



Sandip Foundation's

SANDIP INSTITUTE OF TECHNOLOGY AND RESEARCH CENTRE

Department of Computer Engineering

Assignment No. 6: Algebraic Structures and Coding Theory

Answer the following questions

Que 1: Define the following terms with suitable examples: Group, Subgroup, semigroups, Ring, Integral domain

Que 2: Define the following terms with suitable examples: Field, Monoid, Homomorphism, Automorphism

Que 3: What is Hamming distance?

Que 4: Show that if a, b are arbitrary elements of group A , then $(ab)^2 = a^2 b^2$

Que 5: Write shortnotes on group codes

Que 6: Explain algebraic system in brief.

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