

DEPARTMENT OF QUANTITY SURVEYING
FACULTY OF ENVIRONMENTAL TECHNOLOGY
FEDERAL UNIVERSITY OF TECHNOLOGY MINNA
FIRST SEMESTER 2018/2019 SESSION EXAMINATION

COURSE: QTS 418 (Information Technology Application to Quantity Surveying)

INSTRUCTIONS: Answer question One (1) and any other Two (2) questions.

Time Allowed: 2 hours

- Question 1: a.** i) Using a hypothetical spreadsheet, calculate the Total of Trial 1 and Trial 2 for all the subjects in Table 1 using the SUM function.
ii. To the total of the trials, add the constant.

Table 1

Subject	Trial 1	Trial 2	Total	Constant
A	500	650		0.03
B	50	567		
C	670	780		

b. Table 2 shows a spreadsheet with profit margin computations prepared by contractors bidding for a contract. The contractors must develop competitive rates to win the project, hence some rigorous analysis must be undertaken to guide the senior management of your firm in deciding a competitive profit margin for the bid.

- i. Set up a hypothetical spreadsheet with properly referenced rows and columns that reproduces

Table 2.

- ii. Write the formulae that calculate the “Profit margin amount” and “Adjusted unit rate” for each

item of work taking the following conditions into consideration:

- Profit should be charged for the following:
- Rates greater than ₦2000, but less than ₦5,000 = 45%
- Rates greater than or equal to ₦5,000 but less than ₦30,000 = 35%
- Rates greater than or equal to ₦30,000 = 30%

TABLE 2: Profit Margin Computation

KEY RATES - JANUARY 2017			
Item	Rate	Profit Margin Amount	Adjusted Unit Rate
Reinforced concrete 12.4 max	35,000.00	10,500.00	45,500.00
230mm hollow block work	3,700.00	1,665.00	5,365.00
French Excavation i.e 1.00m deep	780.56	No profit	780.56
Form work to surfaces exceeding 300mm wide	2,400	1,080.00	3,480.00
230mm filled solid blockwork in foundation	5,300.00	1,855.00	7,155.00
Leveling and compaction of bottom of excavation	280.00	No profit	280.00

Question 2: a. Write on five examples of Database Management System (DBMS).

b. Clearly relate seven advantages of information technology in quantity surveying

Question 3: a. Write concisely on the following specific software applications:

i, Autodesk QTO; ii. WinQS; iii. DimensionX: iv. CostX Takeoff

b. Describe how to merge or split cell in a typical Excel sheet.

Question 4:

The National Association of Quantity Surveying Students (NAQSS) has approached you to present a paper on the concept of Construction Cost Plan in their forthcoming programme. Describe the content of the paper you will present.

Question 5: a. Briefly distinguish between relative, absolute and mixed referencing, citing specific examples of each.

b. Using a hypothetical spreadsheet, calculate the cost of each group of textbooks shown in Table 3 and the total cost of the textbooks.

Table 3

Textbook	Quantity	Price
Biology	4	1200
Chemistry	2	1100
Calculus	7	2140
English	12	2340