NATIONAL OPEN UNIVERSITY OF NIGERIA,

PLOT 91 CADASTRAL ZONE, NNAMDI AZIKIWE EXPRESSWAY, JABI – ABUJA

FACULTY OF SCIENCES

Course code: DAM 344
Course title: Semantic Data Modelling
Time: 3 Hours
Instruction: Answer any five (5) questions.

1. a) Highlight 4 content-related properties of data? (6 Marks)
   b) Briefly Discuss the following: (4 Marks each)
   Degree
   Multiplicity

2. a) In order to model data, certain tasks are executed in an iterative manner. List these tasks (8marks)
   b) Briefly describe the 2 types of data modeling as determined by Whitten (2004). (6marks)

3. a) Briefly highlight the concept of semantic annotation in semantic data modeling. (6 Marks)
   b) What is the Overall goal of Semantic data models as stipulated by Klas and Schrefl (1995) (2 Marks)

   Highlight any six (6) requirements which a data model should meet. (6 Marks)

4. a) Illustrate using a diagram, a data modeling process. (10 Marks)
   b) List 4 knowledge transfer processes in a web-based environment, for which WBT-Master provides tools. (4marks) (Any 4, 1 Mark Each)

5. a) Briefly highlight the difference between hypertext and hypermedia. (10marks)
   b) What is data modeling? (4marks)

6. a) Highlight 3 advantages of the HC-Data model over the HM-Data model. (6marks)
   b) Illustrate using a diagram the WBT-Master architectural. Highlight the WBT-Master architectural principles (8Marks)

7. a) Give short notes on Object method and Category method with appropriate examples. (10marks)
   b) Define briefly the following
   i) Derived attributes ii) Associative entity (4marks)