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**MATRIC NUMBER: 19/ENG06/020**

**DATE: 12/1/2021**

**DEPARTMENT: MECHANICAL ENGINEERING**

**COURSE: MAT 101**

QUESTION 1

I. EMPTY SET: This is also known as the null set. The empty set or null is the unique set having no elements, its size or cardinality (count of elements in a set) is zero. It is noted as { }. example: A = { }.

II. SINGLETON SET: A set which contains only one element is called a singleton set. It is also known as a unit set. example: B = {0}.

QUESTION 2

A = 2 + 7i, B = 9 - 5i

(i) Im (A/B)

=> Im (A) / Im (B)

= 7/-5

(ii) Re(B-A)

=> Re (A) - Re (B)

= 2 - 9

= -7