



DEDAN KIMATHI UNIVERSITY OF TECHNOLOGY

SPECIAL/SUPPLEMENTARY EXAMINATIONS

2020/2021 ACADEMIC YEAR

THIRD YEAR FIRST SEMESTER EXAMINATIONS

**FOR THE DEGREE OF BACHELOR OF TECHNOLOGY
IN
CIVIL ENGINEERING**

TBD 3104: CONSTRUCTION AND ENGINEERING MATERIALS II

Time: 2 Hours

INSTRUCTIONS TO CANDIDATES

- This paper contains **FOUR** questions
- Answer question **ONE** and any other **TWO** questions
- No mobile phones allowed in the examination room

THIS PAPER CONSISTS OF (2) PRINTED PAGES

QUESTION ONE (30 MARKS) - COMPULSORY

- a. Describe the following terms as used in construction Engineering [5 @ 2Marks]
- b. Describe any **FIVE** effects of admixture on the properties of fresh concrete [5 @ 1Marks]
- c. Discuss any FIVE advantages of using concrete as a construction material [5 @ 2Marks]
- d. Discuss **FIVE** reasons of seasoning timber [5 @ 1Marks]

QUESTION TWO (20 MARKS)

- a) Discuss any **FIVE** impurities in water used for concreting and their effect on concrete [5 @ 2Marks]
- b) Discuss any **FIVE** methods of seasoning timber [5 @ 2 Marks]

QUESTION THREE (20 MARKS)

- a) Discuss any **FIVE** techniques used in construction when stone is used as a building material [5 @ 2Marks]

QUESTION FOUR (20 MARKS)

- a) Discuss any **FOUR** types of chemical admixtures used in concrete as construction material [4 @ 2 Marks]
- b) Discuss any **THREE** types of composites based on matrix constituent forms [3 @ 2 Marks]
- c) Discuss any **THREE** components of bricks as a construction material and their relative effect on the built brick structure [3 @ 2Marks]