



National Open University of Nigeria
Plot 91, Cadastral Zone, Nnamdi Azikiwe Expressway, Jabi - Abuja
Faculty of Computing
2024 1 EXAMINATION

COURSE CODE: CIT427

COURSE TITLE: Database System and Management

CREDIT: 3 Units

TIME ALLOWED: 3 Hours

INSTRUCTION: Answer Question One (1) and any other Three (3) Questions

- Q1.
- (a) What are physical data models used for? **3 marks**
- (b) Tabulate the difference between entity relationship model and object-oriented model, using any of the following features: focus/organization, entities, relationships, level and diagrams? **15 marks**
- (c) Using a diagram, illustrate a web service invocation? **7 marks**
- Q2.
- (a) Write on the following terms in database: (i) instances and (ii) schemas **3 marks**
- (b) Explain with example diagrams, E-R diagram and Object-Oriented model. **12 marks**
- Q3.
- (a) State 6 responsibilities of a database administrator. **3 marks**
- (b) Explain three basic structures required for physical implementation of a database. **12 marks**
- Q4.
- (a) Define relationship in database structure? Give an example binary relationship set? **6 marks**
- (b) Describe the entity set. **3 marks**
- (c) Explain entity representation. **6 marks**
- Q5.
- (a) What is a foreign key? **3 marks**
- (b) Discuss the INSET INTO, UPDATE and DELETE clauses of SQL? **9 marks**
- (c) Explain the implication of the volatility of the primary storage? **3 marks**

Q6

- (a) Distinguish between the latency, throughput and 'energy use' performance measures? **9 marks**
- (b) Distinguish between semi-conductor and magnetic storage? **6 marks**

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