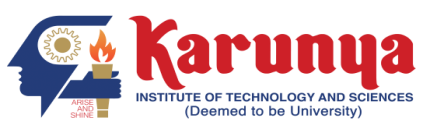
Reg. No. \_\_\_\_\_\_\_\_\_\_\_\_



**End Semester Examination – Nov / Dec – 2019**

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| --- | --- | --- | --- |
|  |  |  |  |
| **Code :** | **17FP2009** | **Duration :** | **3hrs** |
| **Sub. Name :** | **FOOD BIOCHEMISTRY AND NUTRITION** | **Max. Marks :** | **100** |

**ANSWER ALL QUESTIONS (5 x 20 = 100 Marks)**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Q. No.** | **Sub Div.** | **Questions** | **Course**  **Outcome** | **Marks** |
| 1. | a. | Explain the mechanism and significance of mitochondrial oxidative phosphorylation. | CO1 | 10 |
| b. | Describe the steps involved in the breakdown of glucose with its significance. | CO1 | 10 |
| **(OR)** | | | | |
| 2. | a. | Illustrate the interconnection between carbohydrate and protein metabolism. | CO2 | 10 |
| b. | Describe the gluconeogenesis pathway with diagram. | CO2 | 10 |
|  |  |  |  |
| 3. | a. | Describe the palmitate synthesis from acetyl CoA. | CO2 | 10 |
| b. | With a neat flowchart, describe the elongation and desaturation of fatty acid. | CO2 | 10 |
| **(OR)** | | | | |
| 4. |  | Explain the biosynthesis of following: (4 x 5)   1. Sulphur containing amiono acid 2. Aliphatic amino acid 3. Aromatic amino acid 4. Basic amino acid | CO2 | 20 |
|  |  |  |  |  |
| 5. | a. | Discriminate the biochemical and clinical methods of assessment of nutritional status. | CO3 | 10 |
| b. | Discuss the nutritional importance and nutritional value of carbohydrate and dietary fibre. | CO4 | 10 |
| **(OR)** | | | | |
| 6. | a. | Discuss the pathologic effects of **marasmus** in children. | CO5 | 10 |
| b. | Illustrate the significance and regulations of food fortification and nutritional labelling. | CO5 | 10 |
|  |  |  |  |  |
| 7. | a. | Elaborately explain the inborn errors of lipid metabolism. | CO3 | 10 |
| b. | Describe the disorders of liver and the role of nutrition. | CO3 | 10 |
| **(OR)** | | | | |
| 8. |  | Explain the mechanism of plant metabolites as an antinutritional factors with examples. | CO5 | 20 |
|  | | **Compulsory**: |  |  |
| 9. | a. | Elaborate on your own strategies for healthy ageing by formulating a food with improved nutritional characteristics. | CO6 | 10 |
| b. | Discuss in detail about prevention of diabetes in nutritional aspects. | CO4 | 10 |