



PROGRAM : NATIONAL DIPLOMA
BUILDING

SUBJECT : **QUANTITY SURVEYING 1**

CODE : **QSB111**

DATE : 10 NOVEMBER 2014
SUMMER EXAMINATION

DURATION : (SESSION 2) 12:30 – 16:30

WEIGHT : 40 : 60

TOTAL MARKS : 130

EXAMINER : Me KEM MOGODI

MODERATOR : MR NAZEEM ANSARY File Number : **2298**

NUMBER OF PAGES : 4 PAGES, INCLUDING THIS ONE + 1 A4 **DRAWINGS (5)**

INSTRUCTIONS TO CANDIDATES

1. THE STANDARD SYSTEM OF MEASURING BUILDER'S WORK IN SOUTH AFRICA – 6TH EDITION (*ONLY ORIGINAL UNMARKED COPY*) & CALCULATORS ARE ALLOWED IN THE EXAM
2. ALL WORK TO BE EXECUTED WITH THE UTMOST CARE, ACCURACY AND NEATNESS
3. WORK IS TO BE MEASURED IN ACCORDANCE WITH THE LATEST EDITION OF **THE STANDARD SYSTEM OF MEASURING BUILDER'S WORK**.
4. WHERE DIMENSIONS ARE NOT GIVEN, PREFERENCE SHOULD BE GIVEN TO CALCULATING RATHER THAN SCALING.
5. CANDIDATES ARE TO ASSUME THEIR OWN SPECIFICATIONS WHERE WORKMANSHIP AND/OR MATERIALS ARE NOT MENTIONED.
6. IN MARKING PAPERS, PARTICULAR ATTENTION WILL BE GIVEN TO A SYSTEMATIC AND ORDERLY METHOD OF "TAKING-OFF", WELL REFERENCED AND ACCURATE DIMENSIONS, CLEAR DESCRIPTIONS OF WORK AND CLEARLY LAID-OUT QUERY SHEETS AND **MARKED DRAWINGS**
7. **MARKED DRAWINGS** TO BE ATTACHED TO ANSWER SHEET

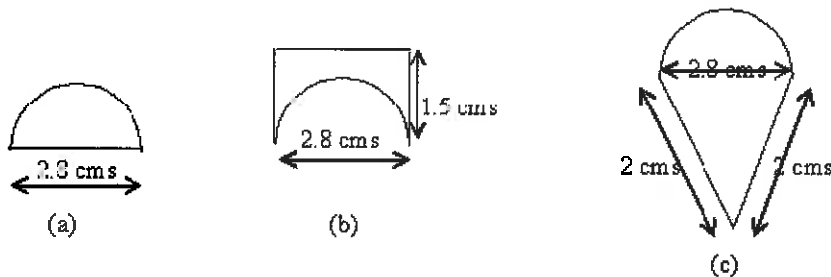
REQUIREMENTS : 15 SHEETS OF DIMENSION PAPER (*ATTACHED*)

QUESTION 1

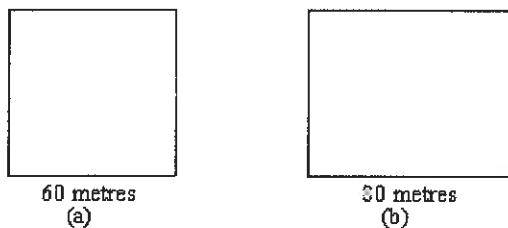
- 1.1 What are the disadvantages of using the "Northern" method of measuring when taking-off quantities? (4)
- 1.2 Outline eight critically important factors that a taker-off should consider in the measuring process. (4)
- [8]**

QUESTION 2

- 2.1 An ant is moving around a few food pieces of different shapes scattered on the floor. For which food-piece would the ant have to take a longer round? (12)



- 2.2 A square and a rectangular field with measurements as given in the figure have the same perimeter. Which field has a larger area? (8)

**[20]****QUESTION 3**

- 3.1 What is the purpose of the Standard System of Measurement (3)
- 3.2 What sequence should be followed when recording dimensions? (3)
- 3.3 What does the SSM say about fractional quantities? (3)
- 3.4 What are building elements? (3)

[12]

QUESTION 4**Descriptive Quantification**

4.1 You are required to demonstrate your ability to take-off quantities from Drawing No. QSB111/UJ/2014-01 for the following elements and **square all the dimensions**:

- | | | |
|----|---|------|
| a) | Check-on dimensions | (5) |
| b) | Foundation collections | (10) |
| c) | Foundations | (25) |
| d) | Ground Floor Construction | (10) |
| e) | Superstructure (External envelope & Internal divisions) | (10) |
| f) | Floor Finishes | (12) |
| g) | Internal Wall Finishes | (8) |
| h) | Ceilings and Soffits | (6) |
| i) | Observation of Rules and Principles of measurement and neatness of presentation | (4) |

[90]**SPECIFICATION****Earthworks**

- Clear site 1500mm beyond the building
- Strip-off 150mm topsoil
- Rock excavation : 200mm dp SR, 100mm dp HR
- Backfill with excavated material in 150mm layers compacted to 80% Mod. AASHTO density
- Surplus excavated material to be carted-off site
- 75mm Thick concrete surface bed
- 25mm Clean river sand blinding under floors
- 70mm Thick hard-core filling on compacted ground

Concrete. Formwork & Reinforcement

- 15Mpa mass concrete in footings and surface beds

Masonry

- All brickwork in concrete stock bricks in 1:4 cement mortar built in stretcher bond
- Face brick plinth 225mm into below ground level in Inca Brown Smooth face bricks with square recessed joints and pointed with 1:3 cement mortar.

Waterproofing

- 375 Micron Gundle Gunplas dpc on walls
- 250 Micron Gundle Gunplas (SABS) dpm under floors with 100mm overlaps and sealed joints

Wall Finishes

- 1 coat undercoat & 2 coats Exterior Quality PVA paint on 15mm thick external cement plaster
- 1 coat undercoat & 2 coats Interior Quality PVA paint on 15mm thick internal cement plaster in bedrooms, lounge and passage
- 150 x 150mm White glazed tiles on 12mm thick plaster backing

Finishes Specifications

Floors

- Marley cottage craft carpet laid with and including underfelt on 22mm cement screed (1:4) on 85 mm concrete surface bed. (Bedrooms, lounge and Dining room and passage)
- Marley 2 mm thick semi flexible Novilon vinyl tiles size 300 x 300mm laid with adhesive on 25 mm cement screed (1:4) on 85 mm thick concrete surface bed and finished with 2 coats wax polish rubbed up to high gloss finish. (Kitchen, Bathroom, Toilet)

Skirtings

- 19x69 mm Meranti skirting with angle rounded and 19 mm quadrant plugged to wall.

Prepare and apply: (to whole house except toilet, bathroom, kitchen)

- 1 coat Woodoc sealer and
- 2 coats Woodoc matt varnish

Ceilings

- 6.4 mm Rhino gypsum ceiling board with "H" Profile metal jointing strips fixed to 38 x 38 mm bracker at 400 mm centres both ways and around perimeter room. (the entire house)

Prepare and apply:

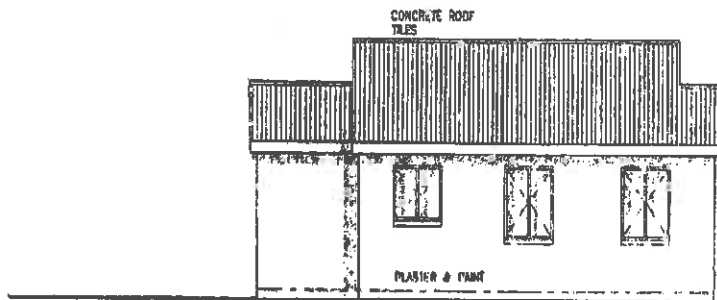
- 1 coat Dulux White universal undercoat
- 2 coats Dulux white finishing coat

Cornice

- 75 mm Gypsum plaster board coved cornice stuck to ceiling and walls with Gypsum cretestone plaster. (the entire house)

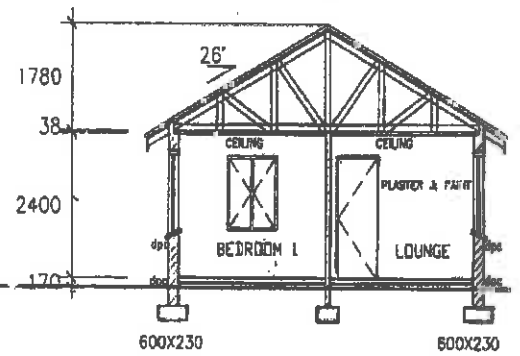
- Prepare and apply:

- 1 coat Dulux White universal undercoat
- 2 coats Dulux white finishing coat



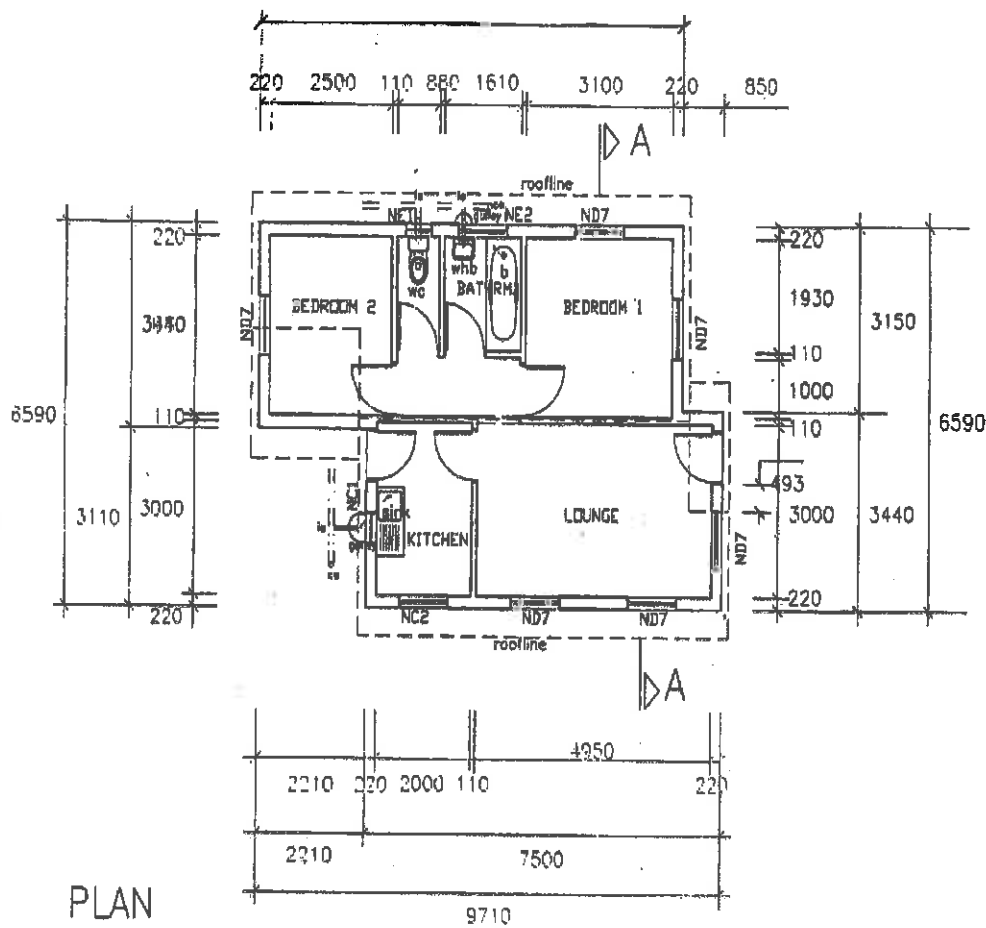
NORTH ELEVATION

SCALE 1:100



SECTION A-A

SCALE 1:100



PLAN

SCALE 1:100

PROPOSED NEW DWELLING

DRAWING NO. QSB111/UJ/2014-01

