

GUJARAT TECHNOLOGICAL UNIVERSITY
BE - SEMESTER- V • EXAMINATION – SUMMER 2015

Subject Code: 153601

Date: 07/05/2015

Subject Name: Pharmaceutical Chemistry (Department Elective-III)

Time: 02.30pm-05.00pm

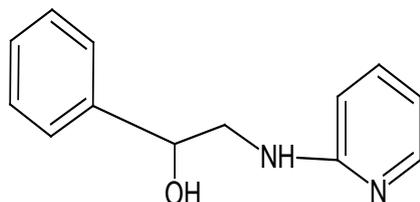
Total Marks: 70

Instructions:

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

- Q.1** (a) Outline the synthesis of Folic Acid **07**
 (b) Explain the construction and working of HPLC **07**

- Q.2** (a) (i). By disconnection (synthon approach), suggest a scheme for the synthesis of Non Steroidal Anti Inflammatory Drug- Ibuprofen. **04**
 (ii). By disconnection (synthon approach), suggest a scheme for the synthesis of the drug molecule, Phenyramidol: **03**



- (b) Suggest a techno commercial synthesis route for anticonvulsant, Phensuximide-a derivative of Succinimide. **07**

OR

- (b) Suggest a techno-commercial synthesis route for antihistamine, Clemizole-a benzimidazole derivative **07**

- Q.3** (a) Give advantage & importance of Mass spectroscopy. **07**
 (b) Explain the principle and working of UV visible spectrophotometer **07**

OR

- Q.3** (a) How HPLC differs from Gas chromatography? Write a note on quantitative HPLC **07**
 (b) Explain the principle, definition, construction and working of a Flame photometer **07**

- Q.4** (a) Outline the synthesis of Biotin. **07**
 (b) (i). Give classifications of Vitamins **03**
 (ii). Outline the synthesis of Vitamin D3 **04**

OR

- Q.4** (a) Outline the synthesis of Vitamin E **07**
 (b) Write the BASF synthesis of Vitamin A. **07**

- Q.5** (a) By disconnection (synthon approach), suggest a scheme for the synthesis of the following drugs: (1). Phenyl propanolamine, (2). Bropirimine **07**
 (b) Write any four guidelines in choosing a disconnection for the synthon approach of drug synthesis. Elaborate your answer with appropriate examples. **07**

OR

- Q.5** (a) Write short notes on (a). Retrosynthesis, (b). Retrosynthetic analysis, (c). Synthons. Give suitable examples wherever required. **07**
 (b) (i). By disconnection (synthon approach), suggest a scheme for the synthesis of **04**

(1). Paracetamol, (2). Amphetamine (3).

(ii). By disconnection (synthon approach), suggest a scheme for the synthesis of **03**
the molecule:

