MAT 215 Complex Variables & Laplace Transformation Assignment 1 Summer 2024

Total Marks: 20

Weight of the Assignment: 20%

Assignment 1 Submission deadline 30th JUNE 2024 (SATURDAY) Between 8.00 PM and 10.00PM

Submission Online: (Pdf)

Submission folder will be provided in the google classroom on 30th June by

* 1. **PM**

Use Cam Scanner to create the PDF of your file. You must upload ONE single File. Multiple file upload under an individual student will not be considered and will earn “0” as an obtained mark of this assignment.

FILE NAME FORMAT: Student Number\_SectionNo\_Name. For example: Sec 07: 12345678\_07\_Mehnaz Karim

Sec 09: 12345678\_09\_Mehnaz Karim Sec 17: 12345678\_17\_Mehnaz Karim Sec 19: 12345678\_19\_Mehnaz Karim LATE SUBMISSION WILL HAVE PENALTY

Please use the following Cover page for the assignment:

# MAT 215

**Complex Variables & Laplace Transformation Assignment 1**

**Summer 2023**

**STUDENT Name:**

**STUDENT ID:**

**Section Number:**

Answer all the questions below: [5+5+5+5]

* + 1. Sketch the region in 𝑥𝑦 – plane represented by the following set of points:

2𝑧 − 3

|2𝑧 + 3| = 1.

2. Prove that |(2𝑧̅ + 5)(√2 − 𝑖)|=√3 |2𝑧 + 5|.

1. Prove that |z-i| = |z+i| represents a straight line.
2. Find all the roots of 𝑧4 = −16𝑖.