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## **Department of Computer Science and Engineering**

**Course: Database Management System**

**Course Code- CSE2221**

**Submission Date: 10th September 2024**

**Total Marks: 10**

Imagine a database that keeps track of students' scores on various tests for various course offers. Assume that

- a) course offers are time- and space-specific and can be uniquely identified by course\_no, semester, year, and section\_no
- b) students are identified with their name, program, and student ID; c) Exams are uniquely identified with exam\_ame, location, time, and exam\_id (optional).

Additionally, student grades on various exams from the course offerings need to be accurately modeled.

Now-

- (1) Construct an E-R diagram that models exams as entities, and uses a ternary relationship, for the above database. **(5 points)**
- (2) Construct an alternative E-R diagram that uses only a binary relationship between students and course-offerings.**(5 points)**

Make sure that only one relationship exists between a particular student and course-offering pair, yet you can represent the marks that a student gets in different exams of a course offering.