



NATIONAL OPEN UNIVERSITY OF NIGERIA
PLOT 91 CADASTRAL ZONE, NNAMDI AZIKWE EXPRESSWAY, JABI, ABUJA
FACULTY OF SCIENCES
DEPARTMENT OF COMPUTER SCIENCE
2020_2 EXAMINATIONS

COURSE CODE: DAM 344

COURSE TITLE: SEMANTIC DATA MODELING

CREDIT: 2 UNITS

TIME ALLOWED: 2 HOURS

INSTRUCTION: ANSWER QUESTION 1 AND ANY OTHER THREE (3) QUESTIONS

1a. In not less than half a page, elaborate on the process of data modelling highlighting its main application. **(6 marks)**

ai) Enumerate the types of data modelling **(2 marks)**

aii) Expressly outline the process of data modelling **(3 marks)**

b. Based on what you have learnt from the course, explain the term 'database' **(2 marks)**

bi. State the two forms of objects with one example each. **(2 marks)**

bii. A common term employed in Semantic Data Modeling is 'category'. Write on this term and state one difference between abstract category and concrete category. **(4 marks)**

ci. Define **HM-Data Model** and **HC-Data Model** briefly. **(2 marks)**

cii. Elaborate the concept of WBT-Master. **(4 marks)**

2a) Elucidate on the following: Identifier, Modifier and Descriptor. **(3 marks)**

bi. Semantic network may be used as a component of two different information-processing tasks. List them. **(2 marks)**

bii List FIVE tools that WBT-Master provides. **(5 marks)**

ci. Describe an attribute. **(3 marks)**

cii. Define semantic data modelling. **(2 marks)**

3a. Expound on the concept of attributes **(5 marks)**

b. Briefly explain the three abstraction that are key for data modelling. **(6 marks)**

c. Give clear differences between static restriction and dynamic restriction. **(4 marks)**

4a. State and briefly describe in a tabular form the 5 commands used in semantic data language. **(5 marks)**

b. Enumerate and write briefly on the 4 forms of organisations of semantic data models. **(4 marks)**

c. Mention and elucidate on the 3 factors that influence the effectiveness of semantic modelling. **(6 marks)**

5a. State and briefly describe the THREE challenges of a shared Data Model **(6 marks)**

b. What is the collibra Software. **(3 marks)**

c. Mention three (3) of the Business Semantics Management product suite, Briefly Explain any one of them. **(6 marks)**