

Seat No.: _____

Enrolment No. _____

GUJARAT TECHNOLOGICAL UNIVERSITY
Diploma Pharmacy (Second Year) Examination – May/June- 2011

Subject code: 420002

Subject Name: Pharmaceutical Chemistry II

Date: 27/05/2011

Time: 02.30 pm – 05.30 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) Write the structure of the following and name any one drug having the following structure. **07**
(i) Aziridine (ii) Imidazole (iii) Indole (iv) Isoxazole
(v) Piperazine (vi) Piperidine (vii) Pyrazole.
- (b) The following compound has heterocyclic and carboxylic rings fused together. **05**
Write their structure and number different positions in each.
(i) Benzimidazole (ii) Isoindoline (iii) Isoquinoline
(iv) Phenothiazine (v) Quinoline
- (c) Name the following groups : **04**
(i) $\text{CH}_2=\text{CHCO}-$ (ii) $\text{H}_2\text{NCO}-$ (iii) $\text{H}_2\text{NCOO}-$ (iv) $-\text{COOH}$
(v) $\text{CH}_3\text{CH}_2\text{OCO}-$ (vi) $-\text{CHO}$ (vii) H_2NSO_2 (viii) $\text{CH}_2=\text{CH}-$
- Q.2** (a) What are antihistaminic agents? Classify it giving suitable examples. **06**
Write a note on aminoalkyl ethers.
- (b) What are analgesics? Give suitable examples of drugs used as narcotic analgesics. **05**
- (c) Write short notes on: **05**
(i) Lipid-lowering agents
(ii) Vasodilators
- Q.3** (a) What are diuretics? Describe the different classes of diuretics with suitable examples. **08**
- (b) Describe the phenomenon of coagulation of blood. Write a note on anti-coagulants. **08**
- Q.4** (a) What are oral hypoglycemic agents? Describe its different classes with examples. **06**
- (b) What are vitamins? Give an account on fat soluble vitamins. **07**
- (c) Write the structure of : **03**
(i) Propranolol hydrochloride
(ii) Atropine
(iii) Furosamide
- Q.5** (a) Write brief account on sulphonamides **08**
- (b) What are antibiotics? Write an account on penicillins **08**
- Q.6** (a) Write a note on drugs used in : **06**
i. Liver function test
ii. Renal function test
iii. Gastric function test

- (b) What do you know about disinfectant in general? Write an account of phenols and related substance as disinfectants. **06**
- (c) Describe colouring and flavouring agent in detail. **04**
- Q.7** (a) What are anti-inflammatory agents? Write a note on non-steroidal anti-inflammatory agents with suitable examples. **06**
- (b) What do you know about steroids in general? What is the significance of steroid drugs in therapy? **06**
- Name one anti-convulsant drug each possessing the following structural characteristics. **04**
- (a) A barbiturate
 - (b) A carboxylic acid
 - (c) A hydantoin
 - (d) A pyrimidine derivative
