NATIONAL OPEN UNIVERSITY OF NIGERIA
14-16 AHMADU BELLO WAY, VICTORIA ISLAND LAGOS
MARCH/APRIL 2016 EXAMINATION

SCHOOL OF SCIENCE AND TECHNOLOGY

COURSE CODE: **DAM 344**
COURSE TITLE: **Semantic Data Modelling**

Time: **2 ½ Hours**
Instruction: Answer any four (5) questions.

1. a) Highlight 4 content-related properties of data? (6 Marks)
   b) Using a well labelled diagram only, illustrate the three level architecture of data models (8 Marks)

2. a) Highlight the additional more complex restrictions on data states that cannot be specified in a data model itself. (8marks)
   b) List and discuss the modelling methodologies which stand out as stipulated by Len Silverston (1997) (6 Marks)

3. a) Briefly and clearly summarize the three most common normalization rules which describes how to put entity types into a series of increasing levels of normalization. (6 Marks)

   b) Briefly highlight the concept of Attributes in data modeling (8 Marks)

4. a) What is the goal of Data Normalization? (1 Marks)
   b) List out the tasks which are performed during data modelling process (4 Marks)
   c) Highlight and briefly discuss the forms an attribute can take/be in an entity relationship model (9 Marks)

5. a) Highlight and briefly discuss the types of data model instance (9 Marks)
   b) Define:
      i) data modeling (2 Marks)
      ii) an entity-relationship model (ERM) (1 Mark)

iii) Entity-relationship modelling (2 Marks)

6. a) Highlight and briefly discuss the main types of Entities (6marks)
   b) Highlight any two (2) components of the Business Semantics Management Product Suite. (8marks)

7. Highlight and briefly discuss the benefits of Modelling Data (12 Marks)
   b) Define briefly the following the term Derived attributes (2 Marks)