 M.Sc. RNLK-/106 P2/21

2021

Food Science & Nutrition

[First Semester]

Paper - 103

Full Marks : 40

Time : 2 hours

The figures in the right-hand margin indicate marks.

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

Illustrate the answers wherever necessary.

Group-A

Answer any five questions. **5×2=10**

1. What stimulates triacylglycerol synthesis? Where are triacylglyderols synthesized in the body?
2. Which carbohydrate molecules used in food industry and as prebiotics?
3. Write any two examples of plant sterols.
4. What is Ramchandran plot?

5. What are the roles of chaperones in protein folding?
6. What happens when a protein is misfolded
7. Define BPG shunt with significance.
8. Write the insulin singal transduction pathway.

Group - B

Answer any four questions. **4×5=20**

9. Give a forward and reverse steps of glycolysis and gluconeogenesis in a single flow chart. $2\frac{1}{2}+2\frac{1}{2}$
10. Describe the pathway of HD synthesis. 5
11. Briefly describe any two glycogen storage disease. $2\frac{1}{2}+2\frac{1}{2}$
12. Draw the structures of Micelle, Bilayer and Liposome. 2+1+2
13. Give a schematic flow chart of palmitate synthesis with proper enzymes and co-enzymes. 5
14. Write the non-oxidative phases of HMP pathway with significance. 3+

Group - C

Answer any one of the following. **1×10=10**

1. Classify oxidoreductases mentioning EC number and biological role. Distinguish between tertiary and quaternary structures of proteins. (4+3)+2

2. Draw and describe different types of fatty acids with proper momenclature. Write the importance of Km and Vmax. 5+5