

STUDENT'S ID NO: \_\_\_\_\_

SIGNATURE: \_\_\_\_\_



UNIVERSITY OF GHANA

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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)