

**NATIONAL UNIVERSITY OF SCIENCE AND TECHNOLOGY**  
**FACULTY OF THE BUILT ENVIRONMENT**  
**DEPARTMENT OF ARCHITECTURE**  
**BACHELOR OF ARCHITECTURAL STUDIES (HONOURS) DEGREE**  
**BACHELOR OF QUANTITY SURVEYING (HONOURS) DEGREE**  
**2012-2013 ACADEMIC YEAR**  
**PART I-SECOND SEMESTER EXAMINATIONS-MAY 2013**  
**AAR 1204 INTRODUCTION TO MATERIALS AND CONSTRUCTION II**  
**AAR 1208 INTRODUCTION TO CONSTRUCTION MATERIALS II**

**Instructions**

**Time: 2 hours**

*Answer All Questions.*

*Illustrate your answers with sketches where appropriate. All questions carry EQUAL marks.*

**QUESTION 1**

- a. What are the considerations to be made when preparing a background for plastering? (5)
- b. A client has asked you to do a survey of the exterior condition of his building. Discuss five defects that could be expected on each of the following:
- i. the plaster and (10)
  - ii. the painting of the walls. (10)
- [25]**

**QUESTION 2**

- a. Describe the manufacturing process of the following materials and their application in construction:
- i. laminated glass (5)
  - ii. fibre glass (5)
- b. Compare the performance of PVC, ceramic and galvanized iron pipes in both cold and hot water supply. (15)
- [25]**

**QUESTION 3**

- a. With the aid of a detailed sketch (es) show how asphalt and other materials are used in parapet roof construction. (10)
- b. What are the comparative advantages and disadvantages of steel and aluminium use in construction? (10)
- c. Sketch the following steel market forms: channel section, angle section, corrugated sheet, round bar and ribbed section, stating one application of each. (5)
- [25]**

**QUESTION 4**

A developer wants to prepare a wall and floor finishes schedule for an office building.

- a. Advise them on the materials they could use in the following spaces:
    - (i) Offices and boardrooms (5)
    - (ii) Ablutions (5)
    - (iii) Reception (5)
  
  - b. Also advise them on the types of glass they could use in different spaces. (10)
- [25]**