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Reg. No.....

Name.....

**FIRST YEAR B.Sc. (NURSING) DEGREE EXAMINATION, APRIL/MAY 2025**

Part I

Paper IV—NUTRITION AND BIOCHEMISTRY

[Special Supplementary (Old Scheme 2012–2015 Admission) & Last and Final Special  
Mercy Chance Examinations (2007-2011 Admissions)]

Time : Two Hours

Maximum : 75 Marks

*Answer Sections A and B in separate answer-books.  
Draw diagrams wherever necessary.*

**Section A (Nutrition)**

I. Choose most appropriate answer :

1 Which one is not a fat soluble vitamin :

- (a) Vitamin A. (b) Vitamin B.  
(c) Vitamin D. (d) Vitamin K.

2 Amino acids synthesized by the body :

- (a) Glycine. (b) Tyrozine.  
(c) Serine. (d) All of the above.

3 Protein energy malnutrition cause :

- (a) Kwashiorkor. (b) Beri beri.  
(c) Rickets. (d) Osteo malacia.

4 Excess of aminoacids is converted to :

- (a) Glucose. (b) Urea.  
(c) Uric acid. (d) None of the above.

5 Flesh (meat) foods are a good source of which vitamin (that is absent in plant foods) :

- (a) Vitamin A. (b) Vitamin C.  
(c) Vitamin B<sub>12</sub>. (d) Vitamin D.

6 Diet which provides sufficient calorie, adequate amount of proteins, fat, carbohydrates, minerals and vitamins needed for health and well being is :

- (a) Therapeutic diet. (b) Balanced diet.  
(c) Nutritious diet. (d) Special diet.

**Turn over**





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- 7 Which one is not a symptom of Vitamin A deficiency ?
- (a) Bitots spot. (b) Breathlessness.  
(c) Corneal ulcer. (d) Keratomalacia.
- 8 Which of the following factors influence BMR ?
- (a) Age. (b) Climate.  
(c) Physical activity. (d) All of the above.
- 9 The enzyme present in saliva :
- (a) Pepsin. (b) Ptyalin.  
(c) Lipase. (d) Sucrase.
- 10 The end product of carbohydrate digestion is :
- (a) Sucrose. (b) Galactose.  
(c) Fructose. (d) Glucose.

(10 × 1 = 10 marks)

II. Write short notes on any *five* :

- (a) Water soluble vitamins. (b) Functions of protein.  
(c) Sources of Vitamin A. (d) Iron deficiency.  
(e) Elements of nutrition. (f) Digestion in the stomach.  
(g) Therapeutic diets.

(5 × 4 = 20 marks)

III. (a) Discuss the digestion, absorption and storage of carbohydrates.

*Or*

(b) The classification and sources of carbohydrates.

(8 marks)

IV. Recommended Vitamin A requirement of a school child per day.

(2 marks)

### **Section B (Biochemistry)**

V. What is Lipids ? Describe the metabolism of triglycerides and synthesis of triacylglycerols.

(1 + 9 = 10 marks)

VI. Discuss the functions of lipoproteins.

(7 marks)

VII. Answer any *four* :

- (a) Structure and functions of cell membrane.  
(b) Regulation of blood glucose level.





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- (c) Enzymes and coenzymes.
- (d) Mechanism of antibody production.
- (e) Composition and utilization of vitamins.

(4 × 3 = 12 marks)

VIII. Write precise answers :

- 1 Significance of estimation of haemoglobins.
- 2 Albumin in urine.
- 3 Write normal level of :
  - (a) S. Calcium.
  - (b) S. Bilirubin.
  - (c) S. Creatinine.

(3 × 2 = 6 marks)

