# ELIZADE UNIVERSITY, ILARA MOKIN

#### DEPARTMENT OF COMPUTER SCIENCE AND MATHEMATICS

2020/2021 FIRST SEMESTER EXAMINATIONS

**COURSE CODE: CSC 305** 

COURSE TITLE: DATABASE SYSTEM I

UNITS: 3

INSTRUCTION: ATTEMPT QUESTIONS 1 AND ANY OTHER 3 TIME ALLOWED: 2<sup>1</sup>/<sub>2</sub>Hrs

**QUESTION 1** 

**HOD's SIGNATURE** 

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- a. Define the term 'database management system.'
- b. List the common categories of database management systems.
- c. Outline the logical structure of a relational database by means of an E-R diagram.
- d. List the components of an E-R diagram.
- e. State the specific roles of each component of an E-R diagram.
- f. State the essential elements of an entity-relationship diagram

# QUESTION 2

- a. Describe the concept of mapping cardinalities with respect to entity relationship diagram.
- b. List five common features of database management systems.
- c. Identify four classical forms of data manipulation.

# **QUESTION 3**

- a. Describe any three components of a data structure
- b. Explain how statements in a query language are translated.
- c. State the data structures required for physical system implementation.

### **QUESTION 4**

- a. State the categories of data independence. How would a database administrator define a schema?
- b. Describe a data dictionary.
- c. How do sophisticated users interact with database systems?

### **QUESTION 5**

- a. Describe object-based logical models.
- b. List the common types of object-based logical models.
- c. Explain the concept of entity-relationship models.

# **QUESTION 6**

- a. Identify the main components of a database management system
- b. Give a brief description of relationship sets. How would you specify a relationship set in formal terms?
- c. State the link between entities and programming languages