

U.G. 4th Semester Examination - 2024

PHYSIOLOGY

[HONOURS]

Course Code : PHYSIOL-H-CC-T-8

Full Marks : 40

Time : 2½ Hours

The figures in the right-hand margin indicate marks.

Candidates are required to give their answers in their own words as far as practicable.

1. Answer any five questions: 2×5=10
- a) Define PEM.
 - b) What do you understand by oxidative phosphorylation?
 - c) Write the physiological importance of glucokinase.
 - d) What are iodine deficiency diseases?
 - e) Define carnitine shuttle.
 - f) What are lipoproteins?
 - g) Write the nutritional significance and daily requirement of zinc.
 - h) What are ketone bodies?

[Turn Over]

2. Answer any two questions: $5 \times 2 = 10$

a) What is BMR? Name the factors that influence BMR. $1 + 4 = 5$

b) Briefly discuss the process of beta oxidation of fatty acids. 5

c) What is Cori cycle? Write the physiological significance of this metabolic pathway. $1 + 4 = 5$

d) What is diabetic ketoacidosis? Briefly discuss the process of ketogenesis. $2 + 3 = 5$

3. Answer any two questions: $10 \times 2 = 20$

a) Explain TCA cycle with diagram. What is malate-aspartate shuttle? $8 + 2 = 10$

b) Discuss about the process of transamination and oxidative deamination. What is NPU? $(4 + 4) + 2 = 10$

c) Discuss the enzymatic reactions of glycogenesis with their regulation. What are glycogen storage diseases? $8 + 2 = 10$

d) Write the mechanism of iron absorption and circulation in body. Discuss the causes of iron-deficiency anemia. $8 + 2 = 10$