

Reg. No. _____

Karunya University

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

End Semester Examination – November / December 2009

Subject Title: FOOD BIOCHEMISTRY AND NUTRITION

Time : 3 hours

Subject Code: BC204

Maximum Marks: 100

Answer ALL questions PART – A (10 x 1 = 10 MARKS)

1. The process of formation of glucose from fats is called _____.
2. The number of peptide bonds in a hexapeptide is _____.
3. _____ is the formula for protein efficiency ratio.
4. In amino acid catabolism, the deficiency of carbonyl phosphate synthetase-I in liver leads to _____ condition.
5. The type of diabetes mellitus due to the insulin receptor defect is designated as _____.
6. What is known as amphibolic pathway? Why?
7. How is the steroid nucleus chemically named?
8. Mention any two examples of nutritionally essential aminoacids.
9. Dietary trypsin inhibitor will lead to what kind of effect?
10. Expand ROS and cite examples.

PART – B (5 x 3 = 15 MARKS)

11. Define bioenergetics and list the high energy compounds.
12. Give the chemical structure and functions of cholesterol.
13. Define calorific value and explain why the calorific value of fats is higher than that of glucose.
14. Discuss the inborn errors of glycogen metabolism in brief.
15. Comment on the dietary factors that may increase and decrease the cancer risk.

PART – C (5 x 15 = 75 MARKS)

16. Bring out the HMP shunt pathway and explain its biological significance.
(OR)
17. a. Depict how will you link protein degradation with urea cycle. (10)
b. Depict the electron transport chain reaction. (5)
18. Describe the β -oxidation pathway of fatty acids with reference to stearic acid (C_{18}).
(OR)
19. Bring out both the de novo and salvage pathways for biosynthesis of pyrimidine bases.
20. Write an essay on the balanced diet and its significance.
(OR)
21. a. Discuss the pathologic effects of protein malnutrition in children. (7)
b. How will you determine NPU and PER? (8)
22. Describe the hepatic and renal diseases in brief.
(OR)
23. Give an account of the dietary sources and activity of some antinutritional factors.
24. Discuss in detail the nutrients supposed to be most essential during pregnancy.
(OR)
25. Describe the concept of ageing and comment on the nutritional factors that can delay the ageing process.