ORGANIC CHEMISTRY

DPP

DAILY PRACTICE PROBLEMS

# DPP No. 16

**Total Marks : 31**

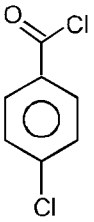
**Max. Time : 32 min.**

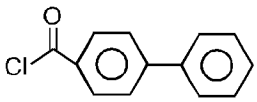
**Topic : Aromatic compounds**

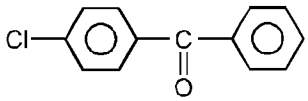
| Type of Questions | | M.M., Min. |
|---|---|---|
| Single choice Objective ('–1' negative marking) Q.1 to Q.5 | (3 marks, 3 min.) | [15, 15] |
| Multiple choice objective ('–1' negative marking) Q.6 to Q.8 | (4 marks, 4 min.) | [12, 12] |
| Subjective Questions ('–1' negative marking) Q.9 | (4 marks, 5 min.) | [4, 5] |

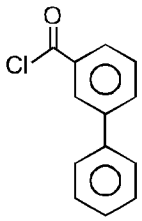
**1.** Allyl bromide during addition of HBr gives :

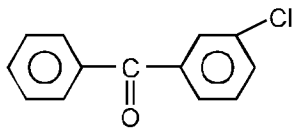
(A) $CH_3-\underset{\underset{Br}{|}}{CH}-\underset{\underset{Br}{|}}{CH_2}$ (B) $\underset{\underset{Br}{|}}{CH_2}-CH_2-\underset{\underset{Br}{|}}{CH_2}$ (C) $CH_3-CH_2CHBr_2$ (D) $CH_3-\underset{\underset{Br}{|}}{\overset{\overset{Br}{|}}{C}}-CH_3$

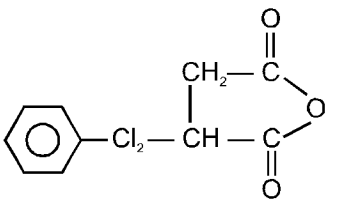
**2.**  $\xrightarrow{C_6H_6 / AlCl_3}$ P ; P is :

(A) 

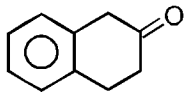
(B) 

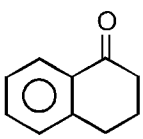
(C) 

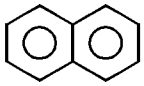
(D) 

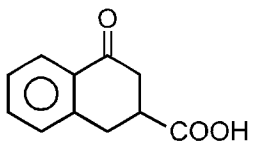
**3.**  $\xrightarrow{AlCl_3}$ A

Find product A is :

(A) 

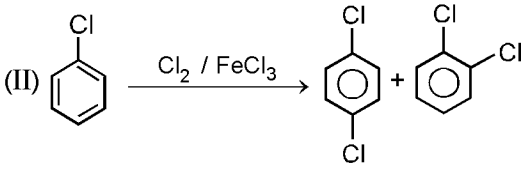
(B) 

(C) 

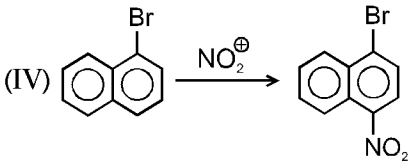
(D) 

**4.** Which common factor is responsible for the regioselective nature of the following reactions.

(I) $CH_2 = CH–Cl \xrightarrow{HCl} CH_3–CHCl_2$

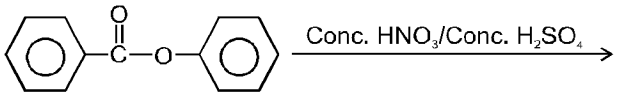
(II) 

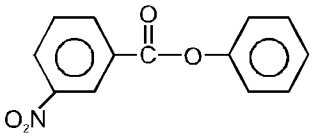

(III) $H–C\equiv C–Br \xrightarrow{HBr} CH_2=CBr_2$

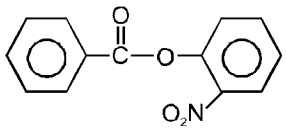
(IV) 

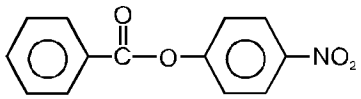

(A) – I effect of halogens
(B) + I effect of halogens
(C) + M effect of halogens
(D) – M effect of halogens

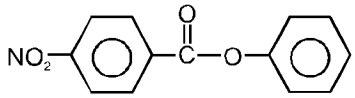
**5.** The major product formed in the reaction is,




(A) 


(B) 


(C) 


(D) 


**6.*** Propyl benzene can be obtained by :

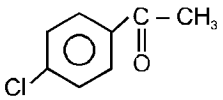
(A) $C_6H_6 + CH_3CH_2CH_2Cl \xrightarrow{AlCl_3}$

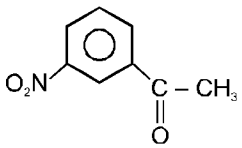
(B) $C_6H_6 + CH_3CH_2COCl \xrightarrow{AlCl_3} \xrightarrow{NH_2–NH_2/KOH}$

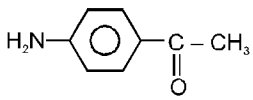
(C) $C_6H_6 + CH_3CH(Cl)CH_3 \xrightarrow{AlCl_3}$

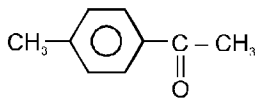
(D) $C_6H_6 + C_2H_5CO\text{-}OCOC_2H_5 \xrightarrow{H^+} \xrightarrow{Zn–Hg/HCl}$

**7.*** Friedel craft acylation can not be used to obtain :

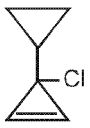
(A) 

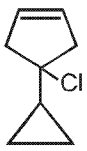

(B) 

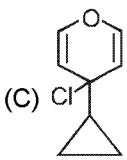

(C) 

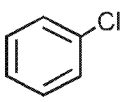

(D) 


**8.*** Which can give white precipitate with $AgNO_3$

(A) 


(B) 


(C) 


(D) 


**9.** Halogens are deactivating groups but have ortho-para directing nature.

# Answer Key

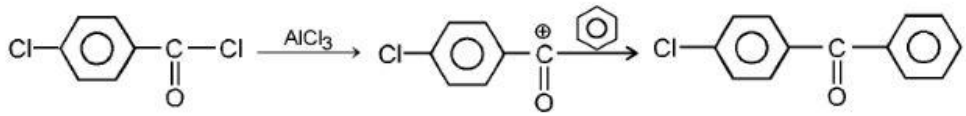
## DPP No. # 16

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **1.** | (A) | **2.** | (B) | **3.** | (D) | **4.** | (C) | **5.** | (C) |
| **6.** | (B,D) | **7.** | (B,C) | **8.** | (A,B,C) | **9.** | True | | |

# Hints & Solutions

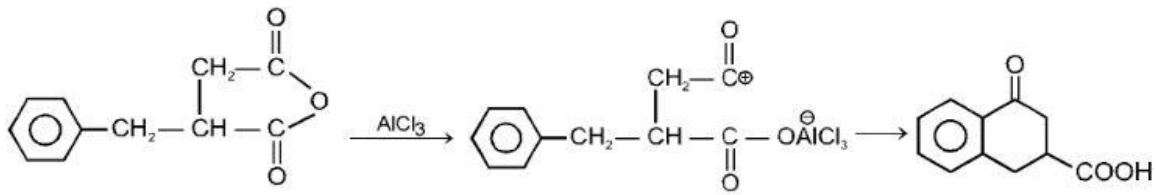
## DPP No. # 16

**2.**




Acylation is more favrourable because of resonance stabilization.

**3.**




**4.** The + M of Cl stabilizes the intermediate carbocation.

**9.** Deactivating nature of halogen can be explain by – I & ortho-para directing nature can be explain by stability of intermediate by + M.