

**NATIONAL UNIVERSITY OF SCIENCE AND TECHNOLOGY
FACULTY OF ARCHITECTURE AND QUANTITY SURVEYING**

**DEPARTMENT OF ARCHITECTURE
BACHELOR OF ARCHITECTURAL STUDIES (HONOURS) DEGREE**

**PART I - SECOND SEMESTER EXAMINATIONS – MAY 2005
AAR1204/AQS INTRODUCTION TO MATERIALS AND CONSTRUCTION II**

Instructions

Time: 3 Hours

***Answer any four questions
Each question carries equal marks***

QUESTION 1

- a) Name the three principal building stone groups & give at least two building stones which are obtained from each group. **(10 marks)**
- b) Give examples of buildings in the two major cities of Zimbabwe which used building stones mentioned above. Illustrate using sketches the face jointing and course technique used. **(15 marks)**

QUESTION 2

- a) Draw a series of annotated sketches, illustrating and explaining the variety of ways in which earth is worked and used as a building material. You may refer to specific buildings, where appropriate. **(15 marks)**
- b) Name at least five different types of plastics used as a building material & provide sketches illustrating how they can be used. **(10 marks)**

QUESTION 3

- a) Name the commonly used classes of glass. Briefly describe the manufacturing processes of at least two classes of glass mentioned above. **(10 marks)**
- b) Briefly describe at least three different types of tiles & how they are manufactured. **(15 marks)**

QUESTION 4

- a) Briefly discuss the importance of bitumen in the construction industry.
(10 marks)
- b) Explain in brief how the workability of bitumen can be increased. **(15 marks)**

QUESTION 5

- a) Differentiate thermoplastics from thermosetting plastics giving examples.
(5 marks)
- b) Polyvinyl chloride (PVC) pipes are made of plastic material. Briefly explain why these pipes seem to be used in the construction industry to a greater extent as compared to other forms of pipes like those of copper, cast iron, asbestos cement etc. What do you consider to be their shortcomings? **(10 marks)**
- c) Write brief notes on the production of calcium sulphate and its importance in the construction industry **(10 marks)**