**Structure of Question- Math3 (Mid)**

Part-A: 10 Marks

Short questions

Separation of real and imaginary parts of , principal argument of z, Identify the curve(Line,Circle/Semi-circle,Ellipse,Hyperbola), Finding singular points(poles) and Residues of , Z( (where ), Verification of , which is a solution of any recurrence relation.

Part-B: 20 Marks

Broad questions

1. Root findings of any complex equation and their geometrical representation.
2. Verification of Cauchy-Riemann equations (Rectangular and polar form).
3. Line integral along a circle, along curve consisting of multiple paths.
4. Evaluate using the Cauchy Residue Theorem (CRT).

Part-C: 10 Marks

Broad questions

1. Solving first and second order difference equation.
2. Find inverse Z-transform .
3. Real life problems of Z-transform(Additional problems of Z-transform).