## **GUJARAT TECHNOLOGICAL UNIVERSITY**

BE - SEMESTER-V • EXAMINATION - WINTER • 2014

Subject Code: 153601 Date: 01-12-2014
Subject Name: Pharmaceutical Chemistry
Time: 10:30 am - 01:00 pm 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) (i). Out line the synthesis of Vitamin D3 (ii). Give classification of Vitamin 03
  - (b) (i). By disconnection (synthon approach), suggest a scheme for the synthesis of Antiamoebic drug- Metronidazole.
     (ii). By disconnection(synthon approach), suggest a scheme for the synthesis of Phenyramidol

- Q.2 (a) How HPLC differs from Gas Chromatography. Write a note on quantitative 07 HPLC
  - (b) Outline the synthesis of Biotin 07

OR

- (b) (i). By disconnection (synthon approach), suggest a scheme for the synthesis of antibacterial-Sulphanilamide.
  - (ii). By disconnection (synthon approach), suggest a scheme for the synthesis of (a). Aspirin, (b). Amphetamine
- Q.3 (a) Write short notes with two examples: (i). Retrosynthesis, (ii). Retrosynthetic 07 analysis, (iii). Synthons
  - (b) Explain principle and working of UV visible spectrophotometer 07

OR

Q.3 (a) Suggest a techno-commercial synthesis route for Trimethoprim (a pyrimidine of derivative)

- (b) Give advantage and importance of Mass spectroscopy
- Q.4 (a) (i). By disconnection approach, arrive at a suitable synthesis for the anti viral 04

**07** 

(ii)Suggest a techno-commercial synthesis route for Isoniazide a derivative of six membered heterocycle-Pyridine

OR

**(b)** Outline the synthesis of Vitamin E

- Q.4 (a) Outline the synthesis of Folic acid
  - **(b)** Explain the construction and working of HPLC
- Q.5 (a) Outline BASF synthesis of Vitamin A 07
  - (b) (i). Suggest a techno-commercial synthesis route for the pyrazolone derivative antipyretic drug-Antipyrine.
    - (ii). By disconnection, suggest a scheme for the CV drug-Propranolol 03

OR

- Q.5 (a) Explain the principle, definition, construction and working of a Flame 07 photometer
  - (b) Outline the synthesis of a Benzodiazepine derivative of Antianxiety drug- 07 Diazepam

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03

**07** 

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