

THE PAPUA NEW GUINEA UNIVERSITY OF TECHNOLOGY
FIRST SEMESTER EXAMINATIONS 2021
DEPARTMENT OF ARCHITECTURE AND CONSTRUCTION
MANAGEMENT

AR 213 - BUILDING SYSTEMS

IN STUDIO 1

ON WEDNESDAY, 16th JUNE 2021 AT 8.20am

TIME ALLOWED: 3 HOURS

DIRECTIONS TO CANDIDATES

1. You have 10 minutes to read the examination paper. You must not begin writing during this time.
2. **Answer all questions. Answers must be short, brief and concise.**
3. Make sure that you read each question carefully. The number of marks for each question is shown near the question number.
4. Please PRINT your name and student number on the answer sheet provided. **Do it now.**
5. All answers must be written on the answer booklet provided. No other written materials are going to be accepted. Make sure that you hand in every answer sheet that you have used.
6. Calculators are permitted in the examination room. Notes and textbooks are not allowed.
7. Mobile phones are strictly not allowed inside exam room. All bags, hats and other personal items will be surrendered to the front of the room.

AR 213- Building Systems -Semester 1 Examination 2021

Answer all questions. Answers must be short, brief and concise.

Question 1: (10 Marks)

Explain the following in ground works:

- a) Site Preparation
- b) Excavation of footings in relation to setting out

Question 2: (10 Marks)

Explain how strength of concrete frame can be increased in relation to detail design.

Question 3: (10 Marks)

Explain the behaviour of concrete under load.

Question 4: (10 Marks)

Describe the 'lightweight suspended floor systems' in buildings.

Question 5: (10 Marks)

Explain the differences between 'floor on the ground' and 'suspended floor'.

Question 6: (10 Marks)

Describe the 'lightweight cladding systems' in buildings.

Question 7: (10 Marks)

Explain the 'advantages' and 'disadvantages' of 'lightweight cladding systems' in buildings.

Question 8: (10 Marks)

Explain the functions and components of a 'revolving door' and where is it commonly used.

Question 9: (10 Marks)

Explain the differences between 'sliding sash windows' and 'casement windows'.

Question 10: (10 Marks)

Describe the 'lightweight roofing systems' in buildings.

End of Paper