

1. Briefly explain the following terms/tools: (i) CIM (ii) client/server computing (iii) GDSS (iv) business process reengineering (v) EDI. (20%)
  2. Discuss the steps necessary for the information services to achieve quality management. (10%)
  3. What are the WWW Specifications and how these specifications work together? (10%)
  4. What is an integrated package? Based on your experience, what accounts for the popularity of the integrated package? (10%)
- (5) Explain the following terms:  
25%
- a) Associative entity
  - b) Waterfall model
  - c) White-box testing
  - d) Fuzzy logic
  - e) Almost complete binary tree
- (6) Write an algorithm to return the sum of the even integers in a linked list.  
10%
- (7) The following figure shows a Grade Report that is mailed to students at the end of each semester.
- 8% a) Please define several entity types, and draw an E-R diagram.  
7% b) Please transform the E-R diagram into a set of relations in 3NF.

| LAKEWOOD COLLEGE<br>GRADE REPORT<br>FALL SEMESTER 199X |                  |                 |                     |       |
|--------------------------------------------------------|------------------|-----------------|---------------------|-------|
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| COURSE-ID                                              | TITLE            | INSTRUCTOR-NAME | INSTRUCTOR-LOCATION | GRADE |
| IS 350                                                 | Database Mgt     | Codd            | B 101               | A     |
| IS 465                                                 | Systems Analysis | Parsons         | B 317               | B     |