



SECOND SEMESTER EXAMINATION 2017/2018 SESSION
COURSE CODE: QTS 521 COURSE TITLE: ADVANCED BUILDING MEASUREMENT II
TIME ALLOWED: 3Hours CREDIT LOAD: 3 Units
INSTRUCTION: Answer questions 1&2, and any other ONE question from 3&4. Only
BESMM3/4 are allowed. All assumptions must be clearly and reasonably stated.

Question One

The Federal Government of Nigeria is proposing to commence the development of a ten-storey Federal Medical Centre (FMC) building in Minna, Niger State. **DRWNG No QTS521/FUM/2018/01a** and **Detail 'a'** contain the details of **Incoming Electrical Services (IES)** for the work from High Tension (HT) drop pole to HT room, transformer and to Low Voltage (LV) room. Also, **DRWNG No QTS521/FUM/2018/01b**, **Details 'b'** and **'schedule of mains installation'** both contain the details of the mains equipment, including: Rising Main Busbar (RMB), Consumer Control Units (CCUs), isolators, fused switch and so forth. You have been consulted as a final year student of Quantity Surveying Department to:

- Take off quantities complete for the **Incoming Electrical Services (IES)**....(10 Marks)
- Take off for **Mains Installation** for the 10-storey hospital building.....(10 Marks)
- Prepare a draft **Bill of Quantities** for the works in (a) and (b).....(10 Marks)

Question Two

DRWNG No QTS521/FUM/2018/02 is a ground floor plan of the paediatric unit of the proposed hospital development being controlled by a 60A, 4-ways Distribution Board. Use the attached **'Distribution Sheet'** and the **'drawing 02'** to take off quantities in Final Circuit for the internal Electrical Wiring, including: cable and conduits, fittings and accessories, builders' work, and testing and commissioning work.....(20 Marks)

Question Three

Use the attached **DRWNG No QTS521/FUM/2018/03** and **Details 'Z' and 'X'** to take off for the general lighting installation in the hospital. (10 marks)

Question Four

The attached **Detail 'C'** is a sectional view of 'Electrical works associated with plumbing and mechanical installation, while **Detail 'Y'** is a cross section of an electric generating set found on the attached **DRWNG No QTS521/FUM/2017/04**. You are required to take off for:

- Electrical works associated with plumbing and mechanical installation.....(5 Marks)
- Connection to generating house.....(5 marks)