THE UNITED REPUBLIC OF TANZANIA

NATIONAL EXAMINATION COUNCIL

DIPLOMA IN TECHNICAL EDUCATION EXAMINATION

783 **BUILDING CONSTRUCTION**

Time: 3 Hour. **Tuesday, 16th May 2017 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) Explain three reasons why reinforced concrete is preferred over plain concrete in high-rise building construction.

   (b) Briefly describe three methods used to improve the workability of concrete during mixing.

   (c) Mention three disadvantages of using timber formwork in large-scale concrete projects.

2. (a) State four functions of a substructure in a building.

   (b) Describe how soil investigation is carried out before foundation construction.

   (c) Explain two causes and two effects of settlement in a building structure.

3. (a) What is scaffolding? Mention four factors to consider when selecting a type of scaffolding for a construction site.

   (b) Explain three disadvantages of using bamboo scaffolding in multistorey buildings.

   (c) List three safety precautions to observe when erecting scaffolds on uneven ground.

4. (a) Describe four essential considerations when selecting a site for construction in a flood-prone area.

   (b) Explain the role of inspection chambers in a building's drainage system.

   (c) Identify three problems that may arise from poor waste water disposal in residential areas.

5. (a) Define the term "sound insulation" and explain its importance in residential buildings.

   (b) Give four methods used to control sound transmission through walls.

   (c) State three limitations of using glass as a walling material in tropical regions.