



B.Sc. (Hons) Nursing First Year Supplementary Examination, October 2023

Enrollment No. _____

Invigilator sign: _____

SECTION C (NUTRITION)

INSTRUCTIONS:

- Section C (Nutrition & Biochemistry) should be answered in first 20 minutes of the Exam duration and handed over to the invigilators.
- Put one tick ✓ mark to only one answer that you consider correct for each question.
- Mark your tick ✓ in pen.

Multiple Choice Questions (MCQs):

[10X1=10]

1. A 30-year-old female patient presents with fatigue, brittle nails, and hair loss. She follows a strict vegan diet and avoids all animal products. Which of the following nutrients is most likely deficient in the patient's diet?
 - a. Iron
 - b. Vitamin B12
 - c. Calcium
 - d. Vitamin D
2. The disease caused in children because of deficiency of vitamin D is—
 - a. Keratomalacia
 - b. Cirrhosis
 - c. Rickets
 - d. Osteomalacia
3. The haemoglobin level of less than ____ g/dl, is considered as anaemia in a pregnant woman.
 - a. 10
 - b. 11
 - c. 12
 - d. 13
4. Which of the following mineral is therapeutically used in diarrhoea patient?
 - a. Iron
 - b. Calcium
 - c. Zinc
 - d. Iodine
5. A 40-year-old male patient is diagnosed with high blood pressure and is advised to reduce his sodium intake. Which of the following food items should the patient limit to decrease his sodium consumption?
 - a. Fresh fruits
 - b. Lean meats
 - c. Canned soups
 - d. Whole grains
6. The tip of the food pyramid is formed by -
 - a. Cereals & millets
 - b. Roots & Vegetables
 - c. Pulses & legumes
 - d. fat and sugar
7. Which of the following disease is prevalent in areas where maize is the staple food?
 - a. Goitre
 - b. Pellagra
 - c. Beriberi
 - d. Dermatitis
8. Which of these food-borne illnesses is not caused by bacteria?
 - a. Cholera
 - b. Typhoid
 - c. Botulism
 - d. Lathyrism
9. Improper storage of grains produces following food toxin
 - a. Ergot
 - b. Fusarium toxin
 - c. Aflatoxin
 - d. Sanguinarine
10. Which of the following improves bioavailability of iron in the intestine:
 - a. Vitamin C
 - b. Tocopherol
 - c. Phytates
 - d. Calcium



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SECTION C (BIOCHEMISTRY)

INSTRUCTIONS:

- Section C (Biochemistry & Nutrition) should be answered in first 20 minutes of the Exam duration and handed over to the invigilators.
- Put one Tick (✓) mark to only one answer that you consider correct for each question.
- Mark your Tick (✓) in pen.

Multiple Choice Questions (MCQs):

[8X1=8]

1. Which of the followings is an essential fatty acid?
 - a. Palmitic acid
 - b. Ascorbic acid
 - c. Linoleic acid
 - d. Stearic acid
2. Which of the following vitamins deficiency is associated with megaloblastic anemia?
 - a. Thiamine
 - b. Pantothenic acid
 - c. Riboflavin
 - d. Cobalamin
3. All of the followings are antigen presenting cells except
 - a. Dendritic cells
 - b. Macrophages
 - c. Chondrocytes
 - d. Astrocytes
4. Wilson's disease is due to defect in
 - a. Copper metabolism
 - b. Zinc metabolism
 - c. Selenium metabolism
 - d. Iron metabolism
5. Non-competitive inhibitors changes Enzyme kinetics in which of the following manner
 - a. High K_m , Low V_{max}
 - b. Unchanged K_m , Low V_{max}
 - c. High K_m , Unchanged V_{max}
 - d. Low K_m , Low V_{max}
6. Liver can't utilize Ketone Bodies due to lack of the following enzyme
 - a. Thiolyase
 - b. β -ketoacyl-CoA transferase
 - c. Acetyl carboxylase
 - d. HMG-CoA reductase
7. Fasting hypoglycaemia is absent in which of the following Glycogen storage disease
 - a. Her's Disease
 - b. McArdle's disease
 - c. Pompe's disease
 - d. Cori's disease
8. Flipped pattern in LDH 1 & 2 isozymes indicates a probable diagnosis of
 - a. Acute renal failure
 - b. Acute pulmonary embolism
 - c. Acute myocardial infarction
 - d. Acute splenic infarction



All India Institute of Medical Sciences, Kalyani

B.Sc. (Hons) Nursing First Year Supplementary Examination, October 2023

Time: 3 Hrs.

NUTRITION & BIOCHEMISTRY

Marks: 75

INSTRUCTIONS:

- Answer Biochemistry & Nutrition Section in separate answer booklets.
- Draw diagram wherever necessary

BIOCHEMISTRY (30 MARKS)

SECTION-A

Answer any ONE of the following:

[1X7=7]

1. Mention the regulatory steps of Glycolysis. How Glycogenesis & Glycogenolysis are reciprocally regulated? What is the enzyme defect in Von Gierke's Disease? (3+3+1)
2. Draw a labelled diagram showing transport & various fates of Triacylglycerol through lymphatics & Blood along with its Apo proteins. How hormone sensitive lipase is regulated? (5+2)

SECTION-B

Write short notes on any Three:

[3X5=15]

3. HDL Cholesterol
 4. Liver function test in obstructive jaundice
 5. Clinical applications of Electrophoresis
 6. Biomarkers of Acute myocardial infarction
 7. HbA1c and its clinical significance
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B.Sc. (Hons) Nursing First Year Supplementary Examination, October 2023
Time: 3 Hrs. NUTRITION & BIOCHEMISTRY Marks: 75

INSTRUCTIONS:

- Answer Nutrition & Biochemistry Section in separate answer booklets.
- Draw diagram wherever necessary

NUTRITION (45 MARKS)

Answer any ONE of the following:

[10X1=10]

1. Describe malnutrition- infection cycle in context to food gap. Explain the different types of undernutrition. Discuss the impact of nutritional status of a girl child on the next generation. (3+5+2)
2. Enlist the important function of Vitamin A in our body. Describe the signs of its deficiency. Discuss the preventive measures of Vitamin A deficiency. (3+5+2)

Answer any FIVE of the following:

[5X5=25]

3. Dietary Antioxidants
 4. Objectives of Integrated child development services (ICDS) scheme
 5. Cereals Vs Millets
 6. Balanced diet and its components
 7. Fluorine is called as double-edged sword: justify
 8. Nutritional factors associated with cancer
 9. Assessment of dietary intake in a family
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