

2007

Time : 3 hours

Full Marks : 80

Candidates are required to give their answer in their own words as far as practicable.

The questions are of equal value.

Answer any **five** questions choosing at least two from each group

**Group 'A'**

1. Discuss the various set operations? Explain Cartesian product and De Morgan's law in this regards.
2. What do you mean by binary relation, domain and range, solution set and graph representation, type inverse, identify and universal.
3. What do you mean by relation matrix and discuss the following properties of relations – reflexive, anti reflexive, symmetric, transitive, non-transitive, equivalence.
4. In connection with Boolean algebra explain the following – negative, conjunction, disjunction, XOR, NAND, NOR. Explain SOP and POS form.

(Turn Over)