6th Semester General Model questions

Protein & Amino acids

Long questions (FM-5/6)

1. Write down the definition of protein? Classify it.(with definition and example)

2. Write down the function of protein in our body?

3. RDA of protein.

4. What is denaturation of protein?

5. Discuss the structure of protein. Give example.

6. Write down the chemical and physical property of protein.

7. What is amino acid? Classify it.(with definition and example)

8. Write down the chemical and physical property of amino acid.

9. Short note: Biological value of protein (BV); Net protein utilization (NPU); Protein Efficiency ratio (PER);

Isoelectric point; Zwitter ion; Peptide Bond.

10. Color test of protein: Xanthoproteic reaction; Millons reaction; Hopkins cole reaction; Ninhyrin reaction; Biuret reaction

11. Function of amino acid.

Short questions (FM-1/2/3)

1. Full form: BV, NPU, PER

2. What is essential amino acid and non-essential amino acid ?Give an example.

3. Give an example of denaturation of protein.

4. What is simple protein and conjugated protein? Give example.

5. Give example of globular protein and fibrous protein.

6. Hydration of protein.

7. Give example of Plant and Animal protein.

8. Identify the types of protein-globulin, albumin, histones, gluteins, nucleoprotein, phosphoprotein, glycoprotein, chromo proteins.

9. Hyper and hypo effect of protein.

2. CARBOHYDRATE CHEMISTRY

Long question (FM-5/6)

1. Definition of carbohydrate. Classify it. (With definition and example)

2. Function of carbohydrate.

3. Hyper and Hypo effect of carbohydrate.

4. Short note on optical isomerism and stereoisomerism.

5. Autorotation of glucose and fructose.

6. Explain Glucose and Fructose give same ozone reaction.

7. What is dietary fiber? Write down the types of dietary fiber.

8. RDA of dietary fiber?

9. Function of dietary fiber.

10. What is lignin, cellulose, hemicelluloses, and pectin? Give example.

11. Physical and Chemical properties of mono, di and polysaccharides.

Short question :(1/2/3)

1. D-L stereoisomerism

2. Molisch test, Seliwanoff test, Tollens test

3. Osazone formation of glucose.

4. Benedict's test and Fehling's test

5. Reducing sugar and non-reducing sugar. Example

6. Conversion-D-Glucose to D-Fructose

7. Give example of mono, di, and poly saccharide.

6. Structure of D &L Glucose and Fructose

7. What is Asymmetric C?

8. Write down the name and structure of Aldose and Kitose sugar.

9. Kiliani Fischer Reaction.

10. Ruff Degradation

11. Which sugar found in milk?

12. Sucrose contains?

13. Is the monosaccharide a D sugar or L sugar.

14. General formula of carbohydrate.

3. LIPID CHEMISTRY

SHORT QUESTIONS: (1 OR 2 MARKS)

1. What is the difference between fats and oils?

2. What is PUFA?

3. What is MUFA?

4. Give the structure of Linoleic acid.

. Write the name of one W-3 fatty acid.

6. What is phospholipid?

7. What is glycolipid?

8. Define sterols & steroids.

9. Define Eicosanoid with example.

10. What is cholesterol?

11. What is liposome?

12. Write about Essential fatty acids.

13. What is the relation between Trans fatty acids and cardiovascular disease?

14. Role of fats in the diet.

SHORT NOTES: (5 MARKS)

1. Esterification of fatty acids.

2. Melting point of fat is a great concern for food industry – explain.

3. Emulsification.

4. Hydrogenation - good or bad – explains.

5. Rancidity of fats.

6. Saponification number.

7. Iodine number.

8. Acid number.

4.WATER

1. Definition of Water in Food.(2)

2. What is Water Activity?(3)

3. Describe the Phase transition of food containing water.(5/6)

4. How dose water activity is influence on quality and stability of food?(4/5)

5. Write down the methods of stabilization of food systems by control of water activity?(5/6)

6. ENZYMES

SHORT QUESTIONS: (1 OR 2 MARKS)

1. What is enzyme?

2. What is Apo enzyme?

3. What is coenzyme?

4. What is 'Ec No.'?

5. Define with example: Oxidoreductase / Transferase / Hydrolases / Lyases / Isomerases / Ligases.

6. What is 'active site of enzyme'?

7. Define 'Km'.

8. What is enzyme inhibition?

9. What is isozyme?

10. Define 'rate limiting enzyme'.

11. What is 'ribozyme'?

12. What is abzyme?

13. What is 'pro-enzyme'?

SHORT NOTES: (5 MARKS)

1. Classification of enzymes.

2. $E + S \rightleftarrows ES \rightleftarrows E + P$ – explain.

3. Lock and key model.

4. Koshland's induced fit model.

5. Linear transformation of Machaelis–Menten equation.

LONG QUESTIONS: (10 MARKS)

1. Machaelis–Menten kinetics of Enzymes – explain the process.

2. Enzyme inhibition – explain with classifications.