

GUJARAT TECHNOLOGICAL UNIVERSITY**B.PHARM- SEM-IV-EXAMINATION – MAY 2012****Subject code: 240005****Date: 29/05/2012****Subject Name: Pharmacology-I****Time: 10:30 am – 01:30 pm****Total Marks: 80****Instructions:**

1. Attempt any five questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.

- Q.1** (a) Give the advantages and disadvantages of sublingual route of drug administration. **06**
- (b) Explain how lipid solubility and ionization of a drug affects its absorption? **05**
- (c) Enumerate various factors that modify drug action. Explain how dose in children may be calculated from adult dose? **05**
- Q.2** (a) Define and explain the following terms (any two): **06**
- (i) Bioequivalence
- (ii) Drug tolerance
- (iii) Apparent volume of distribution
- (b) Write a short note on Phase II reactions involved in drug metabolism **05**
- (c) Explain “receptor occupation theory” and “two state receptor model theory” for drug- receptor interactions. **05**
- Q.3** (a) Write in brief the gating and signal transduction mechanisms of G-protein coupled receptors. **06**
- (b) Differentiate competitive and non-competitive antagonism. **05**
- (c) Explain pharmacokinetic drug- drug interactions with examples. **05**
- Q.4** (a) Write a short note on various types of preclinical studies carried out during development a new investigational drug. **06**
- (b) Enumerate various types of adverse drug effects. **05**
- (c) Write therapeutic uses of prostaglandin analogues. **05**
- Q.5** (a) Write adverse effects and uses of H₁- receptor antagonists. **06**
- (b) Describe neurohumoral transmission. **05**
- (c) Explain Dale’s vasomotor reversal phenomenon. **05**
- Q. 6** (a) Enlist location and actions mediated by adrenergic receptor subtypes **06**
- (b) Write a note on treatment of organophosphorous poisoning. **05**
- (c) Write the therapeutic uses of cholinergic blocking drugs. **05**
- Q.7** (a) Classify cholinergic drugs. **06**
- (b) Enumerate pharmacological actions of adrenergic blocking drugs. **05**
- (c) Describe mode of action and therapeutic uses of local anaesthetics. **05**
