



NATIONAL UNIVERSITY OF SCIENCE AND TECHNOLOGY

FACULTY OF BUILT ENVIRONMENT

DEPARTMENT OF ARCHITECTURE

BUILDING CONSTRUCTION III

AAR 3108

Supplementary Examination Paper

July 2017

This examination paper consists of 2 pages

Time Allowed: 4 hours

Total Marks: 100

Special Requirements: A1 Drawing Boards & Stool. A1 Paper & Masking tape.

Examiner's Name: Munaku E.

INSTRUCTIONS

1. Answer all questions. Question 1 to be answered on A1 sheet(s) of paper provided.
2. Use of calculators is permissible

MARK ALLOCATION

QUESTION	MARKS
1.	40
2.	20
3.	20
4.	20
TOTAL	100

QUESTION 1

You have been asked to design a factory shell for a processing plant in Mazowe measuring 42m x 30m. The structure is to be of a 3 bay steel portal frame with IBR roof and IBR cladding on the side. Show at appropriate scales the floor plan, elevations and details. [40]

QUESTION 2

With appropriate sketches describe the short term, medium term and long term methods of dewatering a waterlogged site. [20]

QUESTION 3

With reference to the various soil types that can be found on a site, illustrate the various foundation systems that are suitable for constructing a single family dwelling for each of the soil types giving adequate explanation on how the system works to distribute the forces working with it. [20]

QUESTION 4

- i. Outline with diagrams the effects of damp on buildings [5]
- ii. Show with appropriate sketches how damp can be controlled on a two storey factory shed with an IBR pitched roof and basements. [15]