



University Examinations for 2021/2022

**SCHOOL OF ENGINEERING AND TECHNOLOGY**

DEPARTMENT OF BUILDING &amp; CIVIL ENGINEERING

**FIFTH YEAR SECOND SEMESTER EXAMINATION FOR**

## BACHELOR OF SCIENCE (CIVIL ENGINEERING)

## ECV 509: CIVIL ENGINEERING PRACTICE

**DATE:**

**TIME:**

## INSTRUCTIONS

- This paper comprises of FIVE questions. Answer **THREE** questions
- Question one is **compulsory** and carry 30 marks
- Answer any other **TWO** questions

**QUESTION ONE (COMPULSORY) (30 MARKS)**

- |    |                                                                                                                                                                                                                                            |                           |                  |
|----|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------|------------------|
| a) | Distinguish and contrast                                                                                                                                                                                                                   | i) Tort and Contract      | (2 marks)        |
|    |                                                                                                                                                                                                                                            | ii) <b>Tort and Crime</b> | <b>(2 marks)</b> |
| b) | Elucidate 5 (Five) Employer's Liabilities under FIDIC Conditions of Contract – Green Book Clause 6 (5 marks)                                                                                                                               |                           |                  |
| c) | Discuss 5 (Five) responsibilities of a consulting engineer (5 marks)                                                                                                                                                                       |                           |                  |
| d) | Define the role of an Engineer in FIDIC conditions of Contract – Red Book (5 marks)                                                                                                                                                        |                           |                  |
| e) | With reference to Industrial Property Act No.3 of 2001, differentiate between the terms Invention and Innovation (2 marks)                                                                                                                 |                           |                  |
| f) | You are a Resident Engineer. In a site visit, your judgment is overruled by the contractor. Discuss 3 (three) rules of practice in the Engineers' code of ethics that you would invoke to ensure that professionalism is upheld. (5 marks) |                           |                  |
| g) | Using an engineering narrative, explain the term “sustainable development” (4 marks)                                                                                                                                                       |                           |                  |

## **QUESTION TWO (20 MARKS)**

- a) Define the term “turn-key-project” (2 marks)
- b) In a turn-key-project, describe the FIDIC conditions of contract – Silver Book, that are applied to execute the project (8 marks)
- c) Elucidate 3 (three) fundamental canons engineers adhere to in fulfillment of their professional duties. (10 marks)

## **QUESTION THREE (20 MARKS)**

With reference to Occupier’s Liability act, 1984

- a) Define an occupier (2 marks)
- b) Explain 1 (one) of its main provisions in relation to a person visiting premises. (3 marks)
- c) Advise an occupier whose employee, a window cleaner was injured when a window pane was shattered and has sued for compensation (10 marks)
- d) Outline 2 (two) general defenses available to the occupier against liability to a trespasser (5 marks)

## **QUESTION FOUR (20 MARKS)**

You are the technical advisor in a County Projects’ Implementation Committee. Explain 4 (Four) principles of ethical conduct that you would apply to ensure that executed projects conform to sustainable development agenda.

## **QUESTION FIVE (20 MARKS)**

- a) Describe responsibilities of Engineers’ Registration Board, in Kenya (3 marks)
- b) Explain 4 (Four) roles of an Engineer as a Contractor (5 marks)
- c) Define the term “Engineering Mentorship” (2 marks)
- d) Discuss 4 (Four) learning technics a mentee should apply for effective mentorship (10 marks)