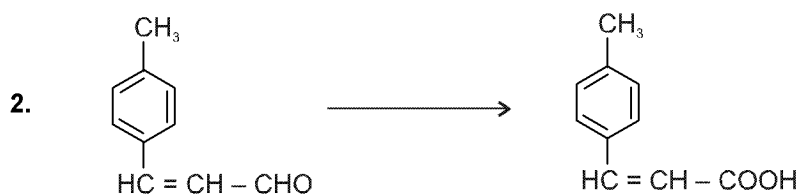


Topic : Aromatic compounds
Type of Questions

		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

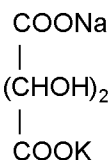


The unsuitable reagent will be

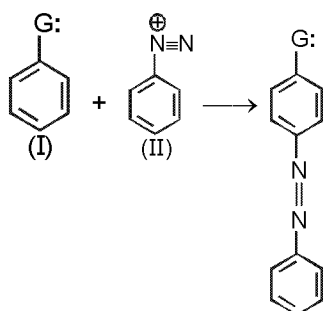
(A) $\text{CrO}_3 / \text{H}_2\text{O} / \text{acetone}$

(B) $[\text{Ag}(\text{NH}_3)_2]^+$ (aqueous)

(C) Alkaline KMnO_4

(D)  + $\text{CuSO}_4 + \text{NaOH}$

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



- (1) Presence of $-\text{NO}_2$ group in aromatic ring I will increase the rate of reaction.
 (2) Presence of $-\text{NO}_2$ group in aromatic ring II will increase the rate of reaction.
 (3) In this reaction a Wheland intermediate (σ complex) is formed.

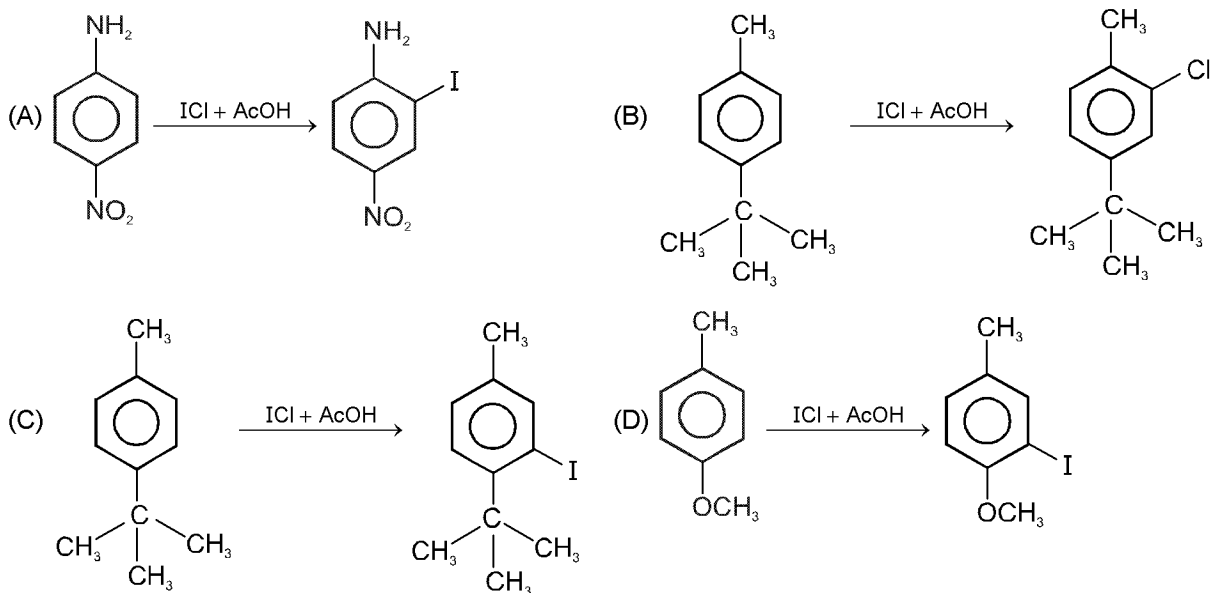
(A) TTT

(B) FFF

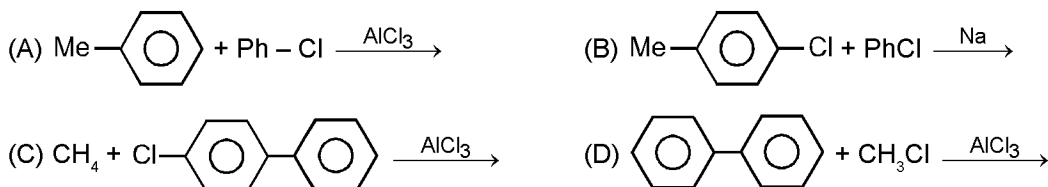
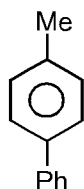
(C) FTT

(D) FTF

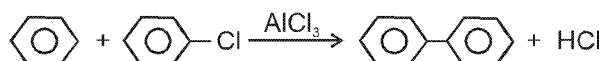
4. Which reaction show correct major product formation.



5. Which method can be used to prepare :



6. Diphenyl can not be prepared by following reaction .

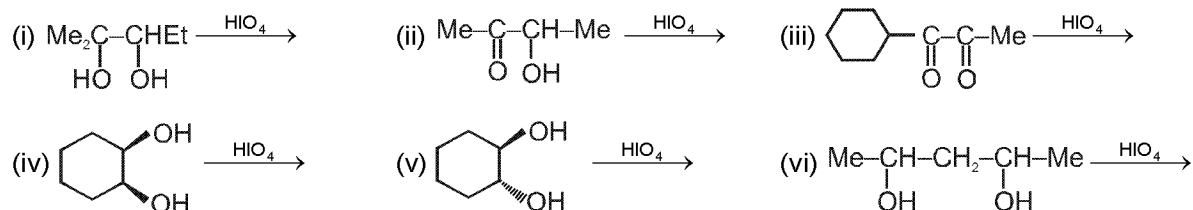


Reagent of the Week

Periodic Acid (HIO₄)

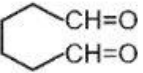
The important function of periodic acid is the oxidative cleavage of bonds with adjacent oxidisable groups for example - cis, 1, 2-diols, α -hydroxycarbonyl compounds, 1, 2-diketones etc. The reagent does not react with 1, 3 or 1, 4-diols or diketones.

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) $\text{Me}_2\text{C}=\text{O} + \text{EtCH}=\text{O}$ (ii) $\text{MeCOOH} + \text{MeCH}=\text{O}$
- (iii)  $+\text{MeCOOH}$ (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 $\text{C}=\text{C}$ also.



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