

National University of Computer and Emerging Sciences, Lahore Campus



Course: Digital Logic Design Lab
Program: BS (Computer Science)
Duration: 25 mins
Date: 05-03-18
Section: B-2

Course Code: EL227
Semester: Spring 2018
Total Marks: 15
Weight: 5%
Pages: 2

Question # 1

$$F = xy + x'y' + y'z \quad \text{Eq: (1)}$$

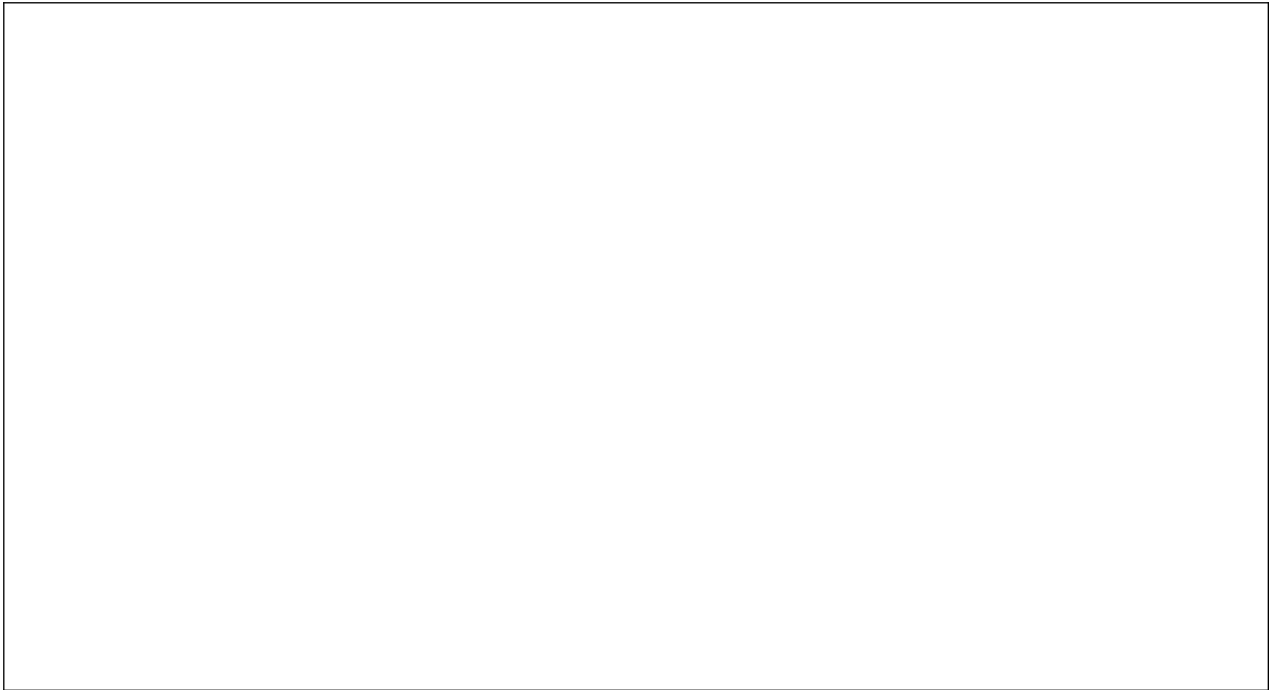
- a. Fill in the truth table of function given above.

Inputs			Output
x	y	z	F

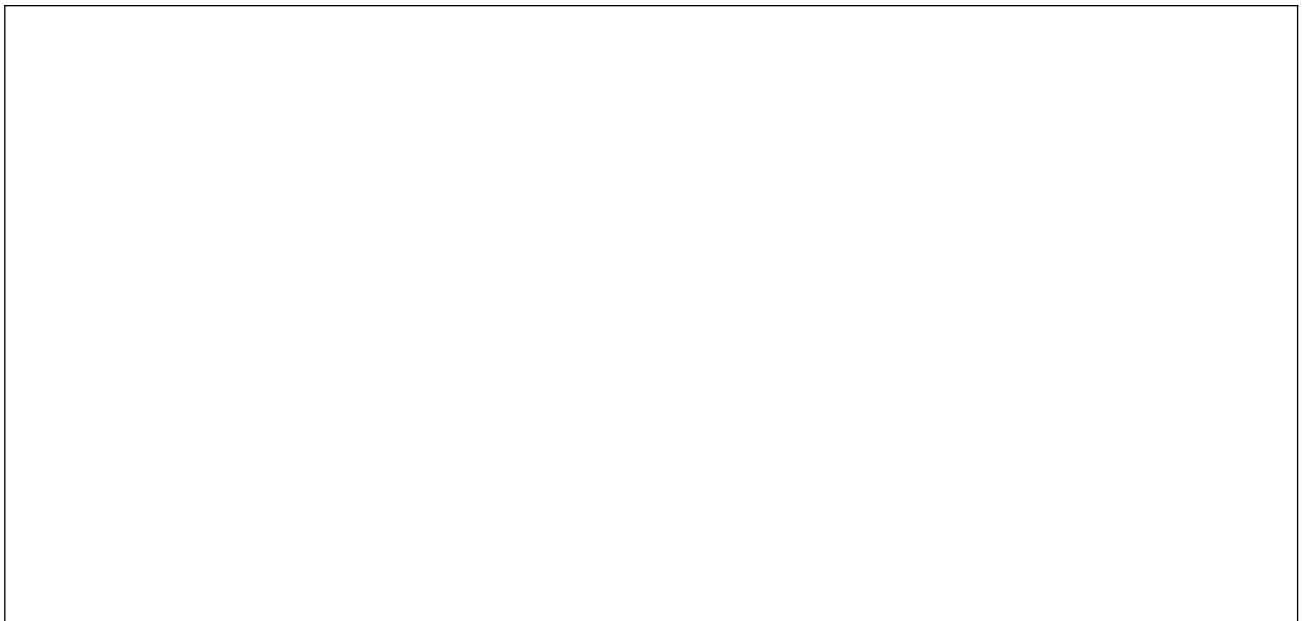
- b. Write Equation of Function in SOP Form i-e as Sum of Min-terms Form (algebraic expression):

M (A, B, C) = _____

- c. Draw Circuit Diagram of Equation (1) using **AND** and **NOT** Gates only.
Note: Use 2-input AND Gates only



- d. Draw Circuit Diagram of Equation (1) using **OR** and **NOT** Gates only.
Note: Use 2-input OR Gates only



- e. Apply Boolean Simplification Techniques to equation derived in Part (b) and show that the simplified equation is same as Equation (1).