

**DIPLOMA OF VOCATION**  
**Industrial Electronics**  
**Subject: Applied Chemistry**  
**Subject Code: ZDSC-102**  
**Semester: Second**  
**October 2020**  
**Theory (External): 35 Marks**  
**Time: 03 Hours**

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**INSTRUCTIONS TO THE STUDENTS**

1. Read the questions carefully and write the answers in the answer sheets.
2. Wherever necessary, the diagram drawn should be neat and properly labelled.
3. This questions paper comprises of 8 questions out of which student need to attempt any 4 questions.
4. All questions carry equal marks.
5. The time allotted will be 3 hours for examinations including time of downloading of question paper to emailing of answer books to the concerned Dean/IC.

## ESSAY TYPE QUESTIONS

1. What do you understand by the term 'Mixture'? Discuss the types of mixture with suitable example.
2. Define surface tension? What are its units? What is the effect of temperature on surface tension?
3. What is meant by a chemical bond? Explain with two suitable examples.
4. Define ionization energy? How does it vary along a period and along a group?
5. 500 ml of a sample of water on EDTA titration with Eriochrome Black-T as indicator consumed 18 ml of 0.045M EDTA till end point is reached. Calculate the hardness of water.
6. Discuss in detail principle and properties of lubrication.
7. What are the monomers used for each of the following polymers? Also, give application of each:
  - a) Nylon-66
  - b) PVC
  - c) Bakelite
8. What is the difference between rusting and corrosion? Explain.

\*\*\*\*\*END OF PAPER\*\*\*\*\*