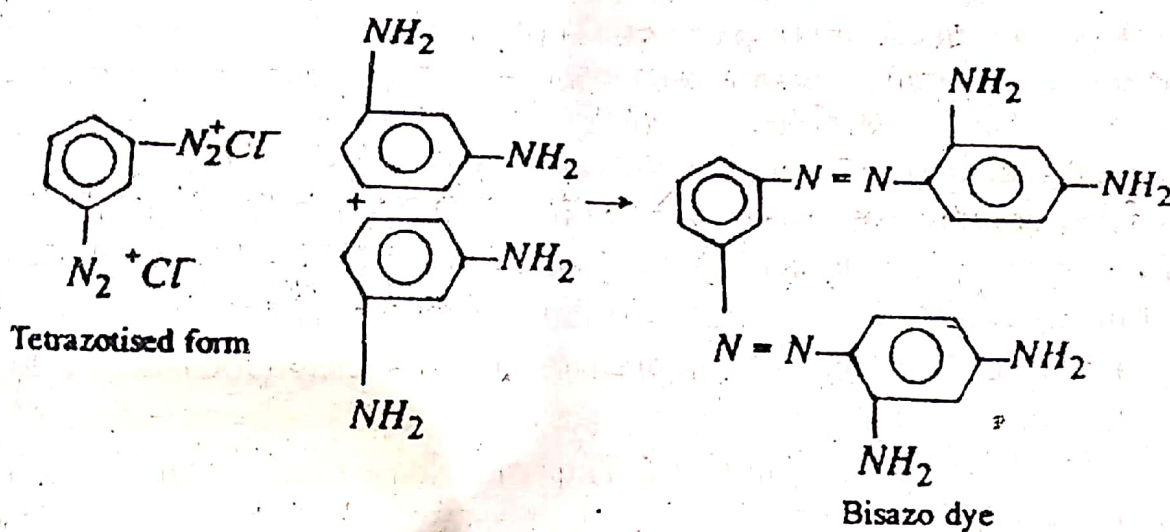
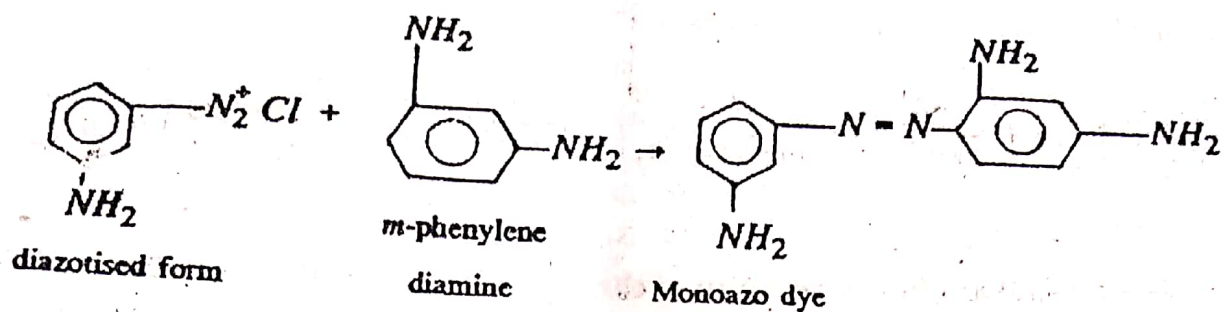


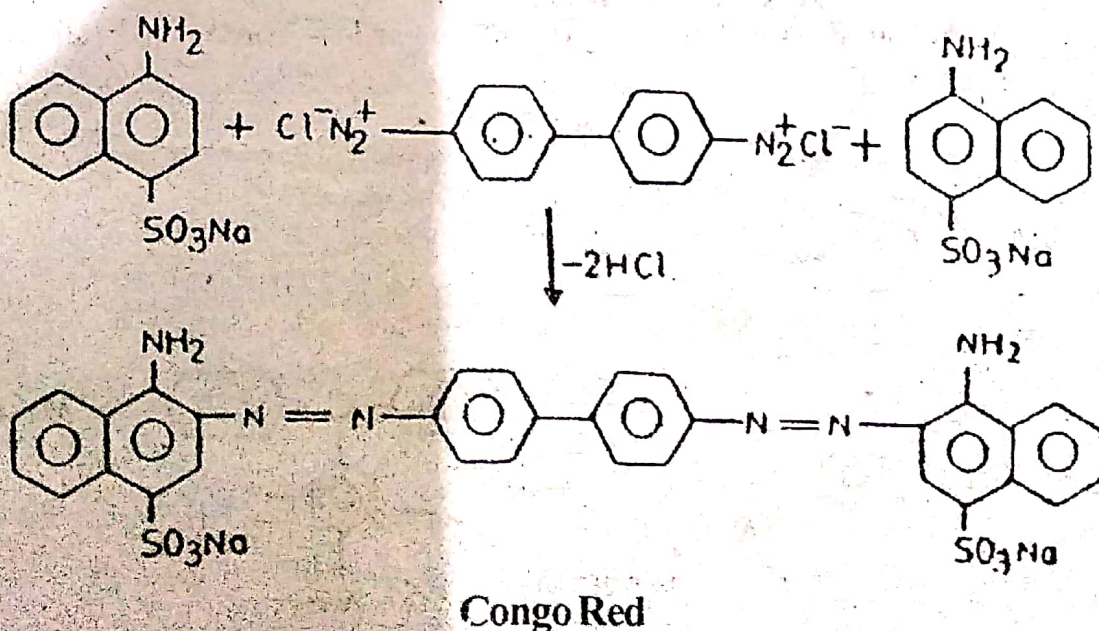
2. Bismark Brown :

It is a direct dye for dyeing wool. It needs to be mordanted before dyeing cotton. It is also used in boot polishes and wood primer. Though it is a mixture of mono- and bisazo dyes but the commercial sample contains mainly bis azo dye. It is prepared by coupling diazotised *m*-phenylene diamine and *m*-phenylene diamine (excess)–



3. Congo Red :

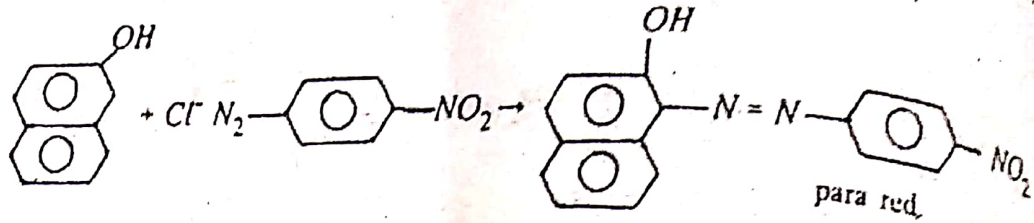
It is prepared by coupling tetrazotised benzidine and sod. salt of naphthylamine-4sulphonic acid



it is a direct dye for dyeing cotton. It is an acid-base indicator having red and blue colours in alkaline and acidic solutions respectively.

4. Para Red :

It is a developed or in grain dye as it is synthesized directly in fibres. It is particularly used for making printed fabrics. The fibre is soaked in an alkaline solution of β -naphthol, dried and then immersed in an ice-cold solution of p -nitrobenzene diazonium chloride-



Q.4. Give a cohesive account of the chemistry of triphenyl methane dyes. Mention their commercial importance.

Ans. : Triphenyl methane dyes : These dyes have brilliant colours but the colours are not fast. These are prepared by introducing auxochromic groups such as $-NR_2$, $-NH_2$, $-OH$ etc. into chromogenic triphenyl methane rings to form colourless leuco bases which oxidise to corresponding 3° alcohols called colour bases. The colour base exists in colourless benzenoid form which readily undergoes intramolecular change of coloured quinonoid form. Malachite Green, Rosaniline and Crystal violet are important triphenyl methane dyes.

(1) Malachite Green : It is prepared by condensing benzaldehyde with dimethylaniline (1 : 2) in presence of conc. H_2SO_4 followed by oxidation of leuco base to colour base by PbO_2 and HCl . The colour base reacts further with HCl to form malachite green.

