



Name : .....

Roll No. : .....

Invigilator's Signature : .....

**CS/B.Pharm (OLD)/SEM-5/PT-504/2010-11**

**2010-11**

**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 × 1 = 10
- i) The mutation which leads to a premature termination of amino acid incorporation into peptide chain is called
- a) silent mutation                      b) missense mutation  
c) nonsense mutation                  d) frameshift mutation.
- ii) Generally, AUG is known as
- a) start codon                              b) stop codon  
c) anticodon                                d) nonsense codon.
- iii) The primary source of sulphur is
- a) cysteine                                  b) cystine  
c) methionine                              d) homocysteine.



CS/B.Pharm (OLD)/SEM-5/PT-504/2010-11



- xi) Which of the following is known as a conditionally essential amino acid ?
- a) Tryptophan                      b) Tyrosine  
c) Phenyl alanine                  d) Histidine.
- xii) The nitrogenous base that is never found in the genetic code is
- a) adenine                              b) guanine  
c) thymine                              d) uracil.
- xiii) The repeat sequence of nucleotides in telomeres is
- a) TTGGGA                              b) TTAGGG  
c) GGGAAT                              d) TTGAGA.

**GROUP – B**

**( Short Answer Type Questions )**

Answer any *three* of the following.                  3 × 5 = 15

2. Write a short note on the genetic code.
3. Write a short note on the sulphur cycle.
4. Write briefly about mutations and their consequences.
5. Explain positive and negative nitrogen balances.
6. Write about the salvage pathway of purine nucleotides.



**GROUP – C**

**( Long Answer Type Questions )**

Answer any *three* of the following.  $3 \times 15 = 45$

7. Discuss about the codon-anticodon recognition. What are the different inhibitors of protein synthesis ? How does cystic fibrosis disease initiate in body ? Write a short note on chaperones.  $4 + 6 + 2 + 3$
8. a) What is the normal range of total bilirubin concentration in serum ?
- b) Discuss about the different types of jaundice.
- c) Schematically represent the degradation of Hemoglobin to bile pigments.
- d) Mention the functions of Heme oxygenase, Biliverdin reductase and Bilirubin glucuronyl transferase.
- e) What is the difference between urobilin and stercobilin ?  $1 + 7 + 3\frac{1}{2} + 3 + \frac{1}{2}$
9. Describe the metabolic fate of phenyl alanine & tyrosine in the body and its importance in biochemistry.
10. Describe the urea cycle and discuss the metabolic disorder associated to it.  $10 + 5$
11. a) What are the types of DNA damage and how can they be repaired ?
- b) Discuss about the DNA replication process in brief.  $( 4 + 4 ) + 7$