



# COMSATS University Islamabad

Attock Campus

## Department of Mathematics

### Assignment # 01

**Class:** BSM-II  
**Subject:** Discrete Mathematics  
**Instructor:** Dr. Atiq ur Rehman

**Due Date:** 07-03-2022 (10:00PM)  
**Course Code:** MTH211  
**Marks:** 10

**Note:** Please follow the due date strictly.

#### Question # 1:

Verify that the proposition  $(p \wedge q) \wedge \sim (p \vee q)$  is a contradiction.

#### Question # 2:

Define conjunction and disjunction.

#### Question # 3

Negate each of the following statement:

- (a)  $\exists x \forall y, x^2 < y + 1$       (b)  $\forall x \exists y, x^2 + y^2 = 12$ .

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### Academic Honesty Requirements:

You are encouraged to work with others in the completion of assignments, but it doesn't include copying. However, in the spirit of Academic Honesty, which includes crediting others for their contribution to your work, please include one of the following statements with every submitted assignment on title page:

1. I worked alone on this assignment.
2. I worked with the following: List their full names. Include their relationship to you if they are not also a member of this class.