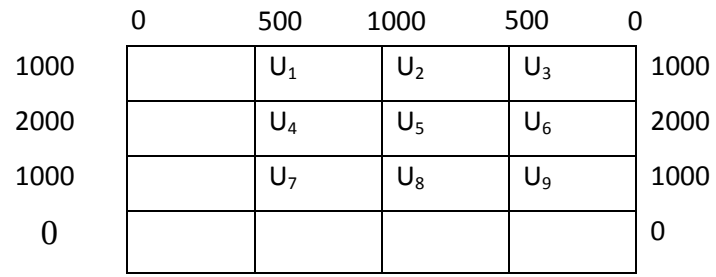
Q.6 Solve $u_{xx} + u_{yy} = o$ for the domain of the given figure.



Q.7 Define probability and explain the Importance of this concept in statistics.

Q.8 Short notes (Any two out of four)

(i) Fuzzy logic (ii) Poisson distribution

(iii) Stochastic process (iv) Game theory

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[Total No. of Questions: 8] *[Total No. of Printed Pages :2]*

Enroll No…….

MA-104

M.Tech. (PS)–I Sem. (Reg./Ex)

Examination, March.-2021

Advanced Mathematics

Time: Three Hours

Maximum Marks:70

Note: Attempt any five questions. (Each question carries equal marks)

Q.1 Use the separation of variables to solve $3ux + 2uy = 0$ with $u(x,o) = 4\bar{e}^{x}$

Q.2 Write short note on Gauss-seidal method.

Q.3 Define.

(i) Wavelet Transform

(ii) Haar Transform

Q.4 Define Galerkin method.

Q.5 (a) Write a note on reliability and its applications.

(b) Define :

(i) MATLAB

(ii) Queuing system.s

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