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



**UNIVERSITY**

(Karunya Institute of Technology & Sciences)

(Declared as Deemed-to-be University under Sec.3 of the UGC Act, 1956)

**End Semester Examination – April/May – 2017**

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| **Code :** | **14BT2008** | **Duration :** | **3hrs** |
| **Sub. Name :** | **METABOLISM AND BIOENERGETICS** | **Max. marks :** | **100** |

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

|  |  |  |  |  |
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| **Q. No.** | **Sub Div.** | **Questions** | **Course**  **Outcome** | **Marks** |
| 1. | a. | Distinguish between glycogenesis and glycogenolysis. | CO1 | 15 |
|  | b | Classify the various types of glycogen storage diseases. | CO1 | 5 |
| (OR) | | | | |
| 2. |  | Demonstrate the reactions of TCA cycle in detail. | CO1 | 20 |
|  |  |  |  |  |
| 3. | a. | Discuss the biosynthesis of phenyl alanine. | CO3 | 10 |
|  | b. | Evaluate the fate of isoleucine in degradation pathway. | CO3 | 10 |
| (OR) | | | | |
| 4. |  | Summarize the reactions of urea cycle. | CO2 | 20 |
|  |  |  |  |  |
| 5. |  | Explain the formation of cholesterol. | CO3 | 20 |
| (OR) | | | | |
| 6. | a. | Outline the reactions of ketone bodies. | CO2 | 10 |
|  | b. | How are fatty acids degraded by beta oxidation? | CO3 | 10 |
|  |  |  |  |  |
| 7. |  | Elaborate on ATP production by oxidative phosphorylation. | CO3 | 20 |
| (OR) | | | | |
| 8. | a. | Give the importance of bioenergetics and its associated reactions. | CO2 | 10 |
|  | b. | Identify the difference between atherosclerosis and hypercholesterolemia. | CO3 | 10 |
|  | |  |  |  |
|  | | **Compulsory**: |  |  |
| 9. |  | Elaborate the reactions of pyrimidine biosynthesis and degradation. | CO2 | 20 |

ALL THE BEST