National University

of Computer & Emerging Sciences Peshawar Campus

Student Name: _____ Roll No: _____

Program: CS 20ABCD **Examination**: Mid
Semester: SPRING – 2021 **Time Allowed**: 2:30 hour
Course: **EE227 DIGITAL LOGIC DESIGN**

Total Marks: **64** Weightage: **30**
Date: **Wednesday May 26th, 2021**
Instructor: **Shakir**

Question 1					Total	Instructor Signature
20 minutes					120 minutes	
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. 1 (10 marks) (Estimated time: 20 minutes)

a) (165.535)10 = (?)16 up to 7 stages using repeated division or multiplication by 16 [2]

b) (93)16 + (DE)16=(?)16 [3]

c) Subtract (–27)10 from (68)10 using 2's complements in 8 bits and cross verify each step using decimal number system. [2]

d) Determine the output waveforms for the XOR gate and for the XNOR gate, given the input waveforms, A and B, in the given Figure [3]