RAMAKRISHNA MISSION VIDYAMANDIRA

(Residential Autonomous College under University of Calcutta)

SECOND YEAR

B.A./B.SC. THIRD SEMESTER (July – December), 2011

Mid-Semester Examination, September, 2011

Date : 13/09/2011 **COMPUTER SCIENCE (General)**

Time : 2 pm – 3 pm Paper : III Full Marks : 25

Answer <u>any two</u> questions : [12½×2= 25]

1. a) Explain Booth's algorithm with suitable illustration.
   b) Write a short on : Representation of Floating Point Number (32 bits single format). [9+3½ = 12½]

2. a) "Primary Key is a subset of Super Key" —Justify the above statement with suitable illustration.
   b) Define Foreign Key. What do you mean by Entity Integrity Constraint, Key Constraint and Referential Integrity Constrain with suitable illustration. [6+2+4½ = 12½]

3. a) Illustrate Select, Project Intersection and Cartesian Product Operations in Relational algebra with proper example.
   b) Write a short not on : 3-Schema Architecture. [9½+3 = 12½]