



FEDERAL UNIVERSITY OF TECHNOLOGY, OWERRI
SCHOOL OF ENVIRONMENTAL SCIENCE AND TECHNOLOGY
DEPARTMENT OF QUANTITY SURVEYING

2014/2015 RAIN SEMESTER EXAMINATION

COURSE CODE: QST 322 COURSE TITLE: ESTIMATING AND PRICE ANALYSIS II

TIME: 2½ HRS

DATE: 27/08/2015

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INSTRUCTIONS

- i. Answer any **FOUR (4)** questions. All questions carry equal marks.
- ii. Bonus marks will be awarded for clear and orderly presentation of answers.

QUESTION ONE

- i. Explain the four types of preliminary items in a building contract giving an example of each type.
- ii. Explain how we estimate the price of "shelter for workmen" in a building site.
- iii. Explain how we estimate the price of "Temporary fencing and gates" in a building site.

QUESTION TWO

- i. Explain the terms "Tendering" and "Estimating".
- ii. Enumerate any five uses of "Estimating" in construction.
- iii. Discuss the problems which arise out of "Site conditions" and how such problems contribute to the wide variability of the bill of Quantities rate.

QUESTION THREE

- i. Discuss the contractor's estimating problems while building up unit rates in regard to;
 - a) Materials
 - b) Labour and
 - c) Plant
- ii. It has been said that the only reliable figure in the bill of quantities from the client's point of view is the tender figure and that the rates are a national breakdown of the contractor's price for commercial and administrative purposes. Discuss the problems associated with different parts of a bill of quantities.

QUESTION FOUR

- i. Explain the relevance of "Preliminary Estimate" in construction work.
- ii. Discuss the STOREY ENCLOSURE METHOD of approximate estimating.
- iii. State the advantages and disadvantages of this method of approximate estimating.

QUESTION FIVE

- i. Discuss the three main initial factors to be considered in the build-up of the cost of concrete.

Good Luck

- ii. Explain why we make allowance for “Shrinkage” in build-up of unit rates for concrete.
- iii. Build-up unit rate for 1m³ of plain in-situ concrete (1:3:6) in foundation over 150mm but not exceeding 300mm thick. Assume 40% shrinkage; 5% concrete wastage; 3.60hrs/m³ for labour in mixing, transporting, placing, and compaction of concrete; and 25% for profit and overhead. Assume manual mixing and make any other necessary assumptions.

QUESTION SIX

- i. Define the term “Schedule” as used in construction.
- ii. State any five examples of the use of schedule in construction.
- iii. Calculate the material schedule for formwork required to cast a concrete column of size 225x450x5800mm, using 25x300x3600mm hardwood and 50x50x3600mm hardwood at 1000mm centres and 3lb-wt 75mm long nails. Make all necessary assumptions.



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