



University of Al-Hamdaniya, College of
Education

Department of Mathematics

GROUP THEORY

Asst. Lecturer. Hadil Hazim Sami

Lecture No. 1

Subjects

No.	subject
1	Binary operations
2	Semi group ,monoid,
3	Group
4	Examples of groups
5	Theorems about the groups
6	Problem
7	Symmetric groups
8	Examples
9	Special cases of groups
10	PROBLEM
11	Theorems of integers modulo n
12	Problem
13	Subgroups

No.	subject
14	Theorems about subgroups
15	Problem
16	Cyclic group
17	Examples
18	Theorems about the subgroups
19	The Cosets
20	Relations between the subgroups the Cosets
21	Normal subgroups and Quotient group
22	Problem
23	Order of a group and subgroup
24	Lagrang theorem
25	Definition of Homomorphisms and examples
26	Theorems about Homomorphisms

No.	subject
27	Isomorphism
28	Theorems about Homomorphisms and Isomorphism
29	The Fundamental Theorems of Ring Homomorphism
30	Problem

References

- Abstract Algebra , D. M. Burton , Brown Publishers – 1988 .
- Group Theory , J. S. Milue , 2010 .