THE UNITED REPUBLIC OF TANZANIA

NATIONAL EXAMINATIONS COUNCIL

DIPLOMA IN TECHNICAL EDUCATION EXAMINATION

784 BRICKWORK AND MASONRY

(SUPPLEMENTARY)

Time: 3 Hours **Year: 2010**

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 “mortar joint”.

(b) Mention four types of mortar joints used in brickwork.

(c) Explain how the choice of joint type affects the appearance and durability of a brick wall.

2. (a) What is meant by the term “load-bearing wall”?

(b) State three factors to consider when designing a load-bearing masonry wall.

(c) Describe the construction process of a load-bearing brick wall from foundation to roof level.

3. (a) Explain the following terms as used in bricklaying:

(i) Raking back

(ii) Frog

(iii) Closer brick

(iv) Quoin closer

(v) Bedding plane

(b) For each, state one practical importance in wall construction.

4. (a) State three situations where reinforced masonry walls are preferred.

(b) Explain two methods of reinforcing masonry walls.

(c) With the aid of a sketch, show the placement of reinforcement in a brick wall.

5. (a) Define the term “dampness” in buildings.

(b) List three sources of dampness in masonry walls.

(c) Describe three methods used to prevent dampness in wall construction.

6. (a) What is a retaining wall in masonry?

(b) State three factors to consider when designing a retaining wall.

(c) Describe the construction process of a gravity retaining wall using random rubble masonry.