

TXL 242: TECHNOLOGY OF TEXTILE COLOURATION

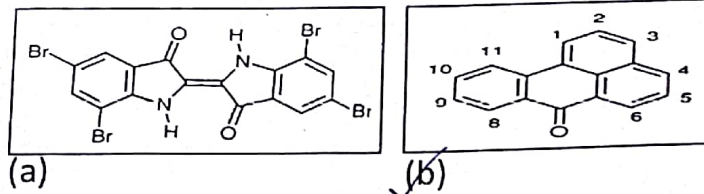
Minor-II

Max. Marks-20

17.30-18.30 /05-10-2018/LH-108

Attempt all questions [Ques. No. 1 to 7].

(1). Among the following two dyes, which one would you expect to possess better fastness property and why? What is the objective of pre-pigmentation step in batch-wise process of Vat dyeing of cotton? [2 + 1]



(2). With suitable justification/s arrange the following dyes with decreasing tendency to skittery dyeing of wool fibres:

(i) 1:1 metal complex dye (ii) strongly polar 1:2 metal complex dye (iii) weakly polar 1:2 metal complex dye [2]

(3). Select a combination with proper explanation for dyeing of Cotton/Wool blend fabric: [2]

(a) Vat/Acid (b) Direct/Acid (c) Basic/Acid

(4). (a) Choose the auxiliary chemical for dyeing of acrylic fibre (containing acid groups as comonomers) with basic dyes

(i) Exhausting agent (ii) levelling agent *level used* [1+2]

(b) How the following nature of chemicals help in the above selected function

(i) Positively charged agent (ii) Negatively charged agent *+ve charge*

(5). Dyeing bath for PET should be alkali free whereas reduction clearing of the dyed sample is generally carried out in alkaline condition – why? How can you dye a PET fabric continuously? [2 + 1]

(6). With a rough diagram, clearly mention two main functions of lint doctor in roller printing. *remove the paint (excess) prevent colour contamination* [2.0]

(7). Give suitable reason/s for the followings: [1 × 5]

- a) Low affinity vat dye is applied in lower temperature while high affinity dye requires higher temperature
- b) Leveling type acid dyes (Group-1) cover barré problem in nylon well and is applied under strong acidic pH
- c) In the context of metachrome dyeing process, dyeing bath pH should not be highly acidic and generally maintained by $(\text{NH}_4)_2\text{SO}_4$
- d) Vat dyeing is carried out at alkaline pH whereas basic dyes are applied on cotton in slightly acidic pH
- e) Back grey fabric is placed under the 'fabric to be printed' in roller printing machine *to absorb extra dye.*

.....The End of the Question Paper.....