

*SH-III/Nutrition/301C-5(T)/19***B.Sc. Semester III (Honours) Examination, 2018-19****NUTRITION****Course ID: 32311****Course Code: SHNUT-301C-5(T)****Course Title: Nutritional Biochemistry-I****Time: 2 Hours****Full Marks: 40**

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

1. Answer *any five* out of the following: 2×5=10
 - (a) Define deamination.
 - (b) What are lipoproteins?
 - (c) Define Km.
 - (d) What are holoenzyme and apoenzyme?
 - (e) Name two essential amino acids with structural formula.
 - (f) Write the structures of the co-enzyme forms of pyridoxine necessary for transamination.
 - (g) How many ATPs are produced after one turn of glycolysis?
 - (h) What are ketone bodies?

2. Answer *any four* out of the following: 5×4=20
 - (a) Briefly describe the urea cycle. 5
 - (b) Write down the properties of enzymes. 5
 - (c) What is 'glycogenolysis'? Describe the process. 1+4=5
 - (d) What do you mean by substrate level phosphorylation? Explain with example. 3+2=5
 - (e) Describe how pyruvic acid enter into the TCA cycle. 5
 - (f) Write a short note on the mitochondrial electron transport chain. 5

3. Answer *any one* out of the following: 10×1=10
 - (a) What are trans fatty acids? What is carnitine transport system? Give the reaction sequence of the β -oxidation pathway of a saturated fatty acid with 16 carbon atoms. 2+4+4=10
 - (b) What is gluconeogenesis? Write down the irreversible steps of the glycolytic pathway. How many ATPs are produced if one glucose molecule enter into TCA cycle — Enumerate. 2+4+4=10