*Name* : .....

*Roll No.* : .....

*Invigilator's Signature :* .....

**CS/B.PHARM(OLD)/SEM-5/PT-504/2011-12**

**2011**

# PHARMACEUTICAL CHEMISTRY
# ( BIOCHEMISTRY )

*Time Allotted* : 3 Hours Full Marks : 70

*The figures in the margin indicate full marks.*

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

## GROUP – A

## ( Multiple Choice Type Questions )

1. Choose the correct alternatives for any *ten* of the following : $10 \times 1 = 10$

   i) Sulphur containing amino acids after catabolism produces a substance which is excreted

   a) $SO_2$ b) $HNO_3$

   c) $H_2 SO_4$ d) $H_3 PO_4$ .

   ii) The end product of amino acid nitrogen metabolism in uricotelic animals is

   a) Bilirubin b) Urea

   c) Uric acid d) Biliverdin.

iii) Transamination is a

a) irreversible process b) reversible process

c) both (a) & (b) d) none of these.

iv) Oxidative conversion of many amino acids to their corresponding alpha ketoacids occurs in mammalian at

a) Liver & Kidney b) Adipose tissue

c) Pancreas d) Intestine.

v) The biosynthesis of urea occurs mainly in the liver

a) Cytosol b) Mitochondria

c) Microsome d) Nuclei.

vi) The transaminase activity needs the co-enzyme

a) ATP b) $B_6$ $PO_4$

c) $FAD^+$ d) $NAD^+$.

vii) The purine nucleotides act as the components of

a) $FAD^+$ b) $NAD^+$

c) $NADP^+$ d) all of these.

viii) Thymine and Deoxyribose form

a) Deoxycytidine b) Deoxyadenine

c) Deoxythymidine d) Deoxyuridine.

ix) The most abundant intracellur free nucleotide

a) ATP b) $FAD^+$

c) $NAD^+$ d) $NADP^+$.

x) Within the single turn of DNA the number of base pair exists

a) 4 b) 6

c) 8 d) 10s.

xi) DNA is denatured by

a) heat b) acid

c) alkali d) none of these.

**GROUP – B**

**( Short Answer Type Questions )**

Write short notes on any *three* of the following. 3 × 5 = 15

2. Positive nitrogen balance & Negative nitrogen balance.

3. Salvage pathway of purine nucleotides.

4. Name the purine & pyrimidine bases found in nucleic acids.

5. Synthesis of urea in human body.

**GROUP – C**

**( Long Answer Type Questions )**

Answer any *three* of the following. 3 × 15 = 45

6. Draw DNA double helix, describe its main features and add notes on DNAs functions.

7. Name the different types of RNAs. Write main features and functions of *m*RNA.

8. Describe the metabolic fate of Phenyl alanine & Tyrosine in the body and its importance in biochemistry.

9. Explain the following :

   a) DNA as gene

   b) Denaturation of DNA

   c) Carcinogens

   d) Mutations.