



# Daffodil International University

Department of Computer Science and Engineering

Faculty of Science & Information Technology

Midterm Examination, Fall 2022

Course Code: CSE212, Course Title: Basic Electronics

Level: 2 Term:1 Batch: 60

Time: 1 hour & 30 Min.

Marks: 25

## Answer ALL Questions

|    |    |  |       |     |
|----|----|--|-------|-----|
| 1. |    | Define i) Ripple Factor ii) Breakdown voltage. Explain p-type semiconductors in detail.  | [2+3] | CO1 |
| 2. | a) | Show that a Full Wave rectifier is more effective than Half Wave Rectifier.  | [5]   | CO2 |
|    | b) | Explain the process of AC to DC conversion using two diodes simultaneously in detail.  | [5]   |     |
| 3. | a) | A Full-Wave rectifier uses two diodes, the internal resistance of each diode may be consumed constant at $20\ \Omega$ . If the peak inverse voltage is $150\text{ V}$ & load resistance is $980\ \Omega$ then solve it to get the followings:<br>i) Mean Load Current ii) R.M.S. Value of load current | [5]   | CO3 |
|    | b) | A diode's internal resistance of $10\ \Omega$ is used for half-wave AC to DC conversion. If the maximum voltage is $25\text{ V}$ & load resistance is $400\ \Omega$ then solve this to get rectification efficiency.   | [5]   |     |