THE TEXTILE ASSOCIATION (INDIA)
G.M.T.A. (REVISED) EXAMINATION – 2012
SECTION-A PAPER-II (A-2)
ENGINEERING CHEMISTRY

Date: 23.12.2012 Marks : 100 Time: 10 am to 1 pm

Instructions:
1. Attempt six questions out of which Q.1 is compulsory
2. Answer each next main question on new page
3. Figure to the right indicate full marks
4. Illustrate your answer with sketches and flow chart wherever necessary
5. Use of non programmable electronic pocket calculator permissible.
6. Mobile and any other communication devices are not allowed in exam hall.
7. Assume suitable data wherever necessary.

Q.1. Attempt any five:

(a) Define hardness. Differentiate hard water and soft water.
(b) Explain any one method of preparation of soap.
(c) Differentiate between homopolymer and copolymer
(d) What are applications of thermal insulators?
(e) Discuss the electrochemical theory of corrosion
(f) Explain the aim, principle, procedure, calculation involved in EDTA method?
(g) Write a short note on fuels.

Q.2. Classify carbohydrates? What is chemical composition of starch? Explain reaction enzymes on starch and used of enzyme in textile industry.

Q.3. Write a short note:

(a) Insulators and its application. (b) Classify fuels.
(c) Lime soda process for water treatment (d) Addition and Condensation polymerization


Q.5. Calculate the total hardness of a sample of water in 0Fr and 0CI having the following salts CaCl2 = 11.1mg/l, Mg(HCO3)2 = 7.3mg/l, Ca(HCO3)2 = 5.1mg/l, Mg(NO3)2 = 14.8mg/l.

(a) What is copolymerization? What is co-polymer?
(b) Define plastic. How can they be classified? Give any four differences between thermo and thermosetting plastics.


Q.7. What are renewable energy sources? Explain its necessity in textile.

Q.8. a. Explain principle of lubricants. Writes its properties.

And what is flash and fire point?

b. What are factors affecting on dry and wet corrosion?

What do you mean by glass transition temperature? Explain its significance in dyeing of synthetic fibre.