



WEST BENGAL STATE UNIVERSITY

B.Sc. Honours 4th Semester Examination, 2022

PHYACOR08T-PHYSIOLOGY (CC8)

Time Allotted: 2 Hours

Full Marks: 40

*The figures in the margin indicate full marks.
Candidates should answer in their own words and adhere to the word limit as practicable.*

Answer any five questions from the following

8×5 = 40

1. (a) Distinguish between substrate level and oxidative phosphorylation. 3+1+4
(b) What is uncoupler?
(c) Describe the amphibolic role of TCA cycle.
2. (a) Describe the process of β -oxidation of saturated fatty acid. 5+3
(b) Calculate the number of ATP generated from complete oxidation of palmitic acid.
3. (a) How Ketone bodies are synthesized? 4+4
(b) Discuss the role of lipoproteins in transport of lipids.
4. (a) What is meant by ammonia toxicity? 2+6
(b) How is ammonia detoxicated in our body?
5. (a) How is tyrosine formed from phenylalanine in the body? 2+4+2
(b) State the biochemical process of creatine biosynthesis in the body mentioning sites/organs for each step.
(c) How is melatonin formed in the body?
6. (a) What are the normal values RQs of carbohydrates, proteins and fats? 2+1+1+4
(b) What is supplementary value of protein?
(c) What is antivitamin?
(d) Describe the role of vitamin D in calcium metabolism.

7. (a) Discuss the regulatory steps of glycolysis. 3+3+2
(b) What are the steps involved in the conversion of pyruvic acid to acetyl CoA?
(c) Write the significance of 2, 3-BPG.
8. (a) Name the vitamins that play key roles in TCA cycle and mention the steps. 4+3+1
(b) Write the functions of an antioxidant vitamin.
(c) State the function of Selenium.

N.B. : *Students have to complete submission of their Answer Scripts through E-mail / Whatsapp to their own respective colleges on the same day / date of examination within 1 hour after end of exam. University / College authorities will not be held responsible for wrong submission (at in proper address). Students are strongly advised not to submit multiple copies of the same answer script.*

—x—