (**any one out of two**) : [1 × 10 = 10]

- a) Describe Tricarboxylic acid cycle. Write about its amphibolic nature.
- b) Define enzymes. Classify them giving examples. Add a note on clinical significance of enzymes in heart disease.



**First Basic B.Sc. Nursing Examination, Winter
(Special Examination) - 2020
NUTRITION AND BIOCHEMISTRY**

Total Duration : 3 Hours

Total Marks : 75

Instructions :

- 1) Use **blue/black ball point pen only.**
- 2) **Do not write anything on the blank portion of the question paper.**
If written anything, such type of act will be considered as an attempt to resort to unfair means.
- 3) **All questions are compulsory.**
- 4) **The number to the right indicates full marks.**
- 5) **Draw diagrams wherever necessary.**
- 6) **Distribution of syllabus in Question Paper is only meant to cover entire syllabus within the stipulated frame. The Question paper pattern is a mere guideline. Questions can be asked from any paper's syllabus into any question paper. Students cannot claim that the Question is out of syllabus. As it is only for the placement sake, the distribution has been done.**
- 7) **Use a common answerbook for all Sections.**

SECTION - A (45 Marks)

Nutrition

1. Short answer question (**any five out of six**) : **[5 × 5 = 25]**
 - a) Enumerate the factors affecting food & nutrition.
 - b) Describe the functions of proteins.
 - c) Dehydration.
 - d) Explain the role of dietary fibers in human diet.
 - e) Enumerate essential amino acids.
 - f) Describe classification of foods with suitable examples.
2. Long answer question (**any two out of three**) : **[2 × 5 = 10]**
 - a) Classification of lipids.
 - b) Discuss 'Scurvy' and its prevention.
 - c) Enlist the methods of food preservation with suitable examples.

3. Short answer question (**any two** out of three) : **[$2 \times 5 = 10$]**

- a) Enlist the functions and effects of over consumption of carbohydrates.
- b) Discuss the sources & deficiency disorders of Calcium.
- c) Write a note on 'Mid-day meal programme'.

SECTION - B (30 Marks)

Biochemistry

4. Short answer question (**any four** out of five) : **[$4 \times 5 = 20$]**

- a) Describe the role of blood buffers in the maintenance of blood pH.
- b) Functions and deficiency manifestations of vitamin 'D'.
- c) Factors affecting enzyme activity.
- d) Absorption, storage and transport of iron.
- e) Metabolism of fatty acids.

5. Long answer question (**any one** out of two) : **[$1 \times 10 = 10$]**

- a) Describe aerobic and anaerobic glycolysis with its energetics.
- b) Explain beta oxidation of palmitic acid with it's energetics.



First BASIC B.Sc. (Nursing) Examination, Summer - 2021
NUTRITION AND BIOCHEMISTRY

Total Duration : Section A + B = 3 Hours

Total Marks : 75

Section - A & Section - B

Instructions :

- 1) Use **blue/black ball point pen only**.
- 2) **Do not write anything on the blank portion of the question paper.**
If written anything, such type of act will be considered as an attempt to resort to unfair means.
- 3) **All questions are compulsory.**
- 4) **The number to the right indicates full marks.**
- 5) **Draw diagrams wherever necessary.**
- 6) **Distribution of syllabus in Question Paper is only meant to cover entire syllabus within the stipulated frame. The Question paper pattern is a mere guideline. Questions can be asked from any paper's syllabus into any question paper. Students cannot claim that the Question is out of syllabus. As it is only for the placement sake, the distribution has been done.**
- 7) **Use a common answerbook for all Sections.**

SECTION - A (45 Marks)

(Nutrition)

1. Short answer questions (**any five out of six**) : **[5 × 5 = 25]**
 - a) Different methods of food preservation.
 - b) What is mean by food standards and what is importance of it.
 - c) Importance of micro and macro nutritive elements for body.
 - d) National iodine deficiency disorders and its preventive measures.
 - e) Functions of Protein.
 - f) Factors affecting the fluid imbalance

2. Long answer questions (any two out of three) : [2 × 5 = 10]

- a) Factors influencing the food selection.
- b) Causes and its management of Malnutrition.
- c) Principles of cooking.

3. Short answer questions (any two out of three) : [2 × 5 = 10]

- a) Factors influencing the absorption of carbohydrate.
- b) Iron deficiency anemia.
- c) Discuss the Body mass index and its importance in Nutrition.

SECTION - B (30 Marks)

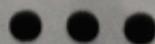
(Biochemistry)

4. Short answer questions (any four out of five) : [4 × 5 = 20]

- a) Enumerate various transport mechanism. Add note on active transport
- b) Explain Functions of Trace elements
- c) Describe regulation of Blood Glucose
- d) PH buffers.
- e) Explain Immunoglobulins

5. Long answer questions (any one out of two) : [1 × 10 = 10]

- a) Describe sources, recommended daily allowance, deficiency manifestation of Vitamin D
- b) What is Collagen? How they are synthesized? Describe some abnormalities of collagen biosynthesis.



First Basic B.Sc. Nursing Examination, (Phase - III) Winter - 2021
NUTRITION AND BIOCHEMISTRY

Total Duration : Section A+B = 3 Hours

Total Marks : 75

SECTION - A & SECTION - B

Instructions :

- 1) Use **blue/black ball point pen only.**
- 2) **Do not write anything on the blank portion of the question paper.**
If written anything, such type of act will be considered as an attempt to resort to unfair means.
- 3) **All questions are compulsory.**
- 4) **The number to the right indicates full marks.**
- 5) **Draw diagrams wherever necessary.**
- 6) **Distribution of syllabus in Question Paper is only meant to cover entire syllabus within the stipulated frame. The Question paper pattern is a mere guideline. Questions can be asked from any paper's syllabus into any question paper. Students cannot claim that the Question is out of syllabus. As it is only for the placement sake, the distribution has been done.**
- 7) **Use a common answerbook for all sections.**

SECTION - A (45 Marks)

(Nutrition)

1. Short answer questions (**any five out of six**) : **[$5 \times 5 = 25$]**
 - a) Discuss fat soluble Vitamins.
 - b) Discuss Food additives.
 - c) National nutritional policy in India.
 - d) Discuss the classification of food.
 - e) Discuss Principles of Cooking.
 - f) Factors affecting the electrolyte imbalance.

2. Long answer questions (any two out of three) : [2 × 5 = 10]

- Discuss in details about the protein energy malnutrition.
- Define therapeutic diet and its type.
- Discuss the Mid Meal Programme.

3. Short answer questions (any two out of three) : [2 × 5 = 10]

- Factors affecting the nutrition during illness.
- Define over hydration and causes of for same.
- Discuss about Vitamin C its sources and deficiency.

SECTION - B (30 Marks)
(Biochemistry)

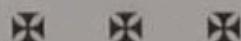
4. Short answer questions (any four out of five) : [4 × 5 = 20]

- Functions of Vitamin C.
- Composition and functions of Cell.
- Factors affecting enzyme activities.
- Regulation of blood glucose level.
- Sources and Functions of Phosphorus.

,

5. Long answer questions (any one out of two) : [1 × 10 = 10]

- Discuss Cholesterol metabolism in detail.
- Give sources, daily requirement biochemical functions and deficiency manifestations of calcium.



First Basic B.Sc. Nursing Examination, (Phase - II) Summer - 2022
NUTRITION AND BIOCHEMISTRY

Total Duration : 3 Hours

Total Marks : 75

Instructions :

- 1) Use **blue/black** ball point pen only.
- 2) Do not write anything on the **blank portion of the question paper**. If written anything, such type of act will be considered as an attempt to resort to unfair means.
- 3) All questions are **compulsory**.
- 4) The number to the **right** indicates **full marks**.
- 5) Draw diagrams **wherever necessary**.
- 6) Distribution of syllabus in Question Paper is only meant to cover entire syllabus within the stipulated frame. The Question paper pattern is a mere guideline. Questions can be asked from any paper's syllabus into any question paper. Students cannot claim that the Question is out of syllabus. As it is only for the placement sake, the distribution has been done.
- 7) Use a common answer book for all sections.

SECTION - "A"

(Nutrition)

1. Short Answer Questions (Solve any 5 Out of 6) : **[5 × 5 = 25]**
 - a) Discuss the factors affecting the nutrition.
 - b) FAO. *disturbing food additive*
 - c) Functions of protein.
 - d) Deficiency of Vitamin A.
 - e) Methods of food preservation.
 - f) Classification of food.
2. Long Answer Questions (Solve any 2 Out of 3) : **[2 × 5 = 10]**
 - a) Therapeutic diets.
 - b) Vitamin A deficiency programme.
 - c) Factors affecting BMR.

3. Short Answer Questions (Solve any 2 Out of 3) :

- a) Functions of Carbohydrate.
- b) Vitamin B complex.
- c) Dehydration and its sign and symptoms.

SECTION - "B"

(Biochemistry)

4. Short Answer Questions (Solve any 4 Out of 5) : [4 × 5 = 20]

- a) Write any five function of cholesterol.
- b) Explain factors affecting calcium absorption.
- c) Antioxidant.
- d) Discuss in brief about digestion and absorption of lipids.
- e) Explain clinical importance of Blood urea.

5. Long Answer Questions (Solve any 1 Out of 2) : [1 × 10 = 10]

- a) Define Blood buffer. Explain in detail about different types of Blood buffer and role of buffers in maintaining acid base balance.

OR

- b) Describe Glycolysis and Explain in detail about Reaction sequence, Location and Energy Generation.



First Basic B.Sc. Nursing (Old) Examination, Winter - 2022
NUTRITION AND BIOCHEMISTRY

Total Duration : Section A + B = 3 Hours

Total Marks : 75

SECTION - A & SECTION - B

Instructions :

- 1) Use **blue/black** ball point pen only.
- 2) Do not write anything on the **blank portion of the question paper**. If written anything, such type of act will be considered as an attempt to resort to unfair means.
- 3) All questions are **compulsory**.
- 4) The number to the **right** indicates **full** marks.
- 5) Draw diagrams **wherever** necessary.
- 6) Distribution of syllabus in Question Paper is only meant to cover entire syllabus within the stipulated frame. The Question paper pattern is a mere guideline. Questions can be asked from any paper's syllabus into any question paper. Students cannot claim that the Question is out of syllabus. As it is only for the placement sake, the distribution has been done.
- 7) Use a common answerbook for **all** sections.

SECTION - A (45 Marks)

(Nutrition)

1. Short answer questions (**any five** out of six) : **[5×5=25]**
 - a) Discuss classification of food.
 - b) Enlist the functions of carbohydrate.
 - c) Write a note on mid day meal programme.
 - d) Note on Rickets & its prevention.
 - e) Note on Composition of body fluids.
 - f) Classify vitamins & list the deficiency diseases of Vitamin A.

2. Long answer questions (any two out of three) : [2×5=10]

- Explain the various methods of food preservation.
- Define Basal Metabolic Rate. Enlist the factors affecting Basal Metabolic Rate.
- Food additives and its principles.

3. Short answer questions (any two out of three) : [2×5=10]

- Enlist deficiency diseases of calcium and its prevention.
- Explain the classification of proteins.
- Discuss the effects of overconsumption of fats.

SECTION - B (30 Marks)
(Biochemistry)

4. Short answer questions (any four out of five) : [4×5=20]

- Write about diagnostically important enzymes with their significance.
- Note on Immunoglobulins and their functions.
- Note on absorption and storage of Iron.
- Competitive inhibition of enzymes with suitable examples.
- Write biological function and deficiency manifestations of vitamin 'A'.

5. Long answer questions (any one out of two) : [1×10=10]

- Describe the fate and formation of Ammonia. Add a note on diagnostic significance of serum urea level.
- Describe the pathway of gluconeogenesis and its importance.

