THE UNITED REPUBLIC OF TANZANIA

NATIONAL EXAMINATIONS COUNCIL

DIPLOMA IN TECHNICAL EDUCATION EXAMINATION

784 BRICKWORK AND MASONRY

(SUPPLEMENTARY)

Time: 3 Hours **Year: 2013**

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) What is a "retaining wall"?

   (b) Outline four advantages of using concrete blocks for retaining walls.

   (c) Detail the on-site production process for hollow concrete blocks used in such walls.

2. (a) Define "voussoir" in the context of arches.

   (b) Name four key components of an arch structure.

   (c) Using simple diagrams, compare a jack arch and a corbelled arch.

3. (a) What is meant by "bonding" in masonry?

   (b) Provide three purposes of bonding in wall construction.

   (c) Illustrate the procedure for bonding a new pier to an adjacent masonry wall.

4. (a) List four common issues in newly built masonry structures.

   (b) Discuss the reasons behind each issue from part (a).

   (c) Propose one remedial action for each issue.

5. (a) Explain "expansion joint" in masonry terms.

   (b) Mention three reasons for including expansion joints.

   (c) With a basic sketch, indicate the placement and detailing of a horizontal expansion joint in a wall.

6. (a) (i) What does "pointing" mean in wall finishing?

      (ii) Describe three common pointing styles.

   (b) Outline four safety steps for applying plaster to internal walls.

   (c) State three consequences of ignoring these steps during plastering.