

**THE PAPUA NEW GUINEA UNIVERSITY OF TECHNOLOGY**  
**THE DEPARTMENT OF ARCHITECTURE & CONSTRUCTION MANAGEMENT**  
**SECOND SEMESTER EXAMINATION**

**SECOND YEAR BACHELORS IN ARCHITECTURE & CONSTRUCTION MANGEMENT**

**AR 223 – BUILDING SYSTEMS 2**

Room: ST1

Date: Tuesday 25<sup>th</sup> October 2022

Duration: 3 hours

Time 12:50 pm to 3.50 pm

**Information to Candidate**

1. You have 10 minutes to read the paper. Do not begin writing during this period.
2. Fill in the Attendance Slip with your name and student I.D. number now.
3. In this exam paper, there are two pages including the cover page.
4. There are nine (9) questions and you are to answer all questions.
5. ALL ANSWERS MUST BE WRITTEN IN THE ANSWER BOOK(S) PROVIDED.
6. Each Question must be answered starting on a New Page.
7. Notes, Textbooks and Electronic devices are **NOT ALLOWED** in the Exam Room.

**WRITE YOUR NAME AND ID NUMBER CLEARLY ON THE FRONT PAGE OF THE EXAM BOOKLET  
DO IT NOW.**

**TOTAL MARKS = 100 MARKS**

**Question 1****(6 marks)**

State the six (6) main ingredient of processing glass.

**Question 2****(5 marks)**

Verify this statement for a clear float glass. A clear float glass is used where distorted vision is required and available thickness range is from 3mm to 25mm.

**Question 3.****(8 marks)**

State and explain the four (4) main standard types of glass forms available on the current market.

**Question 4****(9 marks)**

State and explain the advantages of secondary glazing.

**Question 5****(16 marks)**

State and explain the two (2) main groups of an organized roof form and their advantages and disadvantages?

**Question 6****(16 marks)**

State and explain the eight (8) main types of receptacles designed in buildings as various forms of disposal systems for its refuse and currently applied in buildings whether it be in large or small quantities.

**Question 7****(16 marks)**

State and explain clearly the four (4) main reasons for underpinning as the process of strengthen and stabilizing the foundations of an existing building and it may be required for any number of reasons.

**Question 8****(9 marks)**

State and explain these three (3) different paths that are available for foundations capacity needs to be increased.

**Question 9****(15 Marks)**

State and explain the five (5) main factors that is complicated in designing a structural retaining wall.

**End of Exam**