

S.Y.B.PHARM. SEMESTER-III (2011 COURSE) : WINTER -
2017

SUBJECT: PHARMACEUTICAL CHEMISTRY – V (ORGANIC)

Day: Wednesday

Date: 08/11/2017

Time: 02.00 PM TO 05.00 PM

Max. Marks: 80

W-2017-3818

N.B.:

- 1) Q. No. 1 and Q. No. 5 are **COMPULSORY**. Out of the remaining attempt any **TWO** questions from each section.
- 2) Figures to the right indicate **FULL** marks.
- 3) Answers to both the sections should be written in **SEPARATE** answer book.
- 4) Draw neat labeled diagrams **WHEREVER** necessary.

SECTION-I

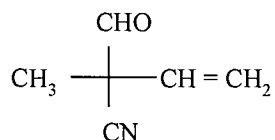
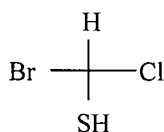
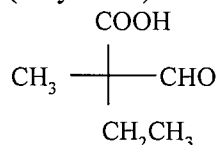
Q.1 Answer any **FIVE** of the following: (10)

- a) What are meso compounds? Explain with example.
- b) Define and give example of enantiomers.
- c) Define and give example of diastereomers.
- d) Draw Newmann projection for:
i) 1- Bromopropane ii) Ethyl alcohol
- e) Define chirality and explain with example.
- f) What is Z and E isomers? Give example.
- g) Why racemic mixtures are optically neutral?

Q.2 What is Isomerism? Classify and explain in detail each class with suitable examples. (15)

Q.3 a) Draw structure and show possible conformations using various projection formulae (any **Two**) (08)
i) Isopropyl alcohol ii) 2- Bromobutane
iii) 2,3-Dichlorobutane

b) Assign R and S configuration to following and explain with reasons (07)
(Any **Two**).



Q.4 Write short notes on any **THREE** of the following: (15)

- a) Role of symmetry in optical activity
- b) Why boat confirmation in cyclohexane is more stable?
- c) Polarimeter
- d) Bromination of 2- butene results in 3 possible isomers , explain.

P. T. O.

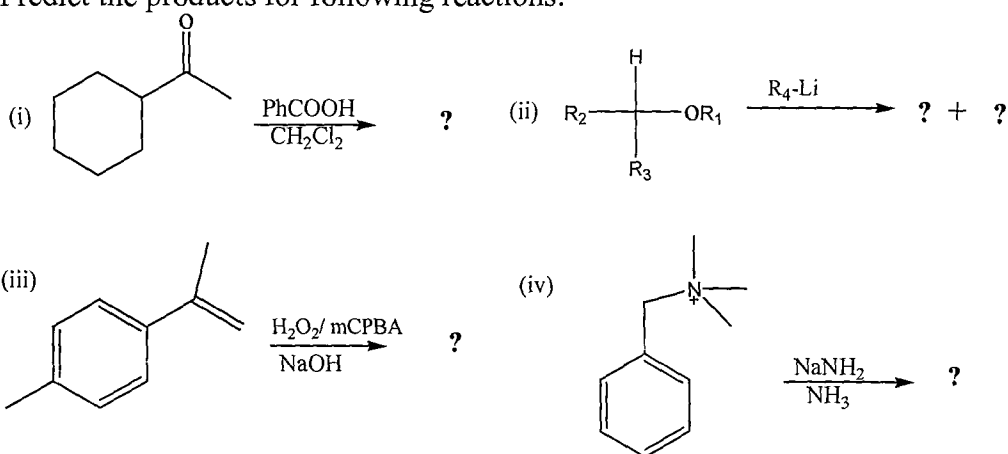
SECTION-II

Q.5 Answer any **FIVE** of the following: **(10)**

- a) Define molecular rearrangements with example.
- b) What do you mean by Sigmatropic rearrangements? Give one example.
- c) Define with example:
 - i) Synthons
 - ii) Synthetic equivalent
- d) What do you mean by retro-synthetic analysis?
- e) How Beckmann rearrangement helps to distinguish between *syn* and *anti* isomerism.
- f) Write mechanism involved in Neber's rearrangement.

Q.6) Explain retro-synthesis of Ibutuprofen, Propranolol and Sulfacetamide. **(15)**

Q.7 a) Predict the products for following reactions: **(10)**



b) Explain importance of order of disconnection with suitable example. **(05)**

Q.8 Write short notes on any **THREE** of the following: **(15)**

- a) Pinacol- Pinacolone rearrangement
- b) Fries rearrangement
- c) Hoffmann rearrangement
- d) Retro-synthesis of diclophenac

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