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PG CBCS
M.Sc. Semester-I Examination, 2020
NUTRITION & DIETETICS
 PAPER: NUD 103
METABOLISM OF MACRO AND MICRO NUTRIENTS AND ITS MOLECULAR BASIS

Full Marks: 40**Time: 2 Hours****Write the answer for each unit in separate sheet****UNIT-5****Biophysical Aspect of Nutrition****Answer any two questions from the following: (250 Words)****2X10=20**

1. Differentiate hexokinase and glucokinase. Write the different steps of Glycolysis with diagram. 2+8
2. Write down the hormonal regulation in β oxidation of fatty acids. Why Krebs cycle is known as TCA cycle. 6+4
3. Describe the different features of TCA cycle. State the role of α ketoglutarate dehydrogenase complex in TCA cycle. 4+6
4. Define omega oxidation. Write the different steps of β oxidation. Explain the energetic of β oxidation of 16 carbon fatty acids. 2+5+3
5. Phosphofructokinase is the rate limiting enzyme or pacemaker of Glycolysis-explain it. Describe the pathway of Glycogenolysis. 5+5
6. Why mitochondria is called the power house of cell. What is Redox Potential (E_0)? Explain the mechanism of oxidative phosphorylation. 2+4+4

UNIT-6**Micronutrients in Nutrition****Answer any two questions from the following: (250 Words)****2X10=20**

1. Describe the mechanism of iron absorption in human body. How iron is transported in the plasma? Mention the factors affecting iron absorption. 3+2+5
2. Write about the iodine metabolism. What are the consequences of iodine deficiency? 6+4
3. Describe the role of calcium and vitamin D in bone health. 5+5
4. Write the importance of folic acid in reproduction. Mention its important sources. 8+2
5. Briefly describe the role of vitamin A and vitamin C as antioxidant. 5+5
6. 'High intake of sodium can cause hypertension' – explain. Write the clinical features of fluorosis. 5+5
