Reg. No. :

Question Paper Code: 41005

B.E. / B.Tech. DEGREE EXAMINATION, DEC 2020

First Semester

Computer Science and Engineering

14UCY105 - APPLIED CHEMISTRY

(Common to EEE, ECE, EIE, ICE and IT)

(Regulation 2014)

Duration: One hour

Maximum: 30 Marks

PART A - $(6 \times 1 = 6 \text{ Marks})$

(Answer any six of the following questions)

1. Anode of galvanic cell is made up of

| (a) <i>Zn</i> | (b) <i>Cu</i> | (c) <i>Mg</i> | (d) <i>Al</i> |
|---------------|---------------|---------------|---------------|
|---------------|---------------|---------------|---------------|

2. Which of the following is to convert chemical energy into electrical energy

| (a) Electrode | (b) Electrolytic cell |
|--------------------------|-----------------------|
| (c) Electrochemical cell | (d) Voltmeter |

- 3. Printed Circuit Board (PCB) and Microprocessor are fabricated by
 - (a) Electroplating(b) Photolithography(c) Adsorption(d) Galvanisation
- 4. The substance which initiate a photochemical reaction but itself does not undergo any chemical change is called

(a) Catalyst (b) fluorescent (c) sensitizer (d) none of the above

- 5. Which of the following metals could provide cathodic protection to iron: Al, Zn, Cu, Ni?
 - (a) Al and Zn (b) Cu and Ni
 - (c) Cu (d) All of the above

- 6. Why Iron is corroded faster than aluminium even though iron is placed below aluminium in electrochemical series
 - (a) form Non-Porous of Al₂O₃
 (b) form Porous of Al₂O₃
 (c) form mixed porous Layer of Al₂O₃
 (d) None of the above
- 7. Freundlich adsorption isotherm relationship is

(a) x/m = KP (b) $x/m = KP^n$ (c) $x/m = K(P)^{1/n}$ (d) x/m = K

- 8. What is the effect of adsorption with respect to surface area
 - (a) Greater the surface area, greater is the adsorption
 - (b) Lesser the surface area, greater is the adsorption
 - (c) Greater the surface area, lesser is the adsorption
 - (d) none of these
- 9. Chromospheres are responsible for

| (a) Colour of the compound | (b) Formation of salt |
|----------------------------|-------------------------|
| (c) Loan pair of electrons | (d) Hyperchoromic shift |

10. Which among the following is used to find the atomic structure of a crystal?

| (a) XRD | (b) UV-Visible |
|---------|--|
| (c) AAS | (d) Flame photometry |
| | $PART - B (3 \times 8 = 24 \text{ Marks})$ |

(Answer any three of the following questions)

| 11. | What are reference electrodes and describe the construction of Standard Hydrogen | | |
|-----|--|-----|--|
| | Electrode(SHE). | (8) | |
| 12. | State and explain the laws of photochemistry in detail. | (8) | |
| 13. | Explain differential aeration corrosion with suitable example. | (8) | |
| 14. | Discuss the factors which influence adsorption of a gas on a solid. | (8) | |
| 15. | Discuss the various types of electronic transitions in detail. | (8) | |