

# UNIVERSITY DEPARTMENT OF MATHEMATICS

## NILAMBER PITAMBER UNIVERSITY, MEDININAGAR

Project on ..... Certain Equation of Countinuity of fluid dynamics and application of Integral equation  
Paper Code..... CC MATH 410



BY

NAME - Lovely Kumari

CLASS- M.Sc

SEM- IV

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Under the Supervision of

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Subject	
Semester	IV <sup>th</sup> (N.P.U)

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Sr. No.	Experiment Description	Experiment Date	Submission Date	Remarks/Signature
1.	Continuity Eq <sup>n</sup> , steady flow Continuity Eq <sup>n</sup> Incompressible Flow Continuity Eq <sup>n</sup> .			
2.	The eq <sup>n</sup> of Continuity in Cartesian Coordinates.			
3.	The equation of Continuity in Cylindrical Coordinates			
4.	The eq <sup>n</sup> of Continuity in spherical polar Coordinates. Equation of Continuity in generalised orthogonal Curvilinear Coordinates.			
5.	The Eq <sup>n</sup> of Continuity by the Lagrangian method.			
6.	Continuity Eq <sup>n</sup> ; Integral form			
7.	The velocity distribution of a certain two-dimensional flow is given by $u = Ay + B$ and $v = ct$ where A, B, C are constants obtain the eq <sup>n</sup> of the motion of fluid particle in Lagrangian method			
8.	Streamline & stream tubes.			
9.	Equivalence between Eulerian and Lagrangian form of eq <sup>n</sup> of cont.			

# I N D E X

Sr. No.	Experiment Description	Experiment Date	Submission Date	Remarks / Signature
10.	Derivation of Eulerian form Lagrangian form - Cont eqn derivation, Assumption of continuity, Derivation.			
11.	Continuity eqn of cylindrical Coordinates.			
12.	Eqn of Continuity of a liquid flow through a channel of a pipe			
13.	working rule of writing the equation of Continuity			
14.	The eqn of Continuity by Euler's method.			
15.	Significance of the eqn of Continuity.			
16.	Integral Equation Linear and non-linear Integral Equation.			
17.	Fredholm integral Eqn Fredholm integral Eqn of 1st and 2nd kind.			
18.	Homogeneous Fredholm integral Equation of the 2nd kind.			
19.	Application of integral Equation. General Theory.			

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I am making this project not only for marks but to also increase my knowledge.

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