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

**Karunya University**

**(Karunya Institute of Technology and Sciences)**

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

**Supplementary Examination - June 2011**

**Subject Title: BIOCHEMISTRY Time: 3 hours**

**Subject Code: 10NT204 Maximum Marks: 100**

#### **Answer ALL questions**

**PART – A (10 x 1 = 10 MARKS)**

1. The name zwitter which is derived from the German word means

a. dipolar b. hybrid c. cation d. anion

2. Mixture of proteins can be separated according to their molecular by SDS-PAGE

a. shape b. size c. length of diameter d. both b& c

3. Fatty acids are carboxylic acids with

a. hydrocarbon side chain b. hydrocarbon long chain

c. saturated fatty acids d. palmitic acids

4. Fructose is a

a. aldopentose b. aldohexose c. ketotetrose d. Ketohexose

5. The non-protein part of a conjugated protein or enzyme is known as

a. coenzyme b. apoenzyme c. holoenzyme d. prosthetic group

6. Procarboxypeptidase + trypsin → \_\_\_\_\_\_\_\_\_\_.

7. The transfer of an amino group from an amino acid to a keto acid is known as

a. deamination b. amino transformation c. transamination

d. interconversion

8. Example for steroid hormones

a. glucocorticoids b. mineral corticoids c. sex hormones d. All the above

9. The synthesis of glycogen from glucose is known as

a. glycogenolysis b. glycogenesis c. glyconeogenesis d. glycogenesis

10. HMP shunt is also called

a. Pentose phosphate pathway b. pyrophosphate pathway

c. Phosphate gluconate pathway d. fructose 6- phosphate pathway

**PART – B (5 x 3 = 15 MARKS)**

11. Comment on gel filtration chromatography.

12. How will you classify carbohydrates in general?

13. Write a short note on modes of enzyme action.

14. Discuss about signal transduction.

15. Explain about HMP shunt pathway.

**PART – C (5 x 15 = 75 MARKS)**

16. Explain in detail about 1°, 2° and 3° structure of proteins. Add a note on functions of proteins and their medical application.

(OR)

17. Describe nucleic acid biosynthesis in detail with a neat diagram.

18. What are the major classifications of lipids? Explain the structure and function of lipids in detail.

(OR)

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19. Describe in detail about the metabolism of carbohydrates with a neat diagram.

20. Give an account of classification of enzymes. Add a note on industrially important enzymes.

(OR)

21. How will you derive Michael’s Menten equation? Explain in step by step method.

22. Explain the role of signal transduction in the metabolic pathways.

(OR)

23. Describe in detail about metabolic pathways with recurring motifs.

24. Write a short note on

a. Glycolysis b. TCA cycle c. Electron transport chain

(OR)

25. Give a detailed account on amino acid metabolism with diagrammatic sketch.