

**HOME ASSIGNMENT**

**Semester-IV**

**Subject- Mathematics(General)**

**Marks: 15**

1. Find the angle through which the axes must be rotated, so that the expression  $ax^2 + 2hxy + by^2$  may be transformed to one in which the term of  $xy$  be absent. 5
2. If by change of axes, without change of origin the expression  $ax^2 + 2hxy + by^2$  becomes  $a'x'^2 + 2h'x'y' + b'y'^2$ , prove that  $a + b = a' + b'$  and  $ab - h^2 = a'b' - h'^2$ . 4 + 6 = 10

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