National University

of Computer & Emerging Sciences Peshawar Campus

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				Total	Instructor Signature
20 minutes	20 minutes				120 minutes	
10	10				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. 2 (10 marks) (Estimated time: 20 minutes)

Prove that NAND AND NOR are commutative but not associative using individual truth tables: