THE UNITED REPUBLIC OF TANZANIA

NATIONAL EXAMINATIONS COUNCIL

DIPLOMA IN TECHNICAL EDUCATION EXAMINATION

784 BRICKWORK AND MASONRY

(SUPPLEMENTARY)

Time: 3 Hours **Year: 2014**

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 "damp-proof course" (DPC).

   (b) State four roles of DPC in wall systems.

   (c) Describe the installation technique for embedding DPC in a brick wall base.

2. (a) What is a "flush joint" in mortar?

   (b) Identify four variations of mortar joint finishes.

   (c) Discuss how joint finish selection influences weather resistance and aesthetics in walls.

3. (a) What function does a "plinth" serve in a building?

   (b) List three materials suitable for plinth construction.

   (c) With a sketch, explain building a concrete plinth over a brick foundation.

4. (a) Give four criteria for choosing sand-lime bricks in construction.

   (b) Compare the properties of common burnt clay bricks and fire clay bricks.

   (c) Outline three field tests for assessing brick durability.

5. (a) What is a "pad foundation"?

   (b) Explain three cases where pad foundations are used instead of raft foundations.

   (c) Sketch the arrangement of a stone masonry pad foundation supporting a column.

6. (a) (i) Define "efflorescence" in masonry.

   (ii) Name three causes of efflorescence.

   (b) Describe four impacts of efflorescence on building materials.

   (c) Suggest three techniques to mitigate efflorescence in new walls.