THE UNITED REPUBLIC OF TANZANIA

NATIONAL EXAMINATION COUNCIL

DIPLOMA IN TECHNICAL EDUCATION EXAMINATION

784 **BRICKWORK AND MASONRY**

Time: 3 Hour. **Wednesday, 15 May 2012 a.m**

Instructions

1. This paper consists of sections **six (6)** questions.
2. Answer question number **one (1)** and any other **four (4)** questions.
3. Question 1 carries **thirty-two (32)** marks and the rest carries **seventeen (17)** marks each.
4. Non-programmable calculators may be used.
5. Communication devices and any unauthorized materials are **not** allowed in the examination room
6. Write your **Examination Number** on every page of your answer booklet.

1. (a) Define the term “precast concrete block”.

   (b) State four advantages of using precast concrete blocks in walling.

   (c) Describe the process of manufacturing solid precast concrete blocks at the site.

2. (a) What is a brick arch?

   (b) Mention four parts of a brick arch.

   (c) With the aid of sketches, differentiate between a flat arch and a semi-circular arch.

3. (a) Define the term “masonry pier”.

   (b) Give three reasons for constructing masonry piers in wall structures.

   (c) Describe the correct procedure for building a masonry pier to bond with an existing wall.

4. (a) State four defects that may occur in freshly constructed walls.

   (b) Explain the causes of each defect mentioned in 4(a).

   (c) Suggest one preventive measure for each defect.

5. (a) Explain the term “construction joint” as used in masonry.

   (b) State three purposes of providing construction joints.

   (c) With the help of a sketch, show the correct position and arrangement of a vertical construction joint in a long wall.

6. (a) (i) What is wall rendering?

      (ii) State three types of finishes that can be applied to rendered surfaces.

   (b) Describe four precautions to take when rendering external walls.

   (c) Explain three reasons why rendering may fail if precautions are not followed.