

COMPLEX VARIABLES (MTH 204)

DR. SANJAY KUMAR SINGH

Assignment-5

Submission and Discussion Date: 11 -02-2023

Problem 1. Solve problem 2.b, 2.d,4.b, from Page-70-71, Section24, Chapter 2.

Problem 2. Solve problems 1.b, 1.d, 2.b, 7 from Page-76-77, Section-26, Chapter 2.

Problem 3. Solve problems 1, 4, 5 from Page-84-85, Section-29, Chapter 2.

Problem 4. Solve all problems.

- Write down all branches of the square root function. Check the continuity and differentiability at each point.
- Let $f : D \rightarrow \mathbb{C}$ be a function defined on a domain D . Show that if f is differentiable at a point $z_0 \in D$, then f must also be continuous at z_0 .

Text Book: R. V. Churchill and J. W. Brown, Complex variables and applications, McGraw-Hill, 2003, **9th Indian Edition.**

Note: Assignment submission is not compulsory. If you submit the assignment, Tutor will check it and mark your mistakes. It will be very helpful in the examination.