ORGANIC CHEMISTRY

DPP

DAILY PRACTICE PROBLEMS

DPP No. 17

Total Marks : 23

Max. Time : 24 min.

Topic : Aromatic compounds

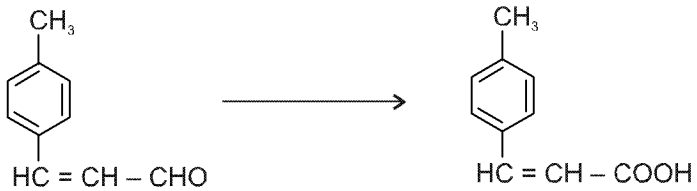
Type of Questions		M.M., Min.
Single choice Objective ('–1' negative marking) Q.1 to Q.3	(3 marks, 3 min.)	[9, 9]
Multiple choice objective ('–1' negative marking) Q.4 to Q.5	(4 marks, 4 min.)	[8, 8]
True or False (no negative marking) Q.6	(2 marks, 2 min.)	[2, 2]
Subjective Questions ('–1' negative marking) Q.7	(4 marks, 5 min.)	[4, 5]

1. The intermediate formed during electrophilic substitution reaction of benzene is :

(A) a non-aromatic resonance stable carbocation (B) a σ-complex

(C) also known as Whealand's intermediate (D) All of these

2.

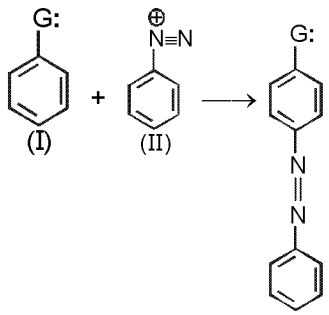


The unsuitable reagent will be

(A) CrO_3 / H_2O / acetone (B) $[Ag(NH_3)_2]^{\oplus}$ (aqueous)

(C) Alkaline $KMnO_4$ (D) $\begin{matrix}COONa\\|\\(CHOH)_2\\|\\COOK\end{matrix}$ + $CuSO_4$ + NaOH

3. For the given reaction consider the statement 1,2 and 3



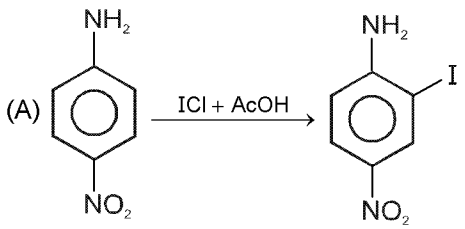
(1) Presence of $-NO_2$ group in aromatic ring I will increase the rate of reaction.

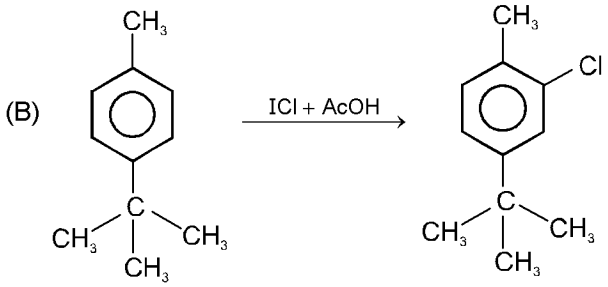
(2) Presence of $-NO_2$ group in aromatic ring II will increase the rate of reaction.

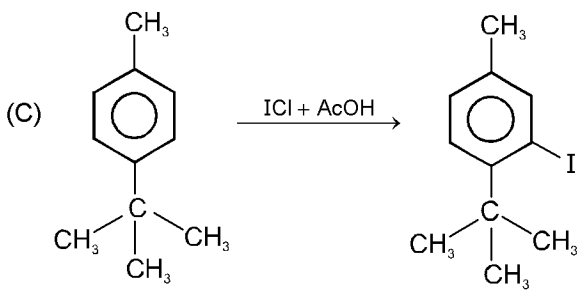
(3) In this reaction a Wheland intermediate (σ complex) is formed.

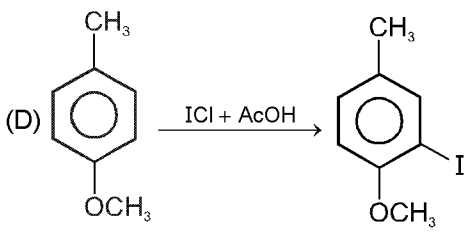
(A) TTT (B) FFF (C) FTT (D) FTF

4. Which reaction show correct major product formation.

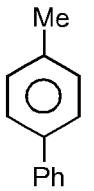


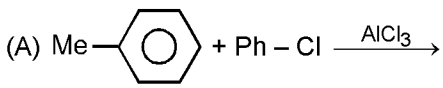


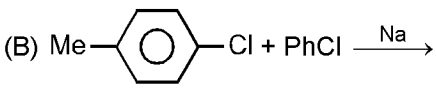


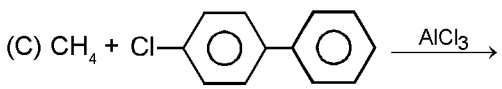


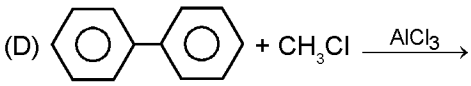
5. Which methode can be used to prepare :



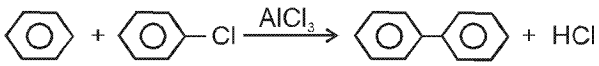








6. Diphenyl can not be prepared by following reaciton .

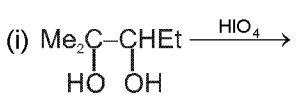


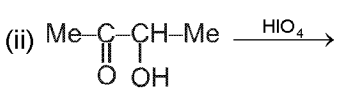
Reagent of the Week

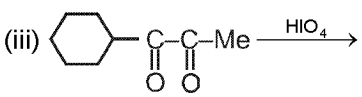
Periodic Acid (HIO_4)

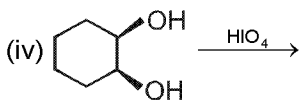
The important function of periodic acid is the oxidative cleavage of bonds with adjacent oxidisable groups for example - cis, 1, 2-diols, α-hydroxycarbonly compounds, 1, 2-diketones etc. The reagent does not react with 1, 3 or 1, 4-diols or diketones.

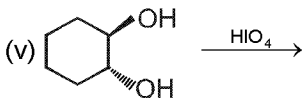
7. The product(s) for each reaction is/are

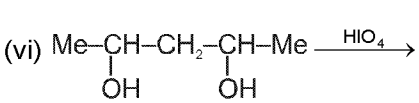












Answer Key

DPP No. # 17

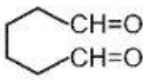
1. (D) **2.** (C) **3.** (C) **4.** (A,D) **5.** (B,D)

6. True

7. (i) $Me_2C=O + EtCH=O$

(ii) $MeCOOH + MeCH=O$

(iii)  $+ MeCOOH$

(iv) 

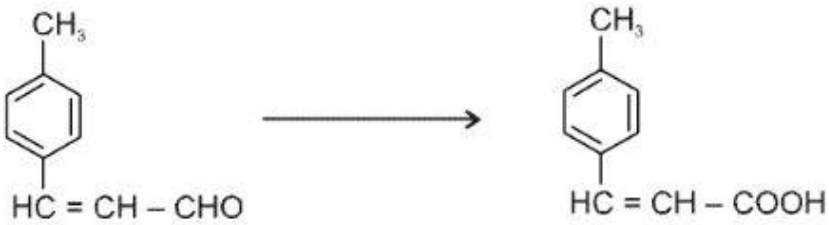
(v) No reaction as the diol is trans and rotation is restricted.

(vi) No reaction for 1, 3-diol.

Hints & Solutions

DPP No. # 17

2. Alkaline $KMnO_4$ (dil.) will oxidise C = C also.



6. Phenyl chloride is very weakly ionised by $AlCl_3$ because Ph^+ carbocation is very less stable.