MAHESHTALA COLLEGE INTERNAL EXAM: 2021

SEM 2 MATHEMATICS (HONS) PAPER : CC 4 DATE:5/7/21 TIME:11:30AM

ANSWER ALL ( 5*2 =10 )

1. Number of identity element in a group is
   a)1 b) 2 c)3 d) 4

2. Set of all 2*2 non matrices forms a group under matrix multiplication. Then its identity element is a) $I_2$ b) $I_3$ c) O d) none

3. Number of generators of the cyclic group {i, -1, -i, 1} is a) 1 b) 2 c)3 d) 4

4. Which is correct a) intersection of two subgroups is a subgroup b) union of two subgroups is a subgroup c) subgroup of a cyclic group may not be a cyclic d) identity element of a group and its subgroup may be different.

5. In set of all rational numbers a binary composition * is defined by a*b= a+b -ab then identity element a) is 0 b) is 1 c) does not exist d) none