

**FYUGP/4th Sem/26(NEP)New  
2026**

**Four Year Under Graduate Programme (FYUGP)**

**4th Semester Examination (Under NEP)  
(New Session 2024-25)**

**FOOD AND NUTRITION (Major)**

**Paper Code : FNTMJ DC-402**

**[Basic Dietetics]**

**Full Marks : 30**

**Time : Two Hours**

*The figures in the margin indicate full marks.  
Candidates are required to give their answers  
in their own words as far as practicable.*

1. Answer any *four* questions : 2×4=8

(a) Define therapeutic diet.

(b) State any two complications of tube feeding.

(c) Differentiate between a regular diet and a soft diet.

(d) List any two physiological complications associated with obesity.

(e) Mention any two symptoms and two recommended foods for diarrhoea.

(f) Why is a high-protein diet essential during recovery from severe infections?

P.T.O.

( 2 )

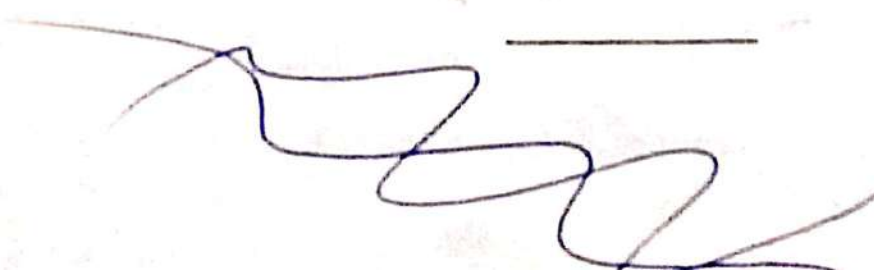
2. Answer any *three* questions :

4×3=12

- (a) Describe the characteristics and advantages of a fluid diet.
- (b) Write down the etiology and clinical manifestations of chronic constipation.
- (c) Discuss the etiological factors associated with obesity.
- (d) Write a brief note on dietary management of underweight.
- (e) Outline the etiological factors and symptoms of esophagitis.
- (f) Describe the dietary intervention required during pre-operative periods.

3. Answer any *one* question :

10×1=10

- (a) Classify fever and discuss its nutritional requirements and dietary management. 5+5
  - (b) Describe the role of low-energy diets and behavioural modification in the management of obesity. Differentiate between central parenteral nutrition and peripheral parenteral nutrition. 6+4
- 

FYUGP/4th Sem/26(NEP)New

2026

Four Year Under Graduate Programme (FYUGP)

4th Semester Examination (Under NEP)  
(New Session 2024-25)

**FOOD AND NUTRITION (Major)**

**Paper Code : FNTMJ DC-403**

**[Food Preservation Techniques]**

Full Marks : 30

Time : Two Hours

*The figures in the margin indicate full marks.  
Candidates are required to give their answers  
in their own words as far as practicable.*

1. Answer any *four* questions :

2×4=8

- (a) What is a food preservative? Name one chemical food preservative.
- (b) What is meant by cold storage? Mention the refrigeration temperature for food preservation.
- (c) Define blanching. Mention its advantage.
- (d) State the relation between water activity and growth of microorganisms.
- (e) Differentiate between drying and dehydration.
- (f) What do you mean by tunnel drying?

P.T.O.



2. Answer any *three* questions :

4×3=12

- (a) Write down the objectives and principles of food storage.
- (b) How does moisture affect microbial growth and spoilage in foods?
- (c) Write a short note on dehydration of animal products in food preservation.
- (d) Explain the importance of regulating permissible limits of chemical preservatives with examples.
- (e) Compare sun drying and spray drying with suitable examples.
- (f) How does sterilization in canning differ from simple heating in terms of microbial destruction and shelf-life extension?

3. Answer any *one* question :

10×1=10

- (a) Write the working principles of high-pressure processing (HPP) and pulsed electric field (PEF) technology in food preservation. Explain the role of irradiation in food preservation. 5+5
- (b) Differentiate pasteurization and UHT (Ultra-High Temperature) processing. Describe the principles, procedure, and applications of UHT processing in food preservation. State the advantages of dehydrofreezing in food preservation. 2+6+2

Four Year Under Graduate Programme (FYUGP)

4th Semester Examination (Under NEP)  
(New Session 2024-25)

**FOOD AND NUTRITION (Major)**

Paper Code : FNTMJ DC-401

[Basic Biochemistry]

Full Marks : 30

Time : Two Hours

*The figures in the margin indicate full marks.  
Candidates are required to give their answers  
in their own words as far as practicable.*

1. Answer any *four* questions : 2×4=8
- (a) What is lactose? Mention its nutritional significance.
  - (b) What is the biological value (BV) of protein?
  - (c) Differentiate between enzymatic and non-enzymatic browning.
  - (d) Name any two essential and two non-essential amino acids.
  - (e) What are macrominerals? Give two examples.
  - (f) Why is iodine considered an essential trace element?

P.T.O.



2. Answer any *three* questions :

- (a) Describe the properties and dietary importance of starch.
- (b) Write chemical and functional properties of proteins with special reference to denaturation and coagulation.
- (c) Explain the functions of fatty acids.
- (d) Briefly discuss hydrogenation and hydrolysis as important chemical reactions of fats and oils.
- (e) Classify lipoproteins and mention their clinical significance.
- (f) Write down the sources and deficiency disorders of Vitamin-A.

10×1=10

3. Answer any *one* question :

- (a) Define glycolysis. Write down the reactions involved in the payoff phase of glycolysis. Add a note on significance of the Tricarboxylic Acid cycle in energy metabolism.

1+6+3

- (b) Write brief notes on the following minerals, highlighting their dietary sources, physiological roles and deficiency disorders :

5+5

(i) Calcium

(ii) Iron