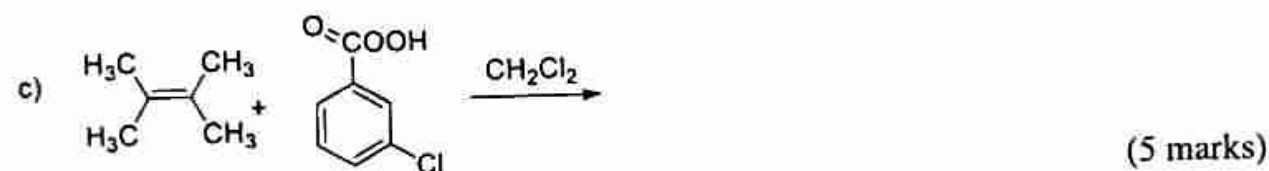

NATIONAL OPEN UNIVERSITY OF NIGERIA
 PLOT 91, CADASTRAL ZONE, NNAMDI AZIKIWE EXPRESSWAY, JABI - ABUJA
FACULTY OF SCIENCES
DEPARTMENT OF PURE & APPLIED SCIENCES
2023_2 EXAMINATIONS_

COURSE CODE: CHM 416
COURSE TITLE: ORGANIC SYNTHESIS
INSTRUCTION: Answer Question ONE (1) and any other Three (3) Questions

TIME ALLOWED: 2 Hours
CREDIT: 2 Units

Q1. Give the product(s) of the following reactions:



d. Write short note on each of the following unique reactions:

i) Oxidation of tertiary alcohol (5 marks)

ii) Perkin Reaction (5 marks)

Q2. Copy and complete the following reactions furnishing the correct products



Q3. a) With the aid of equation, show oxidation of p-xylene to dicarboxylic acid (5 marks)

b) Under what condition can benzene be converted to cyclohexane (5 marks)

c) Distinguish between LiAlH_4 and NaBH_4 based on their functions (5 marks)