THE UNITED REPUBLIC OF TANZANIA

NATIONAL EXAMINATIONS COUNCIL

DIPLOMA IN TECHNICAL EDUCATION EXAMINATION

784 BRICKWORK AND MASONRY

(SUPPLEMENTARY)

Time: 3 Hours **Year: 2011**

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. Cellular phones are **not** allowed in the examination room.
6. Write your **Examination Number** on every page of your answer booklet(s).

1. (a) Define 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.

2. (a) What is a pier foundation?

(b) State three situations where pier foundations are preferred over strip foundations.

(c) With the aid of a sketch, describe the layout of a brick pier foundation under a load-bearing wall.

3. (a) Define the term “wall rendering”.

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

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

4. (a) State four reasons for selecting clay bricks in wall construction.

(b) Explain the differences between first class and second class clay bricks.

(c) Describe three methods used to test the quality of bricks on site.

5. (a) What is meant by the term “ashlar masonry”?

(b) State two advantages and two disadvantages of using ashlar masonry for building walls.

(c) Suggest appropriate situations where ashlar masonry is more suitable than random rubble masonry.

6. (a) For a boundary wall in a flood-prone area, propose three special construction considerations to enhance its durability.

(b) What kind of mortar mix would be ideal for such conditions, and why?

(c) Explain how you would ensure effective water drainage behind the wall.