

SCHOOL OF CHEMICAL AND LIFE SCIENCES
B-Sc-M.Sc. CHEMISTRY, SEMESTER-III ONLINE EXAMINATION-2020
PAPER TITLE: PHARMACEUTICAL CHEMISTRY
PAPER CODE: BCH-SEC3

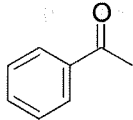
- Please write your roll number at the top of the Answer sheet.
- Attempt all the questions
- It should be noted that 60min extra time will be provided for uploading the answer sheet in pdf format. Please mention the total number of sheets used on the first sheet and sequence of the answer sheet should be clearly mentioned at the top of every sheet used.

Duration: 1.5 Hrs

Maximum Marks =37

Q1. Answer ANY SEVEN of the following in brief:

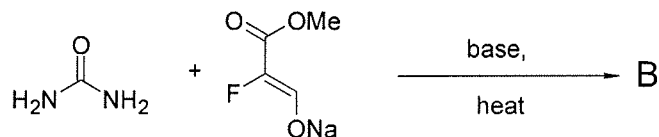
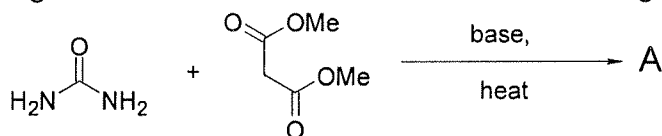
7 x 1 = 7

- Define Reterosynthesis
 - What is Synthon. Give one suitable examples of synthon and its synthetic equivalent.
 - Write the structure of Phenobarbital and mention its pharmacological effect.
 - Explain the disconnection approach for the synthesis of Aspirin.
 - Write down the synthesis of paracetamol from the material given below:
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- How Ethanol can be produced from fermentation?
 - Write the structure of citric acid.
 - Ascorbic acid are referred as acid due to which structural characteristics.
 - Why Aspirin and ibuprofen are not used in combination though paracetamol and ibuprofen are famous as combination?
 - Define Prodrug with a suitable example

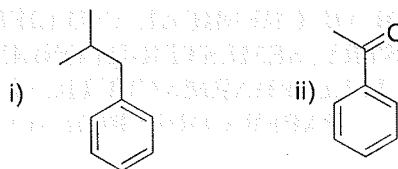
Q2. Answer ANY THREE of the following

3 x 5 = 15

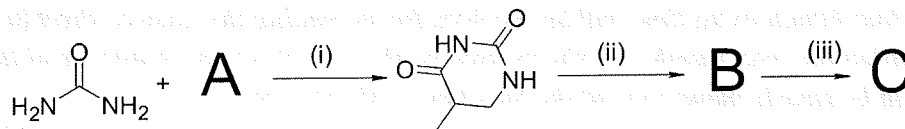
- How Aspirin and paracetamol differs in their mechanism of action?
- Explain the Pharmacological roles of the Products formed in the reactions given below:



- Sketch a synthetic scheme for the synthesis of Ibuprofen.
- Give synthon for the following compounds:



- v. Complete the reaction given below and give the structure of one anti-HIV Drug containing C in its structure.



(i) heat; (ii) $\text{Br}_2/\text{CH}_3\text{COOH}$ and (iii) $\text{C}_5\text{H}_5\text{N}$

Q3. Answer ANY THREE of the following

3 x 5 = 15

- Explain the synthesis of Penicillin or Ascorbic Acid using fermentation method.
- Explain how biosynthesis of Lysine is related with Nicotine biosynthesis.
- Briefly Sketch the Synthesis of DAPSONE and mention the role of the same.
- Devise the synthesis of the following drug:
 - Sulphapyridine
 - Sulpha Thiazole
- How PABA and GTP are related with Folic Acid.

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