



NATIONAL UNIVERSITY OF SCIENCE AND TECHNOLOGY

FACULTY OF THE BUILT ENVIRONMENT

DEPARTMENT OF QUANTITY SURVEYING

MEASUREMENT I

AQS 1203

Main Examination Paper

May 2015

This examination paper consists of 3 pages

Time Allowed: 4 hours

Total Marks: 100

Special Requirements: SMM booklet, Takeoff paper, Abstract, Bill paper

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INSTRUCTIONS

1. Answer question **One** and any other **three** questions
2. Each question carries 25 marks
3. Use of calculators is permissible

MARK ALLOCATION

QUESTION	MARKS
1.	25
2.	25
3.	25
4.	25
5.	25

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Question One (Compulsory)

Making use of the attached drawing on fig 1, take off the following items:

- i. Termite nest removal
- ii. Site clearing, 2000mm from external face of building walls
- iii. Top soil excavation
- iv. Surface trench excavations
- v. Earthwork support
- vi. Pumping and bailing ground water
- vii. Concrete strip footing
- viii. Brickwork
- ix. Brick-force
- x. Hard core (imported granular material)
- xi. Sand blinding
- xii. DPM of micro-black polythene
- xiii. Concrete bed [25]

Question Two

- a) Take off superstructure brickwork and associated sundries including making adjustment for all openings. [15]
- b) Prepare an abstract and bill extract for brickwork and brick force. [10]

Question Three

- a) Why is the foundations bill considered as provisional? [2]
- b) Name the four steps that are followed when preparing a bill using the traditional method. [4]
- c) What other methods are used to prepare a bill besides the one mentioned above? [4]
- d) Name the uses of a bill to a Quantity Surveyor [5]

- e) Using examples where necessary, explain the following:
- i. Dotting on
 - ii. Extra over
 - iii. Ditto
 - iv. In narrow widths
 - v. a.b.d.
- [10]

Question Four

- a) From fig 1 attached, take off the trussed roof timbers and roof coverings [20]
- b) Given that, Interlocking flat ribbed concrete tiles size 430mm x 250mm, are to be used, with a side lap and end lap of 30mm and 50mm respectively, how many flat tiles can be ordered, allowing 1% waste [5]

Question Five

Use fig 1 attached together with the following specifications to take off all window items.

Windows specifications:

- i. Monarch steel window frames
- ii. 3 mm clear glass for all windows
- iii. Quarry brown tiles for internal sills and brick on edge for external sills
- iv. Walls are plastered and painted (PVA paint)
- v. Concrete ring beam to be used
- vi. The windows **do not** have burglar bars and pelmets

Make reasonable assumptions where some information is not given [25]