

FEDERAL UNIVERSITY OF TECHNOLOGY, MINNA
SCHOOL OF ENVIRONMENTAL TECHNOLOGY,
DEPARTMENT OF QUANTITY SURVEYING
EXAMINATION

180 ✓

Course Title: **Principles of Measurement**

Course Code: **QTS 211**

Credit Units: **2**

Academic Session: **2016/2017**

Semester: **First**

Duration: **1 hour 30minutes**

INSTRUCTIONS: Answer All Questions

All measurement should be in accordance with BESMM3 only

Question 1:

- i. What do you understand by the term "taking off" in the context of building measurement? (1marks)
- ii. Why is the use of BESMM important in measurement of building works? (2 marks)
- iii. Give four (4) clear purpose of measurement as a core function of the Quantity Surveying (4marks)
- iv. What two basic activities are involved in measurement of construction works? (2mark)
- v. Why is accuracy important in measurement? (1marks)

Question 2:

Draw out the foundation plans and Calculate the mean girth for the following drawings (present your workings clearly as waste calculation on your dimension paper:

- i. 1DRWG NO: QTS211/01 (10marks)
- ii. 2DRWG NO: QTS211/02 (15marks)

Question 3:

3DRWG NO: QTS211/03 on page 2 is a floor plan for a proposed business center for Dr. I. Saidu at plot 123 Layin Zomo, Chanchaga, Minna.

The following specifications accompanied the drawing:

- Site requires bush clearing, no trees to be removed
- Topsoil to be excavated to an average depth of 150mm
- 50mm thick lean concrete blinding in foundation
- 225mm thick 1:3:6/40mm aggregate plain in-situ concrete in foundation
- 150mm thick reinforced in-situ concrete oversite
- 450mm thick hardcore/laterite filling
- 225mm hollow sandcrete blockwork filled solid laid in foundation 600mm high
- Foundation spread is given as 225mm on all ends
- All excavated materials are to be preserved for re-use

- i. Draw the foundation plan and **section A – A** and label appropriately (5marks)
- ii. Take off quantities from **SITE CLEARANCE TO EARTHWORK SUPPORT ONLY**(20marks)