Student Name: _____   Roll No: _____

Program: CS 20ABCD **Examination**:   Mid   Total Marks: **64** Weightage: **30**
Semester: SPRING – 2021 **Time Allowed**: 2:30 hour   Date: **Wednesday May 26th, 2021**
Course: **EE227 DIGITAL LOGIC DESIGN**   Instructor: **Shakir**

Question 1	Question 2	Question 3			Total	Instructor Signature
20 minutes	20 minutes	20 minutes			120 minutes	
10	10	13			64	

NOTE: Attempt all questions. ***In case of an ambiguity in a question, make an assumption, write your assumption and carry on with the question.***

CALCULATORS ARE NOT ALLOWED

Question No. 3 (13 marks) (Estimated time: 20 minutes)

Simplify the following expression using Boolean algebra and draw circuit before and after simplification. [13]

$$XY + \overline{XZ} + X\overline{Y}Z(XY + Z)$$