



MACHAKOS UNIVERSITY

University Examination 2018/2019

SCHOOL OF ENGINEERING AND TECHNOLOGY
DEPARTMENT OF BUILDING AND CIVIL ENGINEERING
FIFTH YEAR SECOND SEMESTER EXAMINATION
BACHELOR OF SCIENCE (CIVIL ENGINEERING)
ECV 509: CIVIL ENGINEERING PRACTICE

DATE: 17/5/2019

TIME: 2.00-4.00 PM

INSTRUCTIONS: Attempt questions **ONE** and any other **TWO** questions.

QUESTION ONE (COMPULSORY) (30 MARKS)

- a) Briefly explain what Civil Engineering contract is and list five types of contracts commonly applicable to civil engineering projects. (6 marks)
- b) Describe how three of the above contracts as listed in (a) are implemented. (8 marks)
- c) Define what a law of Tort is in reference to construction works. Describe how the claimant is compensated by the defendant if the wrong is proved. (8 marks)
- d) Name and describe three main types of Tort lawsuits. (8 marks)

QUESTION TWO (20 MARKS)

- a) Define what a patent law is and describe the process of applying for a patent? (7 marks)
- b) Describe how one can obtain registration of a copyright for a new invention in Kenya. (7 marks)
- c) State steps which a third party can follow to challenge the validity of an allowed or issued patent. (6 marks)

QUESTION THREE (20 MARKS)

- a) Explain what you understand by the term engineering ethics. (4 marks)
- b) List some of the moral code of behavior which an Engineer has to follow for the good of the profession, society or even yourself so as not to be morally degraded. (8 marks)
- c) List at least four important skills for ethical reasoning. (8 marks)

QUESTION FOUR (20 MARKS)

- a) Describe what you understand by the term FIDIC contracts when applied to civil engineering construction works. (6 marks)
- b) FIDIC contracts covers a wide range of contracts, state some general common features of the FIDIC contracts. (7 marks)
- c) According to FIDIC forms of contracts, describe how disputes are resolved. (7 marks)

QUESTION FIVE (20 MARKS)

- a) Differentiate the roles of Engineers Board of Kenya (EBK) and The Institution of Engineers of Kenya (IEK) which they play towards the Engineering fraternity in the Kenya. (10 marks)
- b) What is the purpose of 'The Engineers Act 2011' which was operationalized in the year 2012? (5 marks)
- c) In a contract what role do the following professionals play?
 - (i) Project Engineer (ii) Project Consultant (iii) Adjudicator (5 marks)