

**B.Sc. 1st Semester (Honours) Examination-2022-23**

**NUTRITION**

**Course ID : 12311 Course Code : SH/NUT/101/C-1**

**Course Title : Food Science and Basic Nutrition-I  
(New)**

*Time : 1 Hour 15 Minutes*

*Full Marks : 25*

*The figures in the right hand margin indicate full marks.*

*Candidates are required to give their answers in their  
own words as far as practicable.*

**Unit-I**

**1. Answer any *five* questions : 1×5=5**

(a) What do you mean by proximate principles of food?

(b) What is homopolysaccharide? Give an example.

(c) Name one single cell protein.

- (d) Give two examples of sulphur-containing amino acid.
- (e) What is Protein Efficiency Ratio?
- (f) Define acid number.
- (g) What are mixed triglycerides?
- (h) Mention any four sources of soluble dietary fibre.

### Unit-II

2. Answer any *two* questions : 5×2=10
- (a) What is mutarotation of glucose? Explain. 5
- (b) What do you mean by denaturation of protein? Name the agents that can cause denaturation. What is zwitterion? 1+2+2
- (c) Briefly describe the significance of dietary fibre. 5

- (d) Describe the following reactions—
- (i) Hydrolysis of triglycerides
- (ii) Hydrogenation of unsaturated fatty acids.

3+2

### Unit-III

3. Answer any *one* question : 10×1=10
- (a) Describe the process of chain lengthening of aldoses. How ketose is converted to isomeric aldose? Write the difference between pyranose and furanose. 5+3+2
- (b) Classify amino acid based on polarity. Describe Biuret test and Ninhydrin test in relation to protein. What do you mean by biological value of protein? 4+(2+2)+2