

BIRLA INSTITUTE OF TECHNOLOGY & SCIENCE PILANI

Comprehensive Examination May (CLOSED BOOK)

IInd Sem 2022-2023

PHA G522 - Chemistry of Macromolecules

Max. Marks: 60

Date: 08/05/2023

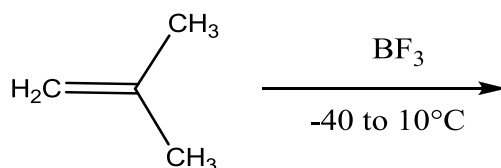
Duration: 180 Minutes

Weightage: 30%

Instruction:

1. All questions are compulsory
 2. Figures to right in square bracket indicates maximum marks
 3. Write precise answers and use diagram/structures wherever necessary
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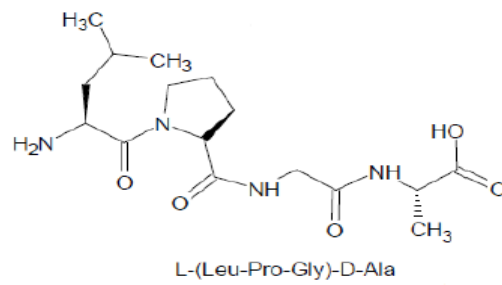
1. A scientist carries out the following reaction for synthesis of a low molecular weight product. Predict the product and mechanism [8]



3. A research group is working with edible mushrooms. They want to extract β glucan polysaccharides. Discuss the various strategy for getting these target molecules from the edible mushroom. [8]
2. Write brief notes on [5+5+5=15]
 - i. Synthesis of Iloprost
 - ii. Class of natural products that precipitate proteins from their aqueous solutions
 - ii. Synthesis of Nandrolone
4. Discuss the biosynthesis of γ - benzo pyrone class of natural products [10]
5. Discuss various steps of Purine nucleotide synthesis [6]

6. Design the synthesis of the anthelmintic tetrapeptide using suitable reagents

[8]



7. Write about various steroid hormone classes and the mechanism of action of steroids as a class

[5]
