

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

Date: 25.12.2020

Marks: 100

Time: 10.00 am to 1.00 pm

Instructions:

1. Attempt **SIX** questions out of which **Q1** 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.

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| Q1. Answer all the five. | 20 |
| a. Explain necessity of making alloys. | |
| b. Explain thermal and electrical insulators. | |
| c. Define: Annealing point and neutralisation number. | |
| d. Explain addition and condensation polymers. | |
| e. Enlist the factors affecting wet corrosion. | |
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| Q2. Explain wet and dry processes for the manufacture of cement. | 16 |
| Q3. a. Explain composition and properties of cellulose. | 8 |
| b. Explain the different types of coals. | 8 |
| Q4. a. Define (i) Boiler corrosion (ii) Scales and sludges. | 8 |
| b. Explain the classification, properties and uses of surfactants. | 8 |
| Q5. a. Explain separation and classification for proteins and amino acids. | 8 |
| b. Explain renewable energy sources. | 8 |
| Q6. a. Explain the methods used for the treatment of water for domestic purposes. | 8 |
| b. Explain estimation of hardness of water by EDTA methods. | 8 |
| Q7. a. Explain sterilisation and disinfections of drinking water. | 8 |
| b. Explain the manufacturing and chemical properties of (i) polyethene and (ii) nylon. | 8 |
| Q8. a. Explain (i) Electrode potential (ii) Electrochemical series. | 8 |
| b. Define addition and condensation polymerisation. | 8 |
