



B

Al-Azhar University of Gaza

19/01/2021

Faculty of Science

Department of Chemistry

Organic Chemistry Dent..

Final Exam.

Time 3.0 h

Student Name: Faweh Hami Al-Swerky.

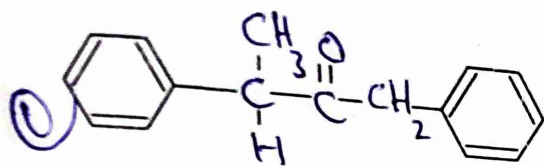
Num 11 20200230

Question one

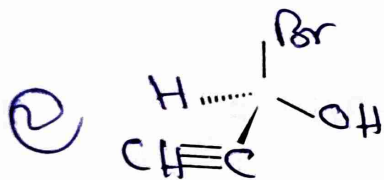
(16 points)

2
 me the following organic compounds using any nomenclature system:

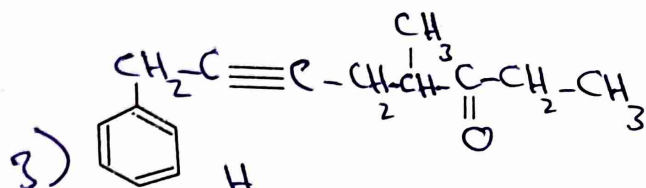
(سمي باستخدام اي نظام)



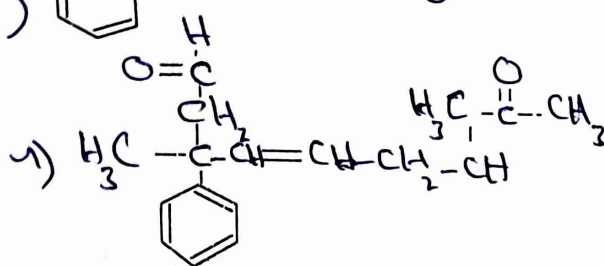
Name // 1,3 diphenyl-2 butanone.



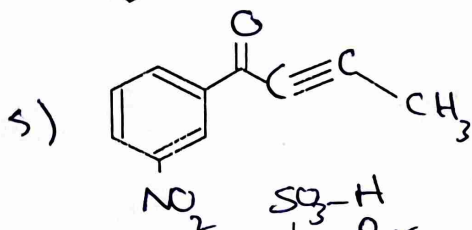
Name // (R) 1-Bromo prop-2-yne 1-ol.



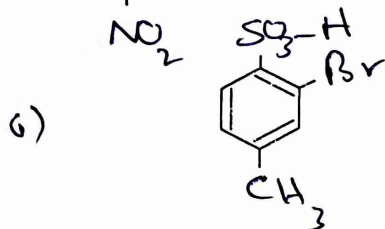
Name // 4-methyl -8-phenyloct -6-yne
-3-one



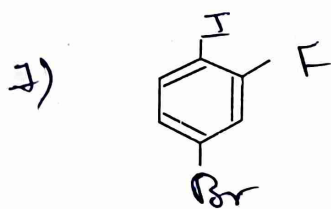
Name // 3,7 di'methyl-9-oxo-3-phenyl
dec-2-en-1-one



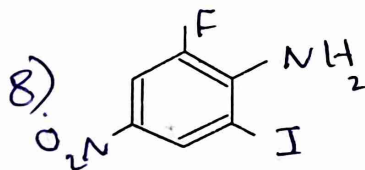
Name // 4-nitrobenzene-but-2-yne-1-one



Name // 2-Bromo-4-methyl Benzene sulfonic
acid.



Name // 4-Bromo-2-floro-1-iodobenzen



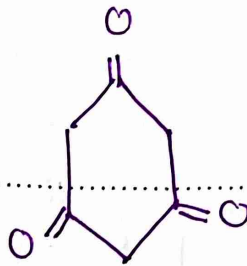
Name // 2-Floro -6-iodo-4-nitro Aniline

b)- Draw the structures of the following organic compounds.

(ارسم المركبات التالية)

1) Cyclohexane-1,3,5-trione

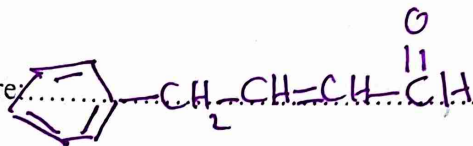
Structure:.....



2) ~~4-Phenylbutene-1-al~~

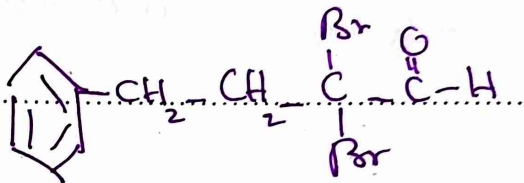
4-phenylbut-2-en-1al

Structure:.....



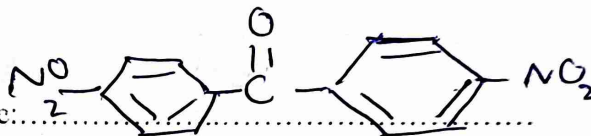
3) α,α -Dibromo- γ -phenylbutyraldehyde

Structure:.....



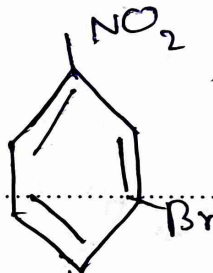
4) 4,4-Dinitrobenzophenone

Structure:.....



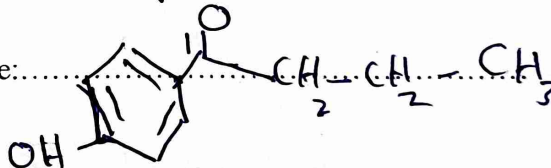
5) 1,2-Dibromo-4-nitrobenzene

Structure:.....



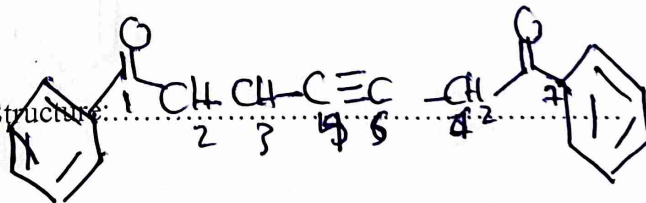
6) p-Hydroxybutyrophenone

Structure:.....



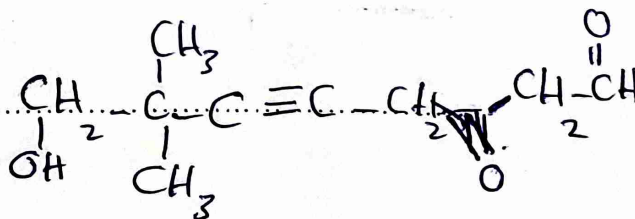
7) 1,7-Diphenylhept-2-en-4-yn-1,7-dione

Structure:.....



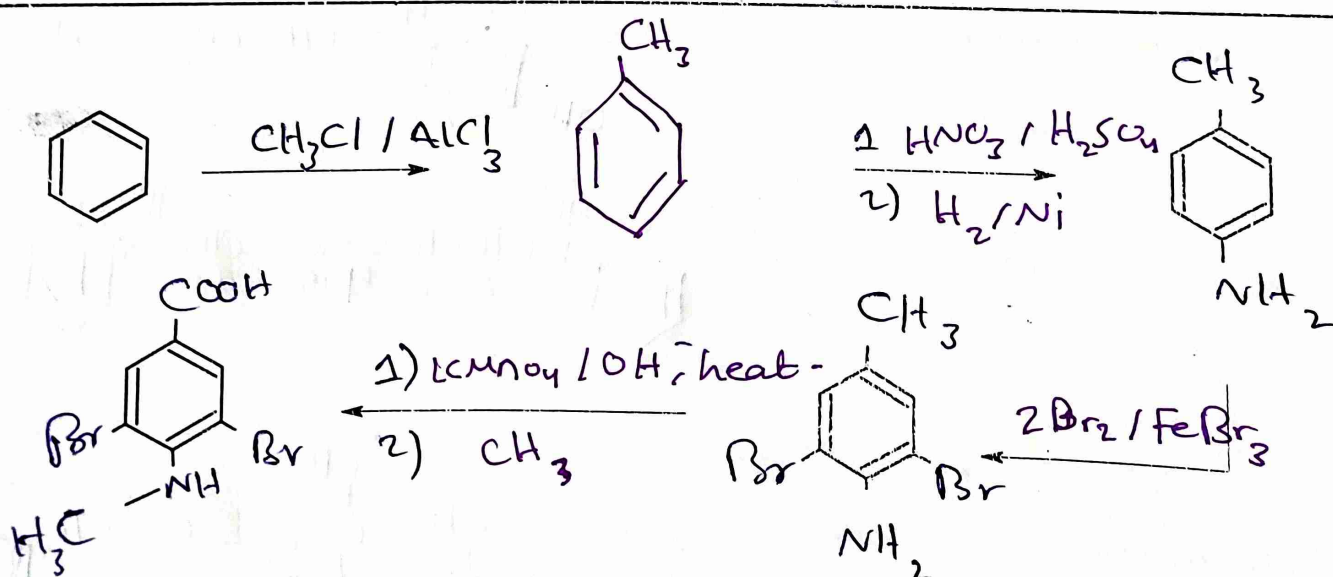
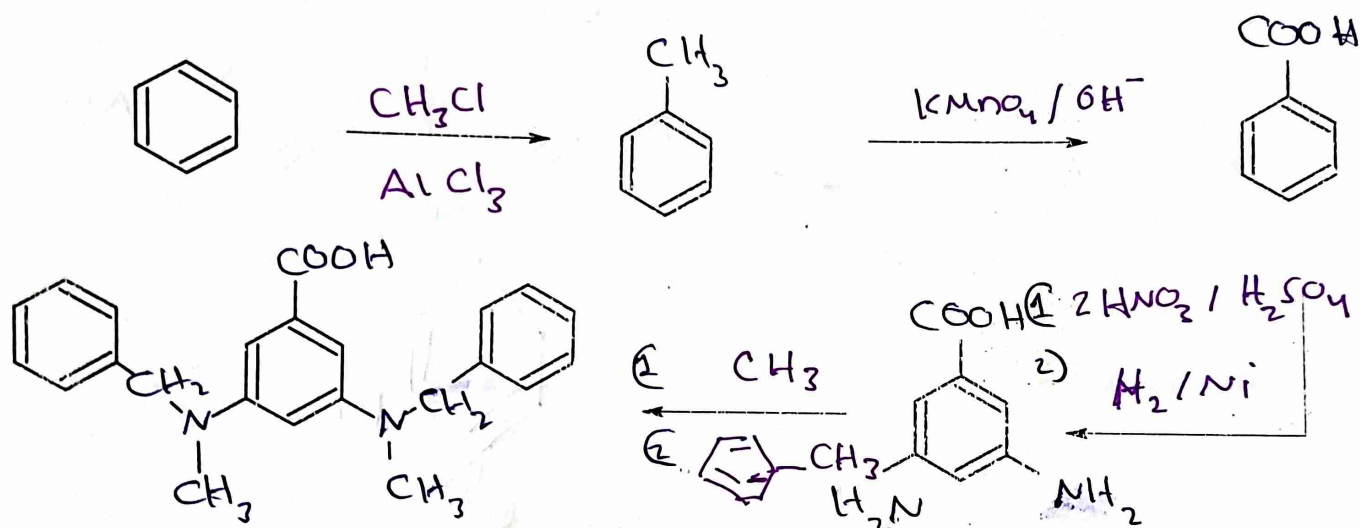
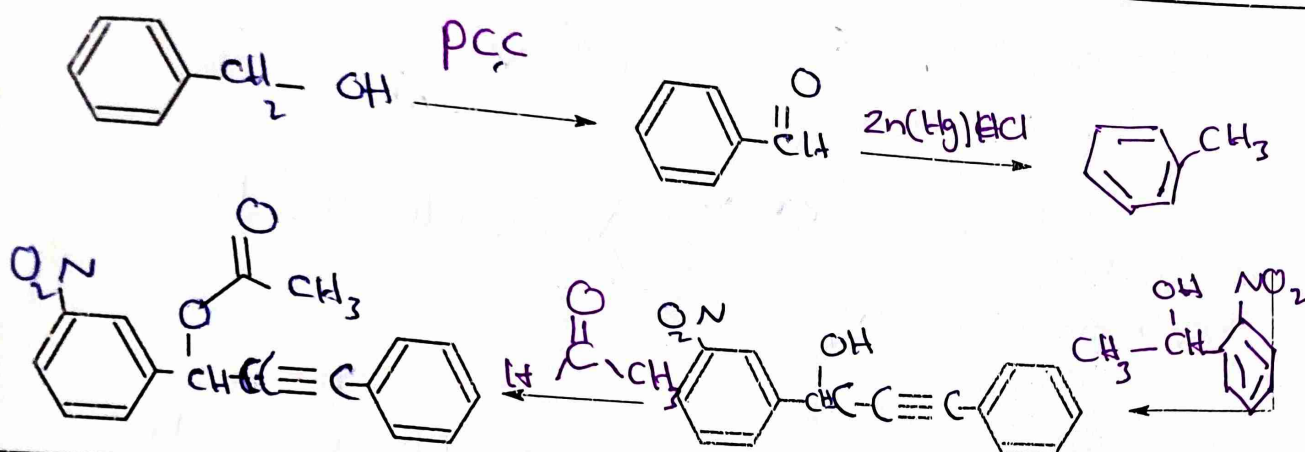
8) 8-Hydroxy-3-oxo-7,7-Dimethyloct-5-yn-1-al

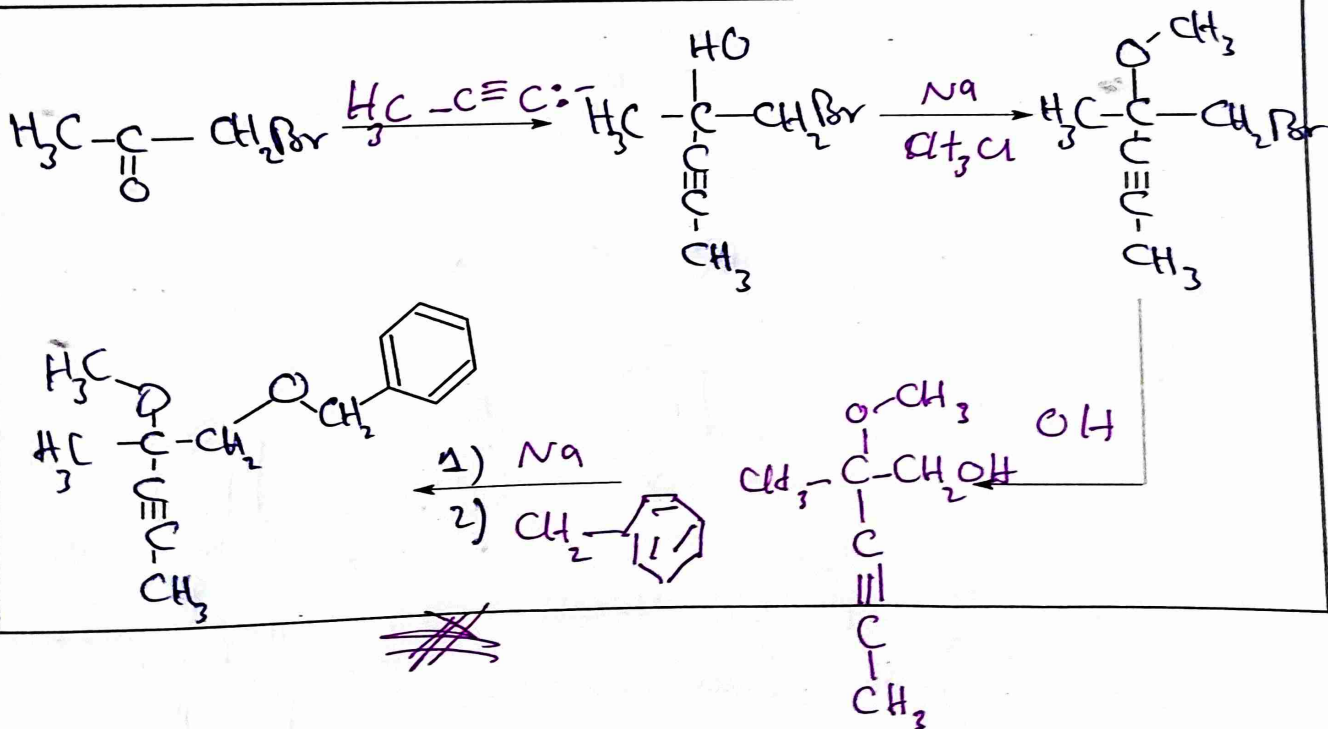
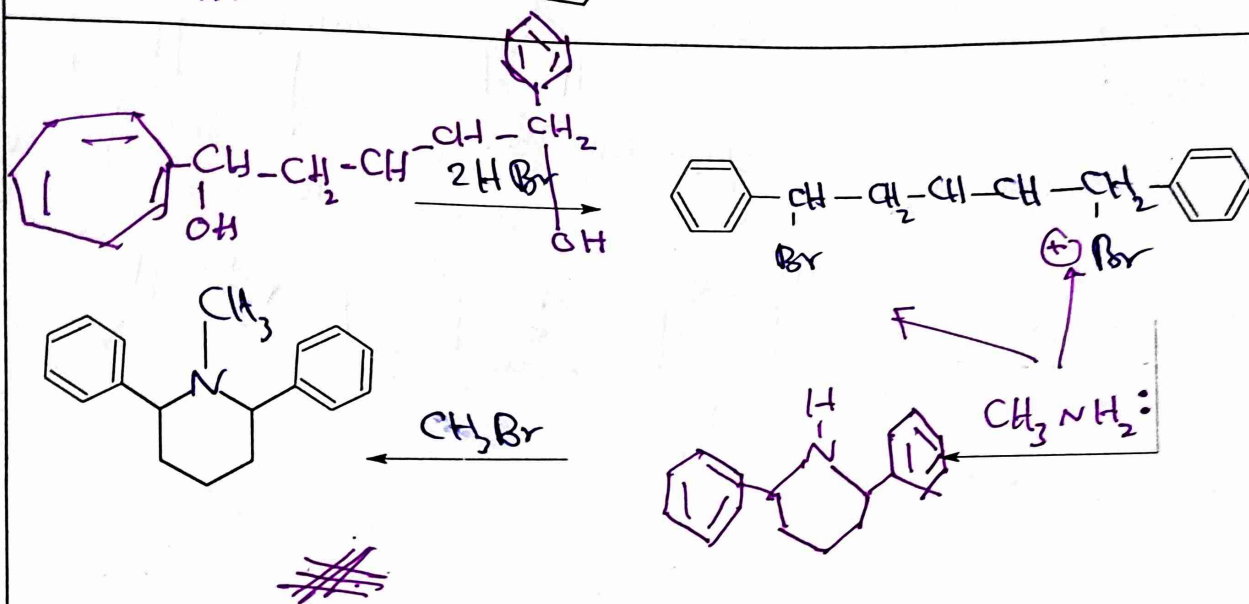
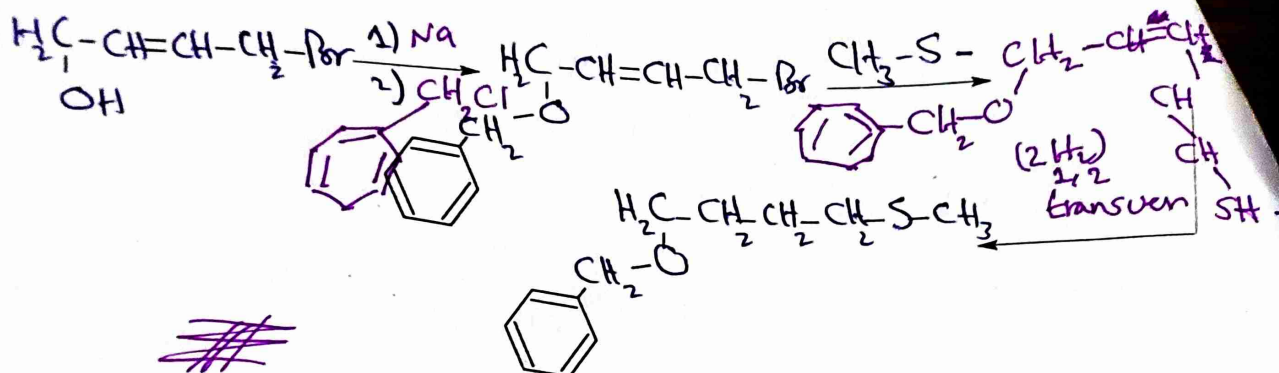
Structure:.....



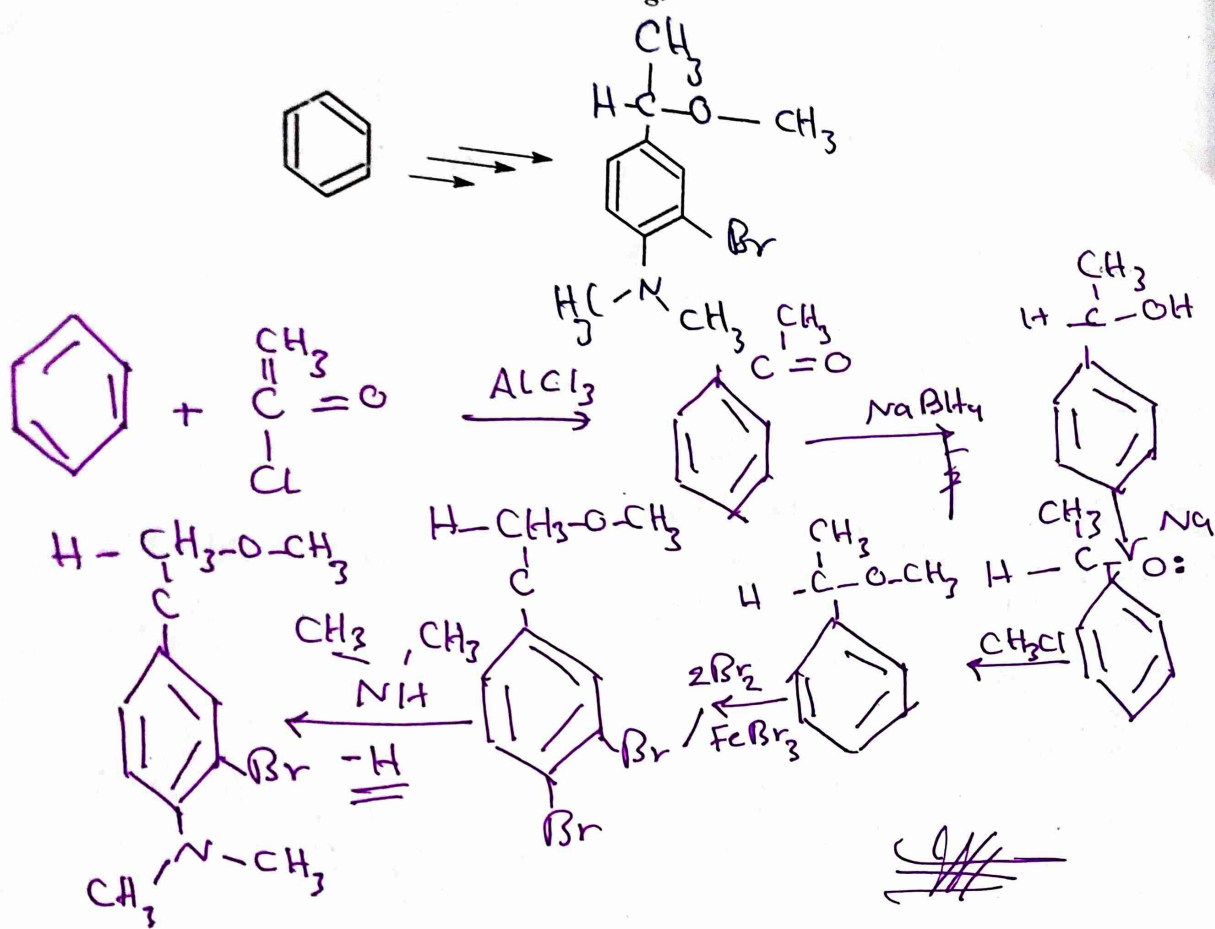
Alkyl halide

the following reactions by writing the missed reactants or products:

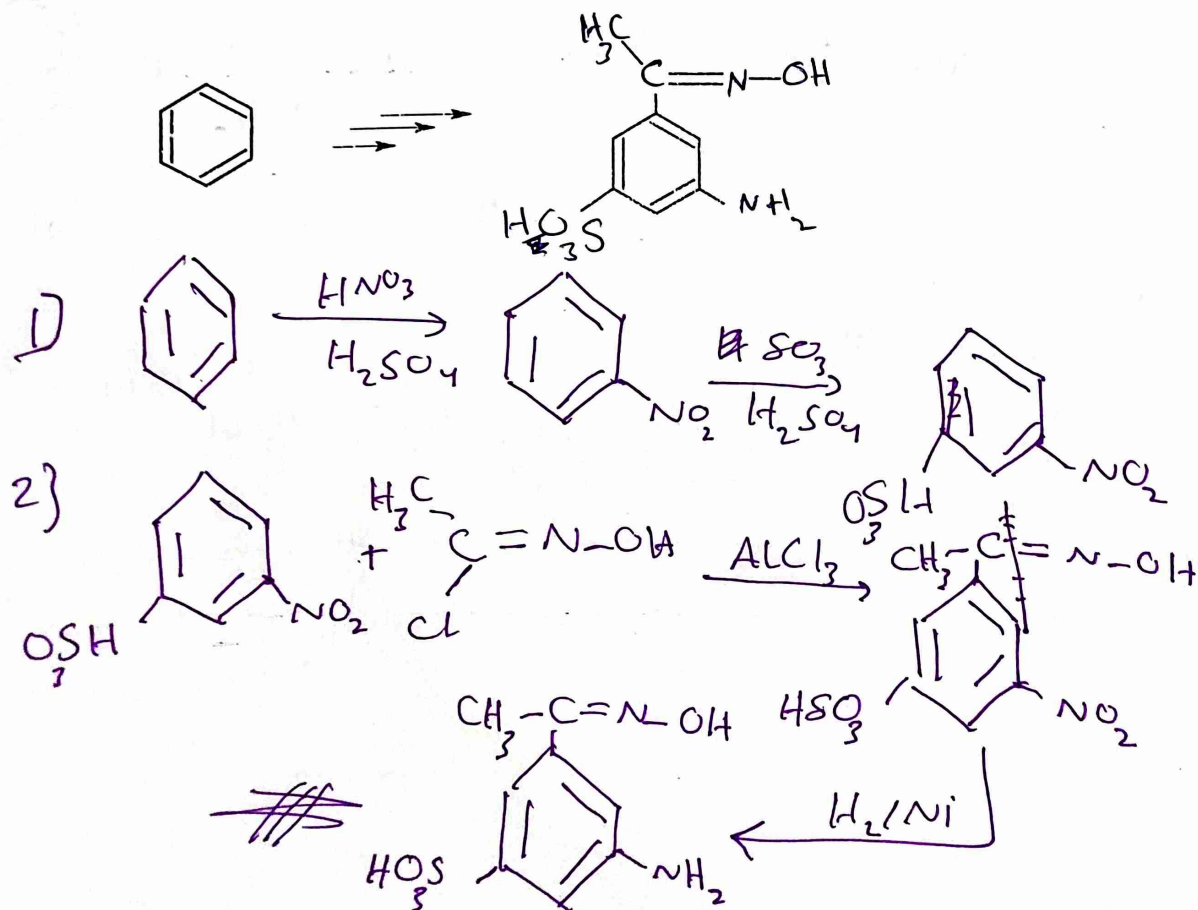




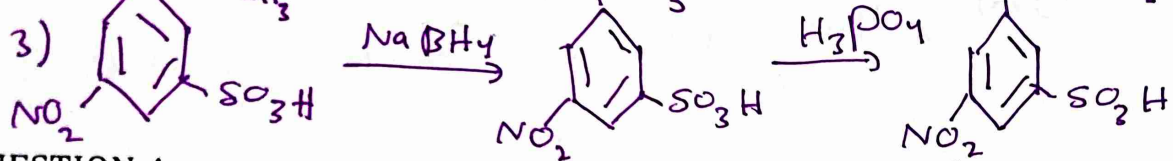
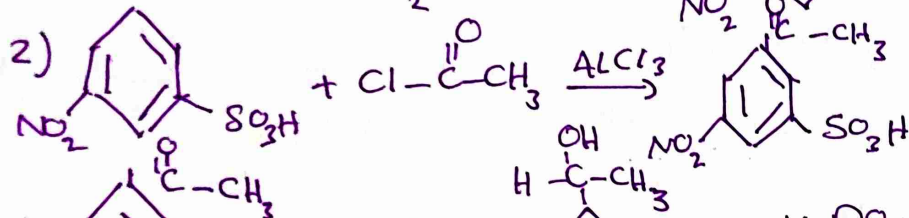
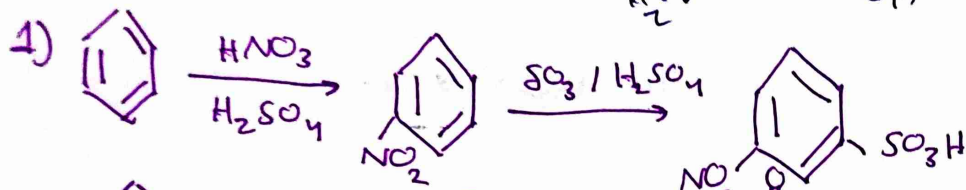
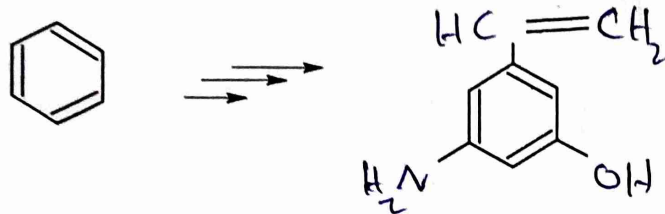
Starting with benzene how can you prepare the following. [12 points].



2) Starting with Benzene how can you prepare the following:



3) Starting with Benzene how can you prepare the following:

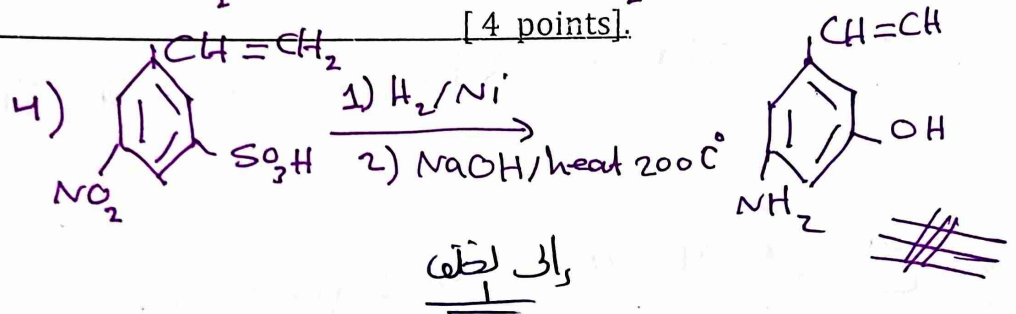


QUESTION 4

[4 points].

Write short notes about:

1) Aromaticity conditions.



2) SN1 mechanism.

1) rate of the reaction depends on the concentration of substrate only.

2) inversion of configuration but 50% R, 50% S

3) The reaction fastest when the alkyl group is

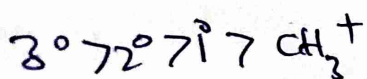
Good luck

D.Nabil Shurrah

Hrtuary

Good luck

D.Nabil Shurrah



إلى
إلى
إلى

Q4 1/1

Solution/1

it should be/1

1) cyclic

2) planar $\rightarrow$ The hybridization of each atom is sp^2

3) conjugated. [The arrangement of all covalent bonds (double-single)].

4) obey Huckel rule $\rightarrow$ no of delocalized π -electrons $= 4n+2$

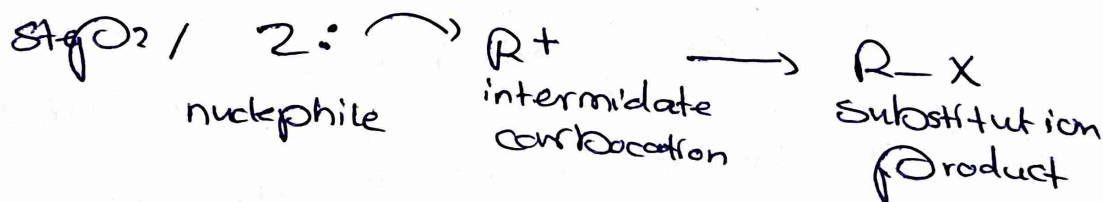
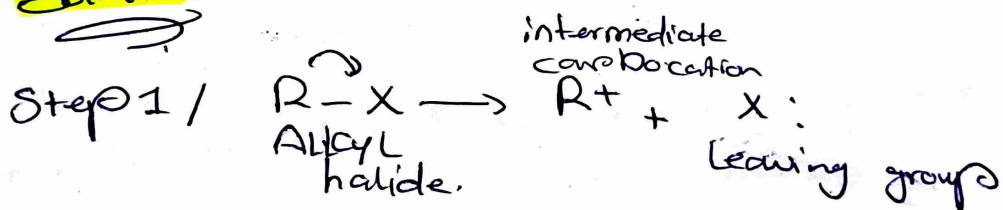
5) more stable than expected [resonance energy]-

Q.5

Q4 2/1

S_N1 mechanism:-

Solution:-



$Z^- \rightarrow$ any nucleophile

$X \rightarrow$ any halogen Cl, Br, I