



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	Question 3	Question 4		Total	Instructor Signature
20 minutes	20 minutes	20 minutes	30 minutes		120 minutes	
10	10	13	16		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. 4 (16 marks) (Estimated time: 30 minutes)

Convert the following Boolean expression into:

1. standard POS expression
2. a minimum POS expression,
3. a standard SOP expression, and
4. a minimum SOP

$$(A + B)(\bar{A} + C)(B + D)$$