


RAN-2306000902010001
Bachelor of Science (Nursing) Sem. - II
Examination September - 2025
Applied Biochemistry and Applied Nutrition and Dietetics
Time: 3 Hours]
[Total Marks: 75
સૂચના : / Instructions
(1)
નીચે દર્શાવેલ નિશાનીવાળી વિગતો ઉત્તરવહી પર અવશ્ય લખવી.
Fill up strictly the details of signs on your answer book
Name of the Examination:
Bachelor of Science (Nursing) Sem. - II
Name of the Subject :
Applied Biochemistry and Applied Nutrition and Dietetics
Subject Code No.: 2306000902010001
Seat No.:

Student's Signature
Section A: Applied Nutrition & Dietetics (50 Marks)
Q. 1. Multiple Choice Questions (Any eight) (1 mark each)
(08)

1. Which class of nutrients includes starches and sugars?
 - A. Proteins
 - B. Lipids
 - C. Carbohydrates
 - D. Minerals
2. Which nutrient helps in maintaining water balance in the body?
 - A. Iron
 - B. Sodium
 - C. Vitamin A
 - D. Calcium
3. The 'Mid-day Meal Programme' in India was launched to improve:
 - A. School attendance
 - B. Nutritional status of children
 - C. Health worker's diet
 - D. Growth of adolescents
4. Which of the following is a polysaccharide?
 - A. Maltose
 - B. Glucose
 - C. Cellulose
 - D. Sucrose

5. Which vitamin is essential for blood clotting?
 - A. Vitamin D
 - B. Vitamin A
 - C. Vitamin K
 - D. Vitamin E
6. Scurvy is caused due to deficiency of
 - A. Vitamin C
 - B. Vitamin A
 - C. Iron
 - D. Riboflavin
7. In which condition is a high protein diet recommended
 - A. Liver cirrhosis
 - B. Burns and tissue repair
 - C. Kidney failure
 - D. Diabetes
8. Recommended dietary allowance (RDA) refers to:
 - A. Average daily intake to meet nutrient needs of almost all healthy individuals
 - B. Maximum safe nutrient intake
 - C. Nutrient intake to prevent deficiency only
 - D. Amount of nutrient required for one person
9. Lipoproteins are responsible for
 - A. Protein digestion
 - B. Fat transportation
 - C. Vitamin synthesis
 - D. Mineral absorption

Q. 2. Short Answer Questions (2 marks each; answer any 6) (12)

1. Mention any four functions of proteins in the human body.
2. Saturated and Unsaturated fats
3. Enlist four common nutritional problems in India
4. What is the role of calcium in the body
5. BMR
6. State function and source of vitamin A
7. What is therapeutic diet

Q. 3. Short Notes (5 marks each; answer any 4) (20)

1. Define malnutrition. Explain its types and prevention.
2. Discuss the nutritional requirements and daily intake of proteins
3. Write a short note on food adulteration act.
4. Describe classification, sources and functions of minerals
5. Define meal planning and describe, step and factors affecting meal planning

Q. 4. Long Answer Questions (10 marks each; answer any 1) (10)

1. Define carbohydrates, Describe composition, sources and their important in diet
2. List and describe different cooking methods and their impact on nutritional value

Section B: Applied Biochemistry (25 Marks)

Q. 5. Multiple Choice Questions (any four) (1 mark each) (04)

1. In premature newborns, deficiency of which lipid component leads to Acute Respiratory Distress Syndrome (ARDS)?
A. Bile acids
B. Leukotriene
C. Thromboxane
D. Dipalmitoylphosphatidylcholine
2. The major source of extracellular cholesterol for human tissues is:
A. VLDL
B. LDL
C. HDL
D. Albumin
3. In which cell does the urea cycle occur?
A. Pancreatic cell
B. Hepatocyte
C. Bowman's gland cell
D. Urinary epithelium
4. Phenylketonuria is caused by a deficiency of which enzyme?
A. Tyrosinase
B. Aspartate transaminase
C. Phenylalanine hydroxylase
D. Alanine transaminase
5. AST and ALT are both elevated in which condition?
A. Muscular dystrophy
B. Viral hepatitis
C. Pulmonary emboli
D. Infectious mononucleosis

Q. 6. Short Answer Questions (2 marks each; answer any 3) (06)

1. Essential fatty acids
2. OGTT
3. Normal range and clinical significance of RFT
4. Fouchet test
5. Deamination

Q. 7. Short Notes (5 marks each; answer any 3)

(15)

1. Describe Krebs Cycle
 2. Heme degradation pathway
 3. Discuss the interpretation of ABG values in acid-base balance
 4. Describe types and clinical applications of ELISA
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