THE UNITED REPUBLIC OF TANZANIA

NATIONAL EXAMINATION COUNCIL

DIPLOMA IN TECHNICAL EDUCATION EXAMINATION

784 **BRICKWORK AND MASONRY**

Time: 3 Hour. **Wednesday, 14 May 2014 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 "reinforced masonry".

   (b) State four reasons for reinforcing masonry walls.

   (c) Describe the process of placing horizontal reinforcement in a block wall during construction.

2. (a) Explain the function of a lintel in wall construction.

   (b) State four types of lintels commonly used in masonry.

   (c) With the help of a sketch, describe the construction of a reinforced concrete lintel over a window opening.

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

   (b) State four functions of partition walls in buildings.

   (c) Explain three differences between load-bearing and non-load-bearing partition walls.

4. (a) What is meant by “plumb and level” in masonry work?

   (b) Explain the effects of ignoring plumb and level checks during wall construction.

   (c) Describe how to use a spirit level and straightedge to check the level of a wall.

5. (a) Mention four causes of mortar failure in bricklaying.

   (b) Explain how poor workmanship contributes to mortar failure.

   (c) Describe three measures that can be taken on site to improve mortar quality.

6. (a) (i) Define the term “fire-resistance” as applied in walls.

      (ii) State four factors that affect the fire-resistance of masonry walls.

   (b) Explain the importance of fire-resistant walls in public buildings.

   (c) Suggest three wall construction methods that improve fire-resistance.