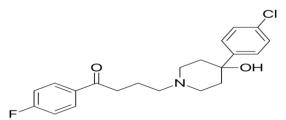
Seat No.: Enrolment No  GUJARAT TECHNOLOGICAL UNIVERSITY  BE - SEMESTER-V(New) • EXAMINATION – WINTER 2016 Subject Code:2153601 Date:22/11/202 Subject Name:Pharmaceutical Chemistry(Department Elective- III) Fime:10:30 AM to 01:00 PM Total Marks: Instructions:			
1. A 2. N	Attemj Make s	pt all questions. suitable assumptions wherever necessary. s to the right indicate full marks.	
			MARKS
Q.1	1	<b>Short Questions</b> What are synthons? Give one example.	14
	2	What is Functional Group Equivalent/Conversion in Disconnection Approach? Give one example.	
	3	Applying Disconnection Approach write a strategy to synthesize N-Methyl piperazine.	
	4	What are the different chemical classes of drugs used for Type-II diabetic treatment?	
	5	Write any two important Structure Activity Relationship of Sulphonyl urea drug.	
	6	What do you mean by Retrosynthesis? Write one example.	
	7	Why Levo Thyroxine is used to treat Hypothyroidism. How does it work as a drug in the body?	
	8	A steroid skeleton has A,B,C and D rings. How do you chemically name this steroid skeleton? Explain how this name is derived.	
	9	What are Sex Hormones? How are they classified?	
	10	Write any two important Structure Activity Relationship of Progesterones.	
	11	What are the important classes by activity, of Androgens? Explain their activities in body.	
	12	What is oral contraceptive? Write a note on oral	
	13	contraceptives. What is Hyperthyroidism? How is it treated?	
	14	What are the causes of Iron deficiency?	
Q.2	(a)	Apply Disconnection Approach to prepare (MeS)2C=N-CN (intermediate for Cimetidine).	03
	<b>(b)</b>	Design a synthesis for the antihistamine-Diphenhydramine	04

(c) Design a synthesis for psychotherapeutic drug-Haloperidol



OR

- (c) Write any five guidelines for choosing a disconnection in organic synthesis with suitable examples.
- Q.3 (a) How will you separate (-) Ephedrine (1R,2S configuration) from a mixture of synthetically made product containing all 04 isomers?
  - (b) Design a synthesis for Ibuprofen by disconnection **04** approach.

(c) Write a strategy to synthesize cis-Jasmone by Disconnection Approach.

OR

- Q.3 (a) What are the different chemical classes of anti-diabetic drugs? Give one example of a drug and its class.
  - (b) Suggest a scheme for the synthesis of (i). Amphetamine, (ii). Phenyl Propanolamine by disconnection approach
  - (c) Design a synthesis for Sulphamethoxazole by **07** Disconnection Approach.

- Q.4 (a) What are Hormones? How are they classified?
  - (b) Discuss the synthesis of Tolbutamide.

(c) Discuss the synthesis of Levo Thyroxine. 07

OR

- Q.4 (a) Write a note on Iron Preparations. 03
  - (b) What is Calcium Homeostasis? Give an account of how the Calcium balance is maintained by body.
  - (c) Give a detailed account of Oral Contraceptives. 07
- Q.5 (a) Write a note on Structure Activity Relationship of Androgens.
  - (b) Discuss briefly metabolites formed from testosterone. 04
  - (c) Design a synthesis for (i). Metronidazole, (ii). Propranolol by disconnection approach.

- Q.5 (a) Write a note on Structure Activity Relationship of O3 Progesterones.
  - (b) Describe the strategy employed to get cis isomer of O4 Cumbretastatin.

(c) Design a synthesis for Cetirizine by disconnection 07 approach.

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