**Second Mid term 425 math**

**Question1**

**a-Classify each of the following equations as hyperbolic,parabolic or elliptic at each point of the domain:**

**i-**

**ii-**

**iii-.**

**b- Find the general solution of:**

**Question2**

**Use Operator factorization to solve the equation: the solution which satisfies:**

**Question 3**

**a-Show that if the Dirichlet problem for a bounded domain has a solution ,then it is unique.**

**b-Let C be the circle r=a in the xy plane and R is the region interior to C.Derive the solution of the boundary –value problem:**

**In the form .**

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