ORGANIC CHEMISTRY

DPP

DAILY PRACTICE PROBLEMS

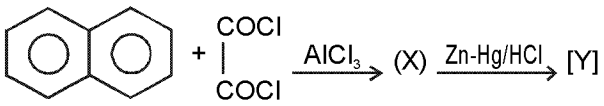
DPP No. 25

Total Marks : 12

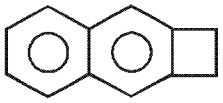
Max. Time : 12 min.

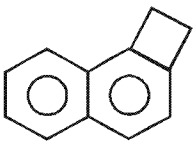
Topic : Haloalkene and Haloarenes

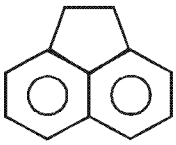
Type of Questions		M.M., Min.
Single choice Objective ('–1' negative marking) Q.1 to Q.3	(3 marks 3 min.)	[9, 9]
Fill in the Blanks ('–1' negative marking) Q.4	(3 marks 3 min.)	[3, 3]

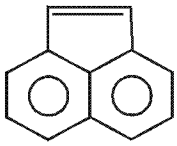
1. 

Y is

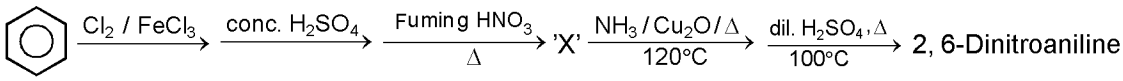
(A) 

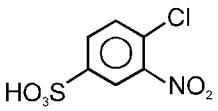
(B) 

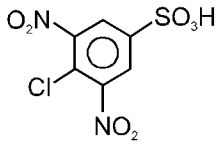
(C) 

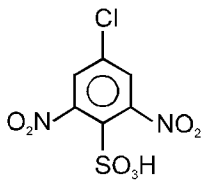
(D) 

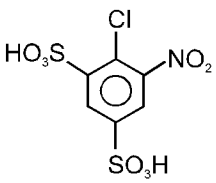
2. The intermediate product 'X' of following synthesis is identified as :



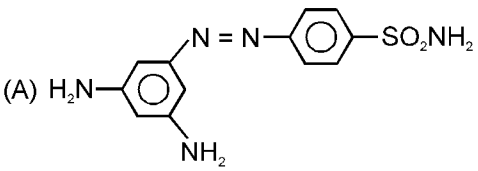
(A) 

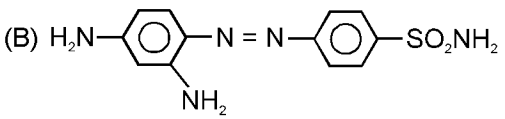
(B) 

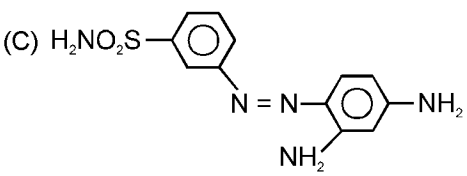
(C) 

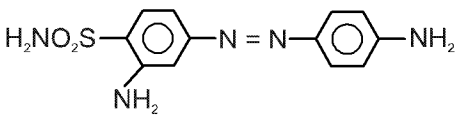
(D) 

3. Prontosil is a sulphonamide drug used in medicine. It is prepared by diazotising sulphanilamide (p-Amino benzene sulphonamide) and then its coupling with m-phenylene diamine. The structure of prontosil is

(A) 

(B) 

(C) 

(D) 

4. (a) Complete the following reactions :

(i) $C_6H_5NH_2 + CHCl_3 + \text{alc. } KOH \rightarrow$

(ii) $C_6H_5N_2Cl + H_3PO_2 + H_2O \rightarrow$

(iii) $C_6H_5NH_2 + H_2SO_4 \text{ (conc.)} \rightarrow$

(iv) $C_6H_5N_2Cl + C_2H_5OH \rightarrow$

(v) $C_6H_5NH_2 + Br_2 \text{ (aq.)} \rightarrow$

(vi) $C_6H_5NH_2 + (CH_3CO)_2O \rightarrow$

(vii) $C_6H_5N_2Cl \xrightarrow[\text{(ii) } NaNO_2/Cu,\ \Delta]{\text{(i) } HBF_4}$

(b) Give the structures of A, B and C in the following reactions :

(i) $C_6H_6N_2Cl \xrightarrow{CuCN} A \xrightarrow{H_2O/H^+} B \xrightarrow[\Delta]{NH_3} C$

(ii) $C_6H_6NO_2 \xrightarrow{Fe/HCl} A \xrightarrow[273\ K]{NaNO_2+HCl} B \xrightarrow[\Delta]{H_2O/H^+} C$

(iii) $C_6H_6NO_2 \xrightarrow{Fe/HCl} A \xrightarrow[273\ K]{HNO_2} B \xrightarrow{C_2H_5OH} C$

Answer Key

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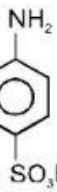
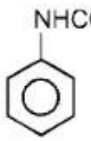
1. (C) **2.** (B) **3.** (B)

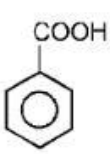
4. (a). (i) $C_6H_5NC + KCl + H_2O$ (ii) $C_6H_6 + N_2 + H_3PO_3 + HCl$ (iii) 

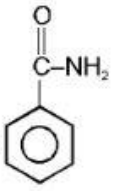
(iv) $C_6H_6 + N_2 + CH_3CHO + HCl$ (v) 

(vi) 

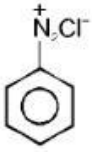
(vii) 

(b). (i) A = 

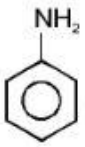
; B = 

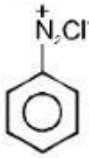
; C = 

(ii) A = 

; B = 

; C = 

(iii) A = 

; B = 

; C = 

Hints & Solutions

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3.