

**THE UNITED REPUBLIC OF TANZANIA  
NATIONAL EXAMINATION COUNCIL  
DIPLOMA IN TECHNICAL EDUCATION EXAMINATION**

784

**BRICKWORK AND MASONRY**

**Time: 3 Hour.**

**Wednesday, 18 May 2005 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.

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1. You are assigned to inspect a newly built two-bedroom house before final rendering:
  - (a) Identify four critical aspects you would check on the wall surfaces.
  - (b) Explain two common problems that may be discovered during this inspection.
  - (c) Suggest appropriate remedies for each problem identified.
2.
  - (a) Define the term "pointing" in masonry.
  - (b) Mention three types of pointing used in construction.
  - (c) Describe step-by-step how pointing is carried out on a wall and state two advantages of pointing over plastering.
3.
  - (a) List four methods of improving bonding between a new masonry wall and an existing one.
  - (b) With the aid of sketches, explain how a toothing technique is applied practically.
  - (c) State two disadvantages of poor bonding in joint walls.
4. You are building a water storage tank using brickwork.
  - (i) What type of bricks and mortar mix would you recommend?
  - (ii) Describe three waterproofing techniques applicable during and after wall construction.
  - (iii) Explain how you would test the tank for leakages after completion.
5.
  - (a) Define the term "wall rendering failure".
  - (b) Give three causes of rendering failure in external walls.
  - (c) Explain how each cause can be prevented through proper construction practices.
6. A contractor used ordinary clay bricks for a warehouse in a saline coastal area.
  - (i) Discuss three potential problems that may arise.
  - (ii) What alternative materials should have been used for durability?
  - (iii) Recommend how to protect existing walls from further damage in such an environment.