

I B. Tech I Semester Supplementary Examinations, August/September - 2022**ENGINEERING CHEMISTRY**

(Com. to Aero E, Bio-Tech, Chem E, CE, Min E, Metal E, PE, PChem E, Auto E, ME)

Time: 3 hours

Max. Marks: 70

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- Note: 1. Question paper consists of two parts (**Part-A** and **Part-B**)
2. Answering the question in **Part-A** is Compulsory
3. Answer any **FOUR** Questions from **Part-B**
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PART -A

1. a) What is condensation polymerization? (2M)
- b) Define power alcohol? What are its advantages? (2M)
- c) Explain reversible and irreversible cells? (2M)
- d) Define single and multi-walled carbon nanotubes? (2M)
- e) What is meant by foaming in boiler troubles? How can it be minimized? (2M)
- f) Define refractory. Mention its characteristics. (2M)
- g) How is BUNA-S prepared? (2M)

PART -B

2. a) Discuss stereospecific polymers. (7M)
- b) Explain the mechanical properties of polymers. (7M)
3. a) Explain Bergius process for preparation of synthetic petrol. (7M)
- b) Differentiate solid, liquid and gaseous fuels. (7M)
4. a) Explain the working of a Ni-Cd and Li cells. (7M)
- b) Discuss how designing and selection can protect from corrosion. (7M)
5. a) Discuss sol-gel method for preparation of nanomaterials. (7M)
- b) Explain type-I and type-II superconductors. Write applications of superconductors. (7M)
6. a) Explain lime soda process for softening hard water. (7M)
- b) Explain electrodialysis method for treatment of brackish water. (7M)
7. a) Discuss thick film mechanism of lubrication. (7M)
- b) Explain construction and working of hydrogen-oxygen fuel cell. (7M)