

22363

11920

3 Hours / 70 Marks

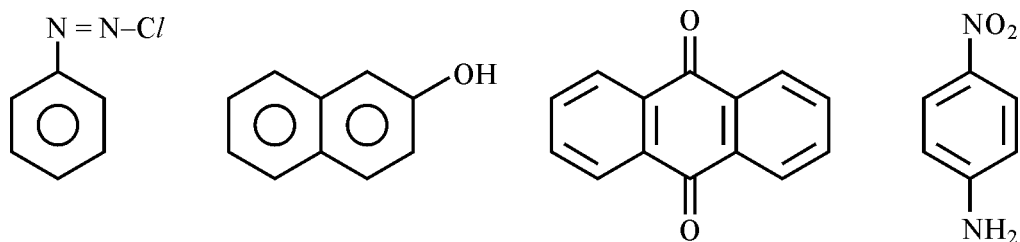
Seat No.

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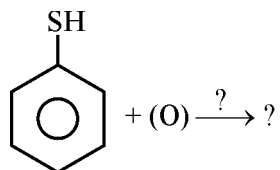
- Instructions :**
- (1) All Questions are *compulsory*.
 - (2) Attempt **all** questions including Question No. 1 which is compulsory.
 - (3) Illustrate your answers with neat sketches wherever necessary.
 - (4) Figures to the right indicate full marks.

Marks**1. Attempt any FIVE of the following :****10**

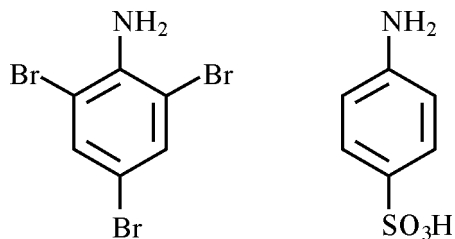
- (a) Name following aromatic compound.



- (b) State industrial applications of phenol.
 (c) Complete following reaction. Name reactant and product.



- (d) Identify the following compounds :



[1 of 4]

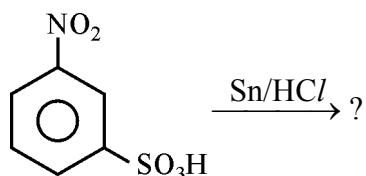
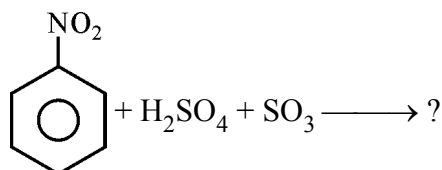
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- (e) Draw resonating structures of anthracene.
 (f) Define the term 'Dye'.
 (g) Define the term 'Supstantivity of dye'.

2. Attempt any THREE of the following :

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- (a) Describe the process of separation of naphthalene from coaltar – using coaltar distillation process.
 (b) Complete following reactions and identify reactants, reagents and products :

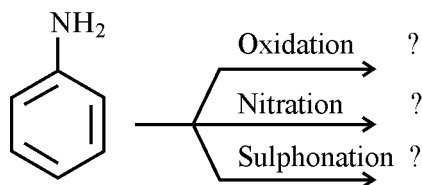


- (c) Explain the method of preparing benzene diazonium chloride with suitable sketches.
 (d) Describe the method of preparing acid with relevant chemical reactions.

3. Attempt any THREE of the following :

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- (a) Describe method of preparing nitro dye using 1 naphthol and sulphuric acid with suitable chemical reaction.
 (b) Explain following characteristics of reactive dyes :
 (i) Solubility (ii) Fastness (iii) Affinity with fibre
 (c) Find the product of following reactions. Draw the structures of reagent and products.

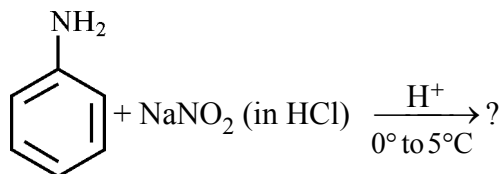


- (d) Comment on the following properties of pigments :
 (i) Solubility (ii) Light fastness (iii) Chemical bonding with fabric

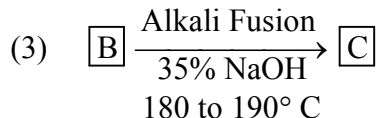
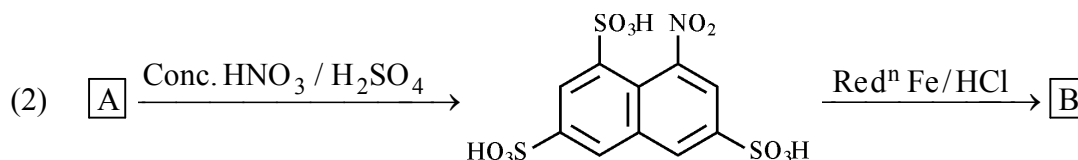
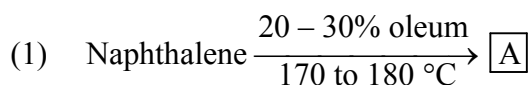
4. Attempt any FOUR of the following :

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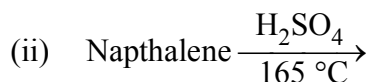
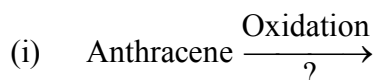
- (a) Explain the relationship between chemical structure of dye and its fastness properties.
- (b) Complete following reaction. Couple the product obtained in reaction with β -naphthol. Write the reaction for the same.



- (c) Complete following reaction drawing structures of reactant and products. Identify A, B and C.



- (d) Complete the following reaction and identify reagent and products. Draw the relevant structures for same :



- (e) Explain mechanism of sulphonation of benzene with electronic structures.

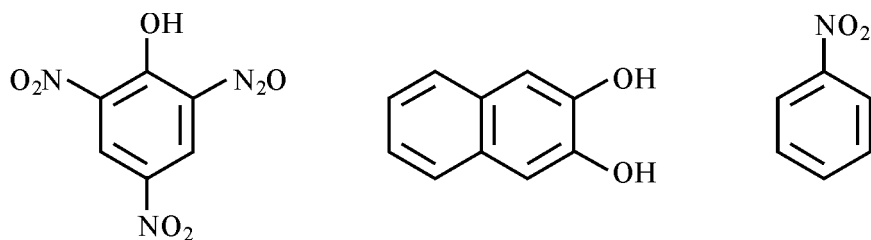
5. Attempt any TWO of the following :

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- (a) Use Friedel Craft's reaction and Wurtz fitting reaction to form toluene.
- (b) Commercial name and CI colour index of dye is "Ramazole blue RGB"; CI "Reactive Blue-250" respectively. Explain the meaning of each term mentioned above.

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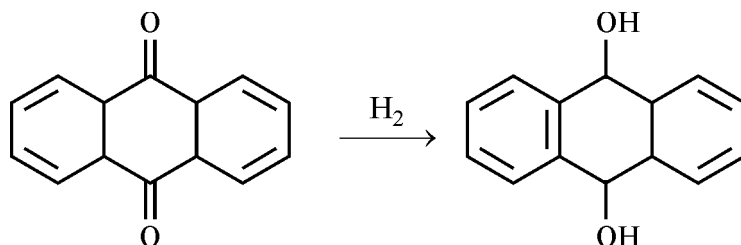
- (c) Observe the following organic compound and predict the name of compound which can behave as a dye with suitable reasoning



6. Attempt any TWO of the following :

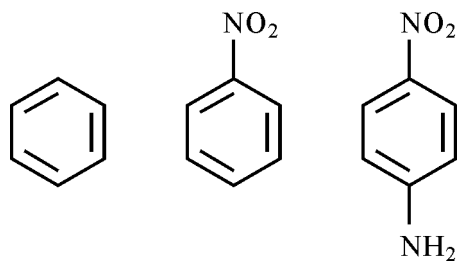
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- (a) Identify the class of dye in which the given reacting system present :



Describe the procedure of applying the same dye on fibre.

- (b) Apply modern theory of light for the following compounds and identify the compound producing deep colour. Predict reason for same.



- (c) Use Dow's process to form phenol. Suggest other reactant and reagents which can be used for preparing phenol. Illustrate your answer with suitable chemical reactions.
