**THE UNITED REPUBLIC OF TANZANIA**

**NATIONAL EXAMINATION COUNCIL**

**DIPLOMA IN TECHNICAL EDUCATION EXAMINATION**

**784** **BRICKWORK AND MASONRY**

**Time: 3 Hour.** **Wednesday, 13 May 2009 a.m**

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**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) What is a cavity tray in wall construction?

   (b) State three functions of a cavity tray.

   (c) With the help of a sketch, describe how a cavity tray is installed above a window opening.

2. (a) Define the term “batter” in walling.

   (b) Mention three reasons for providing batter in walls.

   (c) Describe the method of setting out and constructing a battered masonry wall.

3. (a) What is a quoins in masonry construction?

   (b) State two advantages of using quoins in wall corners.

   (c) Explain the correct procedure for laying bricks to form external corner quoins.

4. (a) Mention four factors that cause uneven settlement in masonry structures.

   (b) Explain how each factor affects the wall's structural integrity.

   (c) Suggest three ways to reduce the risk of differential settlement in masonry buildings.

5. (a) Define the term “backing wall” in cavity wall construction.

   (b) State three differences between a backing wall and a facing wall.

   (c) Describe the construction process of a cavity wall, including positioning of the cavity and ties.

6. (a) (i) What is a control joint in masonry work?

      (ii) State three differences between a control joint and an expansion joint.

   (b) Explain two problems that may occur if control joints are not included in large masonry walls.

   (c) Suggest three best practices for placing control joints in concrete masonry construction.