THE TEXTILE ASSOCIATION (INDIA)
G.M.T.A. (REVISED) EXAMINATION – 2015
SECTION –A PAPER A.2

ENGINEERING CHEMISTRY

Date: 25.12.2015     Marks: 100     Time: 10 am to 1 pm

Instructions: 1. Attempt six questions out of which Q1 is compulsory
2. Answer each next question on new page
3. Figure to the right indicate full marks
4. Illustrate your answers 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

Q1 Attempt any five 20 Marks
a. What are the sources of water? And What are the impurities present in water depending on its source? 4
b. What do you mean by surface active agent? Explain its use in textile industry. 4
c. How does hard water effects on boiler? 4
d. What is corrosion? Explain its principle. 4
e. What are renewable sources of energy? Explain their use for green environment. 4
f. What is polymer? 4
g. What is principle and function of lubricant? 4

Q2 What is starch? How does it manufacture? Explain its use in textile industry and also explain how enzymes attacks on starch and where this mechanism is used in textile processing? 16

Q3 Write a short note on
a) Application of polyester in textile  b) Types of polymerization 16

Q4 What is hard water? Explain methods of treatments of hard water for domestic purpose. 16

Q5 a) What is insulators? Explain its use for engineering application 8
b) What is mechanism of wet corrosion? 8

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Q6  a) What is lubricant? Explain its properties. Explain why flash point is important for lubricants?
    b) Define Alloy. Explain properties and engineering application of alloy.

Q7  a) Explain steps of polymerization reaction.
    b) Define plastic. How can they be classified? Give any four differences between thermo and thermostatic plastics.
    c) Write a short note on a) Carbohydrates  b) Protein

Q8  Discuss types of detergents. Explain cleaning mechanism in detail. Give advantages and disadvantages of detergents