


**NAVRACHANA
UNIVERSITY**
a UGC recognized University

School: School of Science
Program/s: MSc.-LS
Year: 2nd **Semester:** III
Examination: End Semester Examination
Examination year: December - 2022

Course Code: LS226, **Course Name:** Metabolism Integration and Regulation

Date: 02/12/2022

Time: 11.30 am to 13.30 pm

Total Marks: 40

Total Pages: 01

Instructions:

- Write each answer on a new page.
- Draw the diagram wherever necessary
- Stick to the Word Limit given in the Questions.

Q. No	Details	Marks	CO	BTL
Q.1	Answer the following Questions: 1. How many ATPs are produced during the carbohydrate metabolism. Calculate and give the justification 2. Which is considered as the Complex II in ETC. 3. Which are the rate limiting enzymes in the glycolysis pathway 4. What is the role of FADH ₂ and NADH produced from the Krebs Cycle. 5. List down the role of ATP synthase in the ETC. 6. Define the fate of pyruvate in the metabolism? What happens if levels go down? 7. Write the Difference between Transamination and deamination 8. State at which step the metabolism in human body is integrated. 9. What is the role of Glycogen in the body? What happens if the metabolism is getting disturbed? 10. State the role of key enzymes in Krebs cycle? State its significance	2x10=20	CO 1 CO2 CO3 CO4	BTL 1 BTL2 BTL3 BTL4
Q2.	Explain in detail the following: 1. Fate of Glucose in the body. 2. Storage diseases of any one carbohydrate 3. Overview of metabolism map 4. Explain complexes with minute details ultimately leading to generation of energy molecules in cell – diagrammatically explain. 5. Overview of glycolysis in starved conditions.	5x4=20 Marks		