(Following Paper ID and Roll No. to be filled in your Answer Book)

PAPER ID : 150511

Roll No. ☐☐☐☐☐☐☐☐☐☐

B. Pharma. (Semester-V)

SPL. THEORY EXAMINATION, 2014-15

PHARMACEUTICAL CHEMISTRY-IV

(BIO-CHEMISTRY)

Time : 3 Hours]   *[Total Marks : 80*

Note: Attempt all questions.

1.   Answer any two parts :   8×2=16

     (a) Define the word enzymes. Give the nomenclature and classification of enzymes with suitable examples.

     (b) What do you mean by isoenzymes? What is the significance of it in biochemical analysis?

     (c) Define coenzymes. "Justify" how vitamins act as coenzymes?

2. Answer any two parts : 8×2=16

(a) Give the reactions involved in EM pathway. Discuss them in brief.

(b) What do you mean by gluconeogenesis? Discuss the various routes through which it occurs in our body.

(c) Discuss the role of TCA in carbohydrates metabolism? Justify it with suitable examples.

3. Answer any two parts : 8×2=16

(a) Define lipids. Discuss the synthesis of fatty acids. Write a note on essential fatty acids.

(b) Narrate the utilization and biological significance of ketone bodies? Define ketosis and write the problems associated with it.

(c) Define oxidative phosphorylation? Write the mechanisms involved in explaining how ATP synthase works.

4. Answer any two parts : 8×2=16

(a) Define amino acids. Discuss the metabolism of tryptophan with some diseases associated with its metabolism.

(b) Give the biosynthesis and significance of creatine, dopamine and histamine.

(c) What do you mean by replication? Write the steps involved. Discuss the post translational modifications in brief.

5. Answer any two parts : 8×2=16

(a) Write the steps of protein synthesis in brief. How antibiotics works in inhibition of protein synthesis? Discuss briefly.

(b) What do you mean by genes? Discuss the operon model for the regulation of prokaryotes.

(c) Write the significance of studying the regulation of gene expression in eukaryotes.

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