THE UNITED REPUBLIC OF TANZANIA

NATIONAL EXAMINATION COUNCIL

DIPLOMA IN TECHNICAL EDUCATION EXAMINATION

783 **BUILDING CONSTRUCTION**

Time: 3 Hour. **Tuesday, 17th May 2005 a.m.**

Instructions

1. This paper consists of sections **five (5)** questions.
2. Answer all questions.
3. Each question carries **twenty (20)** marks.
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 “structural integrity” and explain its relevance in building construction.

   (b) (i) Identify three factors that influence structural integrity during construction.

   (ii) Explain two consequences of neglecting structural integrity in high-rise buildings.

   (c) Describe three strategies used by engineers to ensure long-term structural performance of buildings.

2. (a) What is a construction work schedule?

   (b) (i) State four types of construction schedules used in project planning.

   (ii) Explain the importance of updating the schedule regularly during the project lifecycle.

   (c) Give three effects of poor scheduling on construction project outcomes.

3. (a) Explain the term "contractual risk" in construction projects.

   (b) (i) Mention three common sources of contractual risk.

   (ii) State two methods of mitigating contractual risks before project commencement.

   (c) Describe three consequences of failing to manage contractual risks properly.

4. (a) Define the term "material specification" and explain its significance in procurement and site work.

   (b) (i) List three types of material specifications and describe their application.

   (ii) Give two reasons why materials must comply strictly with approved specifications.

   (c) Outline three challenges encountered when materials delivered on site do not match specifications.

5. (a) What is post-construction maintenance?

   (b) (i) State four types of post-construction maintenance activities.

   (ii) Explain the importance of maintenance manuals for facility users and managers.

   (c) Identify three long-term consequences of ignoring scheduled maintenance in public buildings.