TECHNICAL UNVERSITY OF MOMBASA

Faculty of Engineering & Technology in Conjunction with Kenya Institute of Highways and Building Technology (KIHBT)

DEPARTMENT OF BUILDING & CIVIL ENGINEERING

HIGHER DIPLOMA IN BUILDING ECONOMICS

EBE 3211: ESTIMATING & COSTING

SPECIAL/SUPPLEMENTARY EXAMINATION
SERIES: AUGUST 2013
TIME: 2 HOURS

Instructions to Candidates:
You should have the following for this examination
- *Answer Booklet*

This paper consists of **FIVE** questions
Answer questions **One** (Compulsory) and Any other **two** questions.

Maximum marks for each part of a question are as shown
This paper consists of **TWO** printed pages

Question One (20 Marks)

a) In relation to approximate estimating explain how the following design variables affect the cost of a building:
- **(i)** Plan shape
- **(ii)** Storey heights
- **(iii)** Size of the building
- **(iv)** Wall to floor area ratio **(16 marks)**

b) (i) Using hypothetical example price the following item extracted from a bill of quantities: Allow for disposal of general surface water **(5 marks)**

(ii) Prepare a detailed specification for concrete in foundations **(9 marks)**

Section B: Answer Any TWO Questions from this Section.

Question Two (20 marks)

Using the data given build up a unit rate for plain concrete (1:3:6) storm water drainage channels. **(20 marks)**

Question Three (20 marks)

a) Briefly describe the following sources of cost information used in price build up:-
- **(i)** Price books
- **(ii)** Build up of rates
- **(iii)** Quotations
- **(iv)** Priced bills of quantities **(10 marks)**

b) (i) In relation to contracts distinguish between "periodic payments" and "stage payments". **(5 marks)**

(ii) Describe the 'standard schedule of rates contracts' and state **THREE** circumstances in which they may be used . **(5 marks)**

DATA:

Cost of Cement- shs 700 per 50kg bag.
Cost of Sand - shs 1200 per cubic metre
Cost of Belost – shs 1500 per Cubic metre.

Assume any other information not given. **(20marks)**

Question Four

a) A proposed storey building has one basement floor and four upper floors. The size of the basement floor is 30 x 30 x 4m while ground floor and the upper floors are 20 x 20 x 4m. Using the storey enclosure method build up the approximate cost of the building if the unit cost is kshs 10,000 per m^2. **(10 marks)**

b) In relation to building and civil engineering projects describe the following types of contracts:-
(i) Lump sum

(ii) Target **(10 marks)**