
UNIVERSITY DEPARTMENT OF MATHEMATICS
Tilka Manjhi Bhagalpur University, Bhagalpur

Assignment – 01

Due Date: 15-05-19

PAPER – VI

Session: 2017–19

1. Parametrization of linear paths with given points
 - (a) 0 to $2 + 3i$
 - (b) $1 + i$ to $2 - i$
 - (c) $-1 - i$ to $2 + 3i$
 - (d) 2 to $2 + 2i$
 2. Parametrization of circular paths
 - (a) Circle centered at 0 from 1 to i
 - (b) Circle centered at $1 + i$ with radius 2.
 - (c) Circle centered at origin of radius 2.
 3. Find the parametrization of the curve $y = x^2$ from 0 to 1.
 4. Find $\int_{\gamma} (x^2 - iy^2)dz$ along
 - (a) The parabola $y = 2x^2$ from $(1, 1)$ to $(2, 8)$.
 - (b) The straight lines from $(1, 1)$ to $(1, 8)$ and $(1, 1)$ to $(2, 8)$
 - (c) The straight line from $(1, 1)$ to $(2, 8)$
 5. Find $\int_{\gamma} |z|^2 dz$ along the square with vertices at $(0, 0), (1, 0), (1, 1), (0, 1)$.
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