THE TEXTILE ASSOCIATION (INDIA)
GMTA EXAMINATION – 2018
SECTION – D PAPER – WOD.2
ANALYTICAL CHEMISTRY IN TEXTILES

Date: 25.12.2018 MARKS: 100 Time: 02.00 pm to 05.00 pm

Instructions:
1. Attempt any Six questions out of which Q.1 is Compulsory
2. Answer each next question on new page
3. Figures to the right indicate full marks
4. Illustrate your answers with neat sketches & flow charts wherever necessary
5. Use of non-programmable electronic pocket calculator is permissible
6. Mobile and any other communication devices are not allowed in the Examination hall.
7. Assume suitable data wherever necessary

Q1 a Describe the electromagnetic spectrum in relation to UV and Visible spectroscopy. 10
   b Discuss Infrared spectroscopy in relation to analysis of fibres. 10

Q2 a Write a note on ‘NMR spectroscopy in Textiles’. 08
   b State the difference between IR and Raman Spectra. 08

Q3 a Discuss the mass spectroscopy in the analysis of aryl amines. 08
   b What is pH? Describe the method of estimation of PH of an acidic solution. 08

Q4 a Describe the method of estimation of TDS of water. 08
   b Discuss potentiometric titration in the analysis of textile chemical. 08

Q5 a What is chromatography? Describe liquid chromatography. 08
   b Write short note on ‘Paper Chromatography’. 08

Q6 a Discuss thermal analysis of fibres in relation to analysis of Nylon 66. 08
   b Discuss the use of gas chromatography and liquid chromatography in textile chemical analysis. 08

Q7 Discuss gas chromatography interfaced with mass spectroscopy (GCMS) in the analysis of azo dyes 16
   a Explain precision, accuracy, significant figure and confidence limit in textile analytical chemistry 08
   b Discuss the importance of statistical analysis in analytical Chemistry, 08