



COMSATS University Islamabad

Attock Campus

Department of Mathematics

Assignment # 03

Class: BSM-V

Subject: Real Analysis I

Instructor: Dr. Atiq ur Rehman

Due Date: 01-06-2023 (12:00PM)

Course Code: MTH321

Marks: 9

Note: Please follow the due date & time strictly.
Students must submit a hard copy of the assignment during office time.
Write the solution to any three of the questions given below.

Q 1: Prove that $\lim_{x \rightarrow 0} \cos \frac{1}{x}$ does not exist.

Q 2: Write any function which is discontinuous at each point of its domain.

Q 3: By definition, prove that $\lim_{x \rightarrow a} x^2 = a^2$.

Academic Honesty Requirements:

You are encouraged to work with others in the completion of assignments, but it doesn't include copying. Academic integrity is an ethical code, whereby the student guarantees that all work submitted is the student's own work. For this purpose, please include the following statement with every submitted assignment on title page:

I worked on this homework myself, and I understand it.