THE TEXTILE ASSOCIATION (INDIA)
G.M.T.A. (REVISED) EXAMINATION - 2016
SECTION A PAPER - A.2
ENGINEERING CHEMISTRY

Date: 24.12.2016
Marks: 100
Time: 10.00 a.m. to 01.00 p.m.

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 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. What are the impurities present in water depending on its source?
   b. What is non ionic surfactant? Explain its use in textile industry.
   c. Define protein. What are types of protein?
   d. Classify corrosion; Explain causes of corrosion
   e. What are renewable sources of energy? Explain their use for green environment.
   f. What is addition and condensation polymerization?
   g. What is principle and function of lubricant?

Q. 2 What is starch? How is it manufactured? Explain its use in textile industry.
   Discuss how enzymes attack on starch and explain its relevance in textile processing.

Q. 3 Write a short note on
   a) Surface active agent
   b) Insulators and their types
   c) Atmospheric corrosion
   d) Wet and dry process for cement manufacturing

Q. 4 What is wet corrosion? Discuss its mechanism with regard to factors influencing wet corrosion?
   How is corrosion controlled?

Q. 5 a) What is lubricant? Explain its use in textile industry
   b) Classify fuels? Explain liquid fuel in details?

Q. 6 a) Describe water treatment in relation to its use for drinking and cleaning.
   b) Define Alloy. Explain properties and engineering application of alloy.

Q. 7 a) Explain steps of polymerization reaction.
   b) Define plastic; Give any four differences between thermo and thermosetting Plastics.
   c) Write a short note on a) Additives for Cement  b) Effect of hard water on boiler

Q. 8 a) What is polymer? Explain properties of Nylon and Polyester
   b) What is chemical composition of cement? Explain its properties
   c) How is hardness of water estimated by EDTA method?
   d) Explain engineering application of Insulators

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