[Summary]

Limit, Continuity & Differentiability of a real valued function of a real variable

Subject:	Business Economics
Course:	B. A. (Hons.), 2ndSemester, Undergraduate
Paper No. & Title:	Paper – 202 Mathematics for Business Economics
Unit No. & Title:	Unit – 2 Functions
Lecture No. & Title:	Lecture – 2 Limit, Continuity & Differentiability of a real valued function of a real variable

Summary

We begin with the quick introduction of some of the algebraic and transcendental functions which are frequently encountered in the field of Mathematical economics.

Our primary goal here is to study the two important concepts of calculus and these are continuity and differentiability or real-valued functions. These concepts require the rigorous understanding about limit of a real-valued function at a point. So we discuss the concept of limit in detail and see how it leads to the definition of continuity and continuous functions. We learn certain examples of continuous and discontinuous functions and get familiarize with certain properties of continuous functions. The final part is dedicated to the detailed introduction of derivatives which are very useful objects in the field of science as well as economics. We learn certain examples of differentiable functions and discuss some of the rules of differentiation. These rules are very useful while investigating the differentiability or while computing the derivatives of certain functions.