



UNIVERSITY OF GHANA

(All rights reserved)

DEPARTMENT OF TEACHER EDUCATION

SCHOOL OF EDUCATION AND LEADERSHIP

COLLEGES OF EDUCATION

END OF SEMESTER ONE EXAMINATIONS FOR LEVEL 300, 2021/2022

B.ED. PROGRAMME

COURSE CODE: **CODE: TEJS 305**

COURSE TITLE: **DATABASE SYSTEMS AND SOFTWARE DEVELOPMENT**

Instruction: Answer all questions in Section A and any three questions in Section B.

Duration: 2 hours

SECTION A

[25 Marks]

Answer all the questions in this section. Each question attracts one (1) mark

1. The goal of normalization is to minimize
 - a. data redundancy •
 - b. number of entities
 - c. number of relationships
 - d. number of tables

2. Which of the following is a data model?
 - a. All points stated below
 - b. Entity – Relationship Model
 - c. Object – Based Data Model
 - d. Relational Data Model

3. The name of a function in OOP ends with
 - a. double quotes
 - b. hash
 - c. parenthesis
 - d. single quotes
4. The feature that allows the same operations to be carried out differently depending on the object in OOP is
 - a. abstraction
 - b. inheritance
 - c. multitasking
 - d. polymorphism
5. Which of the following is generally used for performing tasks like creating the structure of the relations, deleting relation?
 - a. DDL
 - b. DML
 - c. Query
 - d. Relational Schema
6. The most efficient data type for a variable that stores the letter C is the data type.
 - a. character
 - b. double
 - c. float
 - d. string
7. Which of the following refers to the level of data abstraction that describes exactly how the data actually stored?
 - a. Conceptual Level
 - b. File Level
 - c. Logical Level
 - d. Physical Level
8. The instructions a programmer enters into the computer are called the
 - a. edited code
 - b. machine code
 - c. object code
 - d. source code
9. Which one of the following is a type of Data Manipulation Command?
 - a. Alter
 - b. Create

23. Which database level is closest to the users?
- a. Conceptual
 - b. External
 - c. Internal
 - d. Physical
24. Which of the following is a comparison operator in SQL?
- a. All points stated below
 - b. BETWEEN
 - c. LIKE
 - d. =
25. A file manipulation command that extracts some of the records from a file is called
- a. JOIN
 - b. PRODUCT
 - c. PROJECT
 - d. SELECT

SECTION B

[75 Marks]

Answer **any three questions** in this section. Each question attracts 25 marks

1. Discuss any five advantages of the Database Approach over the File-Based Approach. (25 marks)
2. Explain the four (4) main concepts of Object-Oriented Programming. (20 marks)
- 2b. State and explain any **Two** Access Modifiers in Object Oriented Programming. (5 marks)
- 3a. Outline **four** purposes of normalizing data (4 marks)
- 3b. With specific examples, discuss 4 differences between DBMS and file base system of data management. (16 marks)
- 3c. Explain the terms **COUNT**, **COUNT DISTINCT**, and **COUNT (*)** in SQL. (5 marks)
- 4a. State and explain briefly the ACID properties provided by DBMS. (13 marks)
- 4b. Differentiate between Single Valued and Multi Valued attributes (Give examples). (12 marks)
5. Write short notes on the following:
 - i. Data Independence (5 marks)
 - ii. Physical and Logical data independence (10 marks)
 - iii. Drop Table and Truncate Table (10 marks)