**Structure of Question- Math-3 (Final)**

Q.1 **Short questions from full syllabus: (10 marks)**

* Separate real and imaginary part of .
* State Laurent series.
* Evaluate followings:
* ;
* ;
* ;
* ;
* ;
* ;
* ;
* .

Q.2. **Broad Questions: (10 marks)**

* Mapping for rectangular and triangular region.
* Improper integral using CRT.
* Laurent series.

Q.3. **Broad Questions: (10 marks)**

* Laplace Transformation using definition.
* Laplace Transformation using unit step function. Also sketch the function.
* Inverse Laplace Transformation using partial fraction.
* Inverse Laplace Transformation for unit step function. Also sketch the function.

Q.4. **Broad Questions: (10 marks)**

* Solving linear IVP using Laplace Transformation.
* Solving system of linear IVP using Laplace Transformation.
* Solving linear IVP related to application of DE using Laplace Transformation