

FACULTY OF ENGINEERING
B.E. I - Semester (AICTE) (Civil) (New) (Main) Examination, July 2021

Subject: Engineering Chemistry

Time: 2 Hours

Max. Marks: 70

Note: (i) First question is compulsory and answer any three questions from the remaining six questions.

(ii) Answer to each question must be written at one place only and in the same order as they occur in the question paper.

(iii) Missing data, if any, may be suitably assumed.

1 Answer any four questions.

(4 x 4 = 16 Marks)

- (a) Why calgon conditioning is better than Phosphate conditioning?
- (b) Why is water softened by zeolite process is unfit for boiler?
- (c) Distinguish between the corrosion of Al and Mg.
- (d) Differentiate between addition and condensation polymers.
- (e) What is acidic refractory? Give suitable examples.
- (f) Give the classification of adhesives.
- (g) Distinguish between low and high explosives.

(3x18 = 54 Marks)

- 2 (a) What is portable water? What are the various steps to be taken to obtain the pure drinking water.
- (b) What do you understand by Oxidation corrosion? Discuss its mechanism.
- 3 (a) Explain the principle of electroless plating. Discuss the electroless plating of nickel.
- (b) Discuss in brief waterline corrosion and Pitting Corrosion.
- 4 (a) Write down the synthesis, properties and applications of PVC, Teflon.
- (b) Differentiate Thermoplastic and Thermosetting resins.
- 5 (a) Write a note on Manufacturing of Glass.
- (b) Discuss about Chemical factors influencing adhesive action.
- 6 (a) How would you classify the propellants? Give the examples.
- (b) What are the precautions to be followed for the storing of explosives?
- 7 (a) How adhesive strength is developed? Explain.
- (b) Write a note on refractoriness.