



MAT 120: Integral Calculus and Differential Equations

ASSIGNMENT 1: SUMMER 2023

- Please write your name and ID on the first page of the assignment answer script.
- The last date of submission is 5-7-2023
- Solve all the problems

Total Marks: 30

Question No 01:

Let R be the region bounded by the curves $y = 1 - x^2$ and $y = x^6 - x + 1$. Estimate the following quantities:

- (a) The x –coordinates of the points of intersection of the curves. [6]
- (b) The area of R . [8]
- (c) The volume generated when R is rotated about the x –axis. [8]
- (d) The volume generated when R is rotated about the y –axis. [8]