

THE PAPUA NEW GUINEA UNIVERSITY OF TECHNOLOGY  
THE DEPARTMENT OF ARCHITECTURE AND CONSTRUCTION MANAGEMENT  
FIRST SEMESTER EXAMINATION  
SECOND YEAR BACHELOR OF CONSTRUCTION MANAGEMENT  
CM 210 – QUANTITIES & ESTIMATING I

Room: L2  
Date: Monday 7<sup>th</sup> June 2021  
DURATION: 3 Hours  
Time: 8:20 – 11:30 am

Instructions to Candidates

1. You have 10 minutes to read the paper.  
Do not begin writing during this time.
2. Fill in the Attendance Slip with your name and student I.D. number now
3. **There are seven Questions** and you are to **answer all questions.**
4. ALL ANSWERS MUST BE WRITTEN IN THE ANSWER BOOK (S) PROVIDED
5. Each question must be answered starting on a New Page.
6. Notes and Textbooks are not allowed in the Test Room.  
Only materials allowed and to be brought in by students are;
  - Calculators
  - Copy of ANZSMM 2018 Edition

WRITE YOUR NAME AND IDENTIFICATION NUMBER CLEARLY ON THE FRONT PAGE. DO IT NOW!

TOTAL MARKS = 100 MARKS

**Question One: [16 mark]**

State any four (4) duties each of a *Consulting* and *Contracting* Quantity Surveyors.

**Question Two: [15 marks]**

State and explain any five (5) different types of formats for preparing bills of quantities

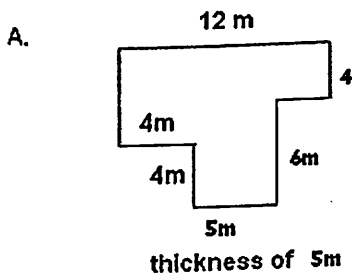
**Question Three: [18 marks]**

Explain and give an example of the following terms when taking off a drawing onto a take off sheet

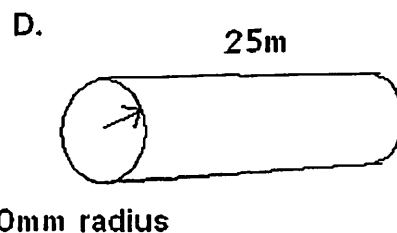
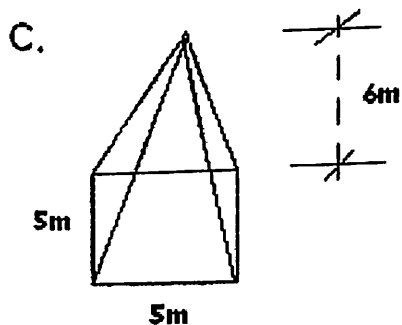
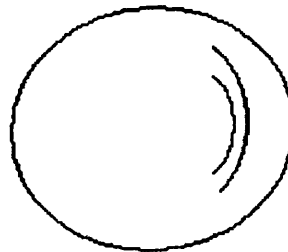
- (i) Dotting on
- (ii) Deductions
- (iii) Sidecast (Waste calculations)
- (iv) Referencing (Sign posting)
- (v) The "X" Symbol (Ampersand)
- (vi) Altering dimensions

**Question Four: [20 marks]**

Calculate the Total Surface Area (Including the base) and Volume of the following diagrams onto a take off sheet paper

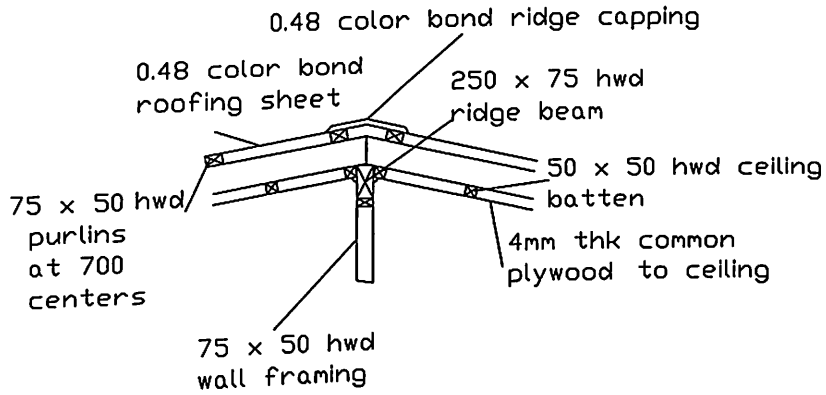


**B. Sphere of 2.5m diameter**



**Question Five: [21 marks]**

Write the complete BOQ description from the following drawing.



**Question six: [6 marks]**

Rearrange the following section in a logical sequence as in ANZ SMM 2018 Edition.

- (i) Finishes
- (ii) Roofing
- (iii) Concrete
- (iv) Hardware
- (v) Masonry
- (vi) Structural steel

**Question seven: [4 marks]**

State the two types of measurement rules that are apply to trench excavation only.