[Total No. of Questions - 9] [Total No. of Printed Pages - 2]
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B. Pharmacy 5th Semester Examination

Pharmaceutical Chemistry-V (Biochemistry) (O.S.)

HBP-301

Time : 3 Hours **Max. Marks : 80**

The candidates shall limit their answers precisely within the answer-book (40 pages) issued to them and no supplementary/continuation sheet will be issued.

Note : Answer five questions. Attempt at least one question from each Section A, B, C and D. Section E is compulsory. All questions carry equal marks.

SECTION - A

1. (a) Explain mechanism of enzymatic action. **(4)**

   (b) Write about concept of enzyme inhibition and explain diagnostic application of enzymes with examples. **(12)**

2. (a) Define bioenergetics and discuss concept of free energy. **(8)**

   (b) Write a note on energy rich compounds and their significance. **(8)**

SECTION - B

3. (a) Write about HMP shunt pathway. **(8)**

   (b) Explain about amphibolic nature of citric acid cycle. **(8)**

4. (a) Discuss gluconeogenesis. **(8)**

   (b) Explain role of hormones in maintenance of blood sugar level. **(8)**

SECTION - C

5. What is nitrogen cycle? Sketch the basic events involved in it. What are the enzymes involved in this cycle? **(16)**

6. What is substrate level of phosphorylation. Explain its significance. Illustrate two reactions in which such phosphorylation reaction occur. **(16)**

SECTION - D

7. What is gene amplification? Describe polymer chain reaction. **(16)**

8. (a) Define genetic code and its importance. **(8)**

   (b) Discuss regulation of gene expression. **(8)**

SECTION - E

9. Write short note on:

   (a) Jaundice

   (b) Inhibitors of respiratory chain.

   (c) DNA.

   (d) Role of metals as coenzymes.

   (e) Name two sulfure containing amino acids.

   (f) What is glucagon?

   (g) Give the caloric value of nutrients.

   (h) Iron. **(2×8=16)**