STATE BOARD OF TECHNICAL EDUCATION AND TRAINING
TELANGANA
DIPLOMA EXAMINATION (C-18)
RATIONALISED-NOV-21-SUPPLY
SEMESTER I , SEMESTER END EXAM
A/AA/BM/C/CH/CM/EC/EE/EI/ES/EV/FW/M/MET/MNG/PKG/PT/TT

18C-104F

General Engineering Chemistry

PCODE 6104

Duration: 2 Hours [Total Marks: 40]

PART-A

Instructions: 1. Answer the following questions. 8 X 1 = 8
2. Each question carries **ONE** mark.

1. Mention the fundamental particles of an atom.
2. Write the formula for calculation of equivalent weight of base.
3. What is the nature of H_2O in the following equation?

$$NH_3 + H_2O \rightleftharpoons NH_4^+ + OH^-$$

4. State any two causes of deforestation.
5. Define hardness of water.
6. Define strong electrolyte.
7. What are the oxidation numbers of P and Na in a compound or ion?
8. Define reverse osmosis.

PART-B

Instructions: 1. Answer any **FOUR** questions. 4 X 3 = 12
2. Each question carries **THREE** marks.

9. Explain the anomalous electronic configurations of chromium and copper.
10. What are lyophilic and lyophobic colloids? Give one example for each colloid.

11. Write the importance of pH.

12. Write a short note on the following:

i) COD ii) BOD

13. What is potable water? Write any five essential qualities of drinking water.

14. Calculate the electrochemical equivalent of a trivalent atom with gram atomic weight 27g.

PART-C

Instructions 1. Answer any **FOUR** questions. 4 X 5 = 20
2. Each question carries **FIVE** marks.

15. Define covalent bond and explain the formation of a covalent bond with oxygen as an example

16 Classify solutions based on the physical state of solvent and solute. Give examples.

17 What is a buffer solution? Explain the buffer action of the basic buffer solution.

18 Explain any five threats to biodiversity.

19. Explain the desalination process of sea water by electrodialysis.

20 Explain Faraday's laws of electrolysis.