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School of Engineering and Technology
MID TERM EXAMINATIONS-II, JANUARY, 2022

B.Tech. Semester-I

ENGINEERING CHEMISTRY-I

BTEBE102

Time: 2 Hrs

MM: 20

Note: All questions are compulsory.

Q1. Attempt any eight questions.

[8x1=8]

- Draw the structure of cation exchanger resin.
- Write full form and structure of LDPE.
- What is the difference between addition and condensation polymers?
- What is pH?
- Give two examples of strong acid and weak base buffer.
- Give the example of hydraulic cement.
- What are the raw materials needed for manufacturing cement?
- Write the chemical formula of silica glass.
- What is the purpose of RUL test?
- If the precipitate is hard and adhering on the inner wall, it is called
- Give the chemical formula of zeolites.
- What is priming?

Q.2 Answer the following:

- (a) What is the Permutit process for removing the hardness of water?
Explain. [2]
- (b) Differentiate between Lime Soda & Ion Exchange process in detail. [2]
- (c) A Discuss Strong and Weak Acids and Bases with suitable examples. [2]

OR

- (a) Discuss all the major boiler troubles in detail. [4]
- (b) Write a notes on: [2]
- i) Conductance
 - ii) Specific conductance

Q.3 Answer the following:

- (a) What are refractories? Write the properties of good refractories. [2]
- (b) Discuss vertical shaft kiln with diagram. [2]
- (c) Write note on Buffers with suitable examples. [2]

OR

- (a) Discuss the role of gypsum in Portland cement. [2]
- (b) Write a note on conductometric titration. [2]
- (c) Write a notes on: [2]
- i) Conductors
 - ii) Insulators