**UNIT 6 - Complex Numbers**

**Complex Numbers**

1. If where and are real numbers, then find the values of and .
2. If and find
   1. .
3. If and then find .
4. If then find and .  **(**Ans**:** )
5. Express the following in the form of where and are real.
6. Represent the complex number in the polar form
7. Find the modulus of the following complex numbers.

   2. (Ans: )
8. Find the modulus and argument (amplitude) for each of the following complex numbers
9. Find two complex numbers whose sum is 6 and whose product is 25.

**DeMoivre’s Theorem**

1. If  , then find .
2. If , then find .
3. If , find .
4. Find the value of .
5. Simplify .
6. If , find
7. If and then find .
8. If , find
9. Simplify
10. Find .