THE UNITED REPUBLIC OF TANZANIA

NATIONAL EXAMINATION COUNCIL

DIPLOMA IN TECHNICAL EDUCATION EXAMINATION

784 **BRICKWORK AND MASONRY**

Time: 3 Hour. **Wednesday, 16 May 2018 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 "brick bonding" as used in brickwork.

(b) Describe with sketches the following types of brick bonds:

(i) English bond

(ii) Flemish bond.

(c) Mention four advantages of using proper bonding in brick wall construction.

2. (a) With aid of sketches, differentiate between stretcher bond and header bond.

(b) Explain the procedure for setting out a one-brick thick wall.

(c) State five safety precautions to be observed when laying bricks on site.

3. (a) Explain the purpose of damp proof course (DPC) in a building structure.

(b) List four types of DPC materials used in masonry.

(c) With the aid of sketch, describe how a DPC is installed in a solid brick wall.

4. (a) What is an arch as used in brick construction?

(b) Using labeled sketches, describe the following types of arches: (i) Semi-circular arch (ii) Segmental arch.

(c) State four advantages of using brick arches in wall openings.

5. (a) Describe the steps involved in preparing mortar for bricklaying work.

(b) Mention four factors affecting the quality of mortar.

(c) Explain the difference between cement-lime-sand mortar and cement-sand mortar in terms of mix ratio and application.

6. (a) (i) What is pointing in brickwork?

(ii) Mention and describe four types of pointing used in masonry.

(b) Distinguish between pointing and jointing.

(c) State three advantages of proper joint finishing in a wall.