



NATIONAL UNIVERSITY OF SCIENCE AND TECHNOLOGY

FACULTY OF THE BUILT ENVIRONMENT

DEPARTMENT OF LANDSCAPE ARCHITECTURE AND URBAN DESIGN

BSC PROPERTY DEVELOPMENT AND ESTATE MANAGEMENT

BUILDING CONSTRUCTION II

AAR 2203

Main Examination Paper

July 2016

This examination paper consists of 3 pages

Time Allowed: 3 hours

Total Marks: 100

Special Requirements: A4 Bond paper

Examiner's Name: Mr E. Musebenzi

1. Answer any three (3) questions from Section A. Section B is **compulsory**.
2. Each question carries 25 marks
3. Marks will be awarded to neatly presented work.
4. You can either draw in pencil or pen.

MARK ALLOCATION

QUESTION	MARKS (SELECTED FOUR)
1.	25
2.	25
3.	25
4.	25
5.	25
6.	25

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SECTION A

Question 1

- a) Briefly explain the function of the following construction elements in Zimbabwe:
- i. Door Frames (3)
 - ii. The Cold Deck Roof System (3)
 - iii. Vapour Retarders (3)
- b) Sketch any five types of doors that you have studied. (10)
- c) Give a detailed cross section of timber cladding (6)

[25]

Question 2

Explain using diagrams how the following types of construction elements are used in property development.

- i. Brick and Glass Curtain Wall Cladding (10)
- ii. Cold and Warm Roof Decks (15)

[25]

Question 3

By using free hand sketches, explain any five types of Building Claddings that can be used for any particular building of your choice.

[25]

Question 4

Briefly describe the following terms in construction with the aid of diagrams where necessary:

- a) Parapet wall (5)
- b) Wall finishes (5)
- c) Studded door (5)
- d) Fire Place (5)
- e) Weather-stripping (5)

[25]

Question 5

- a) What is the effect of moisture on the roof of a building?(3)
- b) By using sketches, illustrate a timber staircase and clearly label the parts. (5)
- c) What are the factors to consider in the design and setting out of a chimney?(5)
- d) Describe what you understand by weather-stripping in construction.(2)

- e) An existing rural area house in Matobo needs to be converted into a lodge. Discuss the type of finishes that need to be considered for it to fulfil its intended purpose and in order to come up with a well thought upmarket design. (10)

[25]

SECTION B (COMPULSORY)

Question 6

- a) Draw a typical section through a double storied residential structure with fire place positioned directly on top of each other sharing the same chimney but different flues. Use a floor to floor height of 3m and indicate the construction detail for the flues to function efficiently. (15)
- b) Draw a section through a house roofed with a concrete deck with a parapet wall edge. Indicate how water collected on the deck is conveyed to the gutters and on to the rainwater downpipe. (10)

[25]