



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**

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- a) List the constituents of domain names **[3marks]**
- b) What are the differences between Relative and Absolute Unique Resource Locator Path. **[4marks]**
- c) Present the elements of the Extensible Stylesheet Language in a table format, outlining the purpose or functions associated with each individual component. **[4marks]**
- d) Provide a concise description of a web page. **[4marks]**

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- a) Elaborate on the fundamental idea behind XSLT. **[3marks]**
- b) Create a concise note detailing the explanation of the code provided below **[4marks]**
- c) Enumerate and elucidate the functions executed by Application Layer Protocols. **[4marks]**
- d) List and explain the benefits of XML **[4marks]**