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| **Question Number** | **I** | **II** | **III** | **Total** |
| **Mark** |  |  |  |  |

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| ***Question I:* [6 Marks]**  **A.Describe the domain of and find the value of** |
| **B. Sketch the level curves of for.**  **C. For, Prove that** |
| ***Question II:*[6 Marks]**  **A. Show that does not exist:**  **B. Discuss the continuity of at** |
| **C. Find the following limits:**  **(i)**  **(i)** |
| ***Question III:*[8 Marks]**  **If**  **A. Find and**  **B. Find at**  **C. Find expressions for that satisfy at**  **D. Is differentiable at ? Justify your answer** |

Good Luck ☺