

- (b) Give the mechanism of ester hydrolysis. 4
- (c) Why are amides weaker bases than amines? 2
8. (a) What are the monomers of Terylene? Explain the synthesis and uses of this polymer. 3
- (b) Why does nitrobenzene undergo electrophilic as well as nucleophilic substitution? 3
- (c) What happens when : 2
- (i) Aniline is treated with  $C_6H_5CoCl$  and  $NaOH$ .
- (ii) Aniline is heated with concentrated  $H_2SO_4$ .

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-(P-4)(Q-8)(18) (4)

Roll No. ....

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**B. Sc. (Hons.) Physics 2nd Semester  
Latest Examination – April, 2018**

**CHEMISTRY-II**

Paper : Phy-205

Time : Three Hours ]

[ Maximum Marks : 40

*Before answering the questions, candidates should ensure that they have been supplied the correct and complete question paper. No complaint in this regard, will be entertained after examination.*

**Note :** Attempt *five* questions in all, selecting at least *two* questions from each Unit.

**UNIT – I**

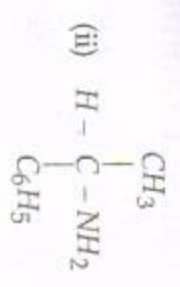
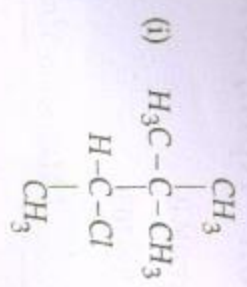
1. (a) Define Resonance. What is the difference between resonance and isomerism? 3
- (b) What is Inductive effect? How does inductive effect help in explaining the relative strengths of organic acids? 5

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2. (a) What do you understand by chair and boat conformations? Why is chair conformation of cyclohexane more stable than boat conformation? 4

(b) Assign R and S configurations to the following compounds: 4

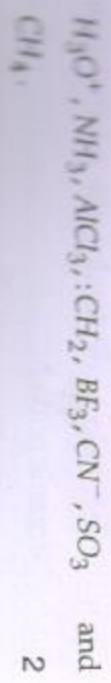


3. (a) Explain the essential difference between enantiomers and diastereomers. 3

(b) What are meso compounds? Give one example. 2

(c) In how many ways can the fission of a covalent bond take place? Explain with suitable examples. 3

4. (a) Classify the following as nucleophiles and electrophiles:



(b) Explain the addition organic reactions with suitable examples. 3

(c) Describe the delocalised chemical bond with the help of a suitable example. 3

UNIT - II

5. (a) What is meant by reaction intermediate? Allyl free radical is more stable than Alkyl free radical. Explain. 4

(b) Why is o-nitrophenol steam volatile while p-nitrophenol not? 2

(c) Out of acetaldehyde and acetone, which has higher boiling point and why? 2

6. (a) Give the mechanism of following reactions: 6

(i) Laisen-Schmidt condensation

(ii) Mannich Reaction.

(b) What is Tollen's reagent? How does it help in identifying an aldehyde? 2

7. (a) Why are acid amides very little reactive while acid chlorides are highly reactive? 2