COMSATS University Islamabad

Attock Campus

Department of Mathematics

Assignment # 01

Class: MSc-II
Subject: Real Analysis II
Instructor: Dr. Atiq ur Rehman

Due Date: 19-09-2019
Course Code: MTH322
Marks: 10

Question # 1
Write two partitions of the interval $[2,4]$ with seven points.

Question # 2
Write two partitions of the interval $[-2,2]$ with eight points.

Question # 3
Let $P_2 = \left\{\frac{\pi}{6}, \frac{\pi}{4}, \frac{\pi}{2}, \frac{2\pi}{3}, \pi\right\}$ be partition of $\left[\frac{\pi}{6}, \pi\right]$ and $f:[0,\pi] \to \mathbb{R}$ be function defined by $f(x) = \frac{\sin x}{x}$. Find $U(P_1, f)$ and $L(P_1, f)$. (Hint: Some software can be used to graph)

Question # 4
Give an example of decreasing function on interval $[0,1]$. Write its maximum and minimum value on the said interval.

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.