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



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

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **Code : 17BT2010** | | | | | | **Duration** | | | | | | | **:** | **3hrs** | |  |
|  | **Sub. Name : METABOLISM AND BIOENERGETICS** | | | | | | **Max. Marks :** | | | | | | | | **100** | |  |
|  |  |  |  |  | **ANSWER ALL QUESTIONS (5 x 20 = 100 Marks)** | | | | | | | | |  |  |  |  |
|  |  |  |  |  |  |  |  | | |  | |  | |  |  |  |  |
|  | **Q.** | **Sub** |  |  |  | **Questions** |  | | |  | |  | | **Course** |  | **Marks** |  |
|  | **No.** | **Div.** |  |  |  |  |  | | |  | |  | | **Outcome** | |  |  |
|  | 1. |  |  | How glucose is converted in to Pyruvate? Explain with the stepwise | | | | | | | |  | | CO1 |  | 20 |  |
|  |  |  |  | reactions. | | |  | | |  | |  | |  |  |  |  |
|  |  |  |  |  |  | **(OR)** |  | | |  | |  | |  |  |  |  |
|  | 2. |  |  | Elaborate on the reactions of TCA cycle. | | | | | | | |  | | CO1 |  | 20 |  |
|  |  |  |  |  | |  | | | | | |  | |  |  |  |  |
|  | 3. |  |  | Give a detailed account on the degradation of Leucine and Isoleucine. | | | | | | |  | | CO2 | |  | 20 |  |
|  |  |  |  |  |  | **(OR)** |  | | |  | |  | |  |  |  |  |
|  | 4. |  |  | How urea is produced in our body? Justify with suitable reactions. | | | | | | | |  | | CO2 |  | 20 |  |
|  |  |  |  |  | |  | | | | | |  | |  |  |  |  |
|  | 5. |  |  | How cholesterol is synthesized in our body? Elaborate it with | | | | | | |  | | CO3 | |  | 20 |  |
|  |  |  |  | suitable path ways. | | | |  | |  | |  | |  |  |  |  |
|  |  |  |  |  |  | **(OR)** | |  | |  | |  | |  |  |  |  |
|  | 6. |  |  | Explain the mechanism of fatty acid biosynthesis and its degradation pathway. | | | |  | |  | |  | | CO3 |  | 20 |  |
|  |  |  |  |  | |  | | | | |  | |  | |  |  |  |
|  | 7. |  |  | Give an account on the anabolism of Purines. | | | | | | | |  | | CO4 |  | 20 |  |
|  |  |  |  |  |  | **(OR)** | | |  |  | |  | |  |  |  |  |
|  | 8. |  |  | Describe the catabolism of thymine and cytosine with suitable reactions. | | | | |  |  | |  | | CO4 |  | 20 |  |
|  |  |  | **Compulsory**: | | | | | | | | |  | |  |  |  |  |
|  |  | | | | | | | | | | | | | | | |  |
|  | 9. |  |  | Describe in detail the mechanism of chemiosmotic theoryby | | | | | | | |  | | CO5 |  | 20 |  |
|  |  |  |  | Oxidative phosphorylation. | | |  | | |  | |  | |  |  |  |  |