NATIONAL UNIVERSITY OF SCIENCE AND TECHNOLOGY

FACULTY OF THE BUILT ENVIRONMENT

DEPARTMENT OF ARCHITECTURE

BUILDING CONSTRUCTION V

AAR 5102

Supplementary Examination Paper

July 2016

This examination paper consists of 4 pages

Time Allowed: **4 hours**

Total Marks: **100**

Special Requirements: Computer installed with ArchiCAD SOFTWARE

Examiner's Name: T. NYAMANDE and I. MHANDU

INSTRUCTIONS

1. Answer ALL questions
2. Answer question 1 using CAD (Computer software)

MARK ALLOCATION

QUESTION	MARKS
1.	**50**
2.	**10**
3.	**20**
4.	**10**
5.	**10**
TOTAL	**100**

QUESTION 1

Design and draw at appropriate scales, a structural plan, section and elevations with relevant details for a place of worship (42m x 18m) of portal frame structure which requires appropriate good internal finishes. Drawings of the structure should be drawn at a scale of 1:1 using ArchiCAD and then placed on an A1 layout with a proper title block which should be printed to pdf in black and white or grayscale. [50]

QUESTION 2

Evaluate the use of pre-stressed concrete technology in the construction of structures [10]

QUESTION 3

Illustrate and explain the differences of curtain walling and structural glazing with appropriate details [20]

QUESTION 4

Describe the concept of the construction of the geodesic dome stating the advantages and disadvantages of its application. [10]

QUESTION 5

Explain with the aid of sketches the folding plate construction techniques evaluating its application in the Zimbabwean context. [10]

