



**MASINDE MULIRO UNIVERSITY OF
SCIENCE AND TECHNOLOGY
(MMUST)**

MAIN CAMPUS

**UNIVERSITY EXAMINATIONS
2014/2015 ACADEMIC YEAR**

FIRST YEAR SECOND SEMESTER EXAMINATIONS

**FOR THE DEGREE
OF
BACHELOR OF SCIENCE IN CIVIL AND STRUCTURAL
ENGINEERING**

COURSE CODE: CSE 102

**COURSE TITLE: INTRODUCTION TO CIVIL &
STRUCTURAL ENGINEERING II**

DATE: THURSDAY, 23RD APRIL 2015 TIME: 9.00AM – 12.00 NOON

INSTRUCTIONS:

1. This paper contains FIVE questions
2. Answer any FOUR questions
3. Marks for each question are indicated in the parenthesis.
4. Examination duration is **3 Hours**

MMUST observes ZERO tolerance to examination cheating

This Paper Consists of 2 Printed Pages. Please Turn Over.

QUESTIONS:**SECTION I – Answer this compulsory question (25 Marks)**

1. (a) As an Engineer you have been assigned the task of doing an EIA study for a sewerage treatment plant within Kakamega county. Discuss in details how you would go about this process. Also suggest any mitigation measures you would consider against the negative impacts of the project. *(10 marks)*
- (b) State the institutions and engineering professional organizations involved in the implementation of road projects in Kenya today. *(5 marks)*
- (c) List TEN civil engineering materials used in the construction of surface and subsurface structures. *(5 marks)*
- (d) Discuss the term sustainable development in relation to Civil Engineering. *(5 marks)*

SECTION II – Answer any three questions (15 Marks each)

2. (a) Give any TEN civil engineering projects that require an EIA before commencement. *(5 marks)*
 - (b) Discuss the major factors threatening the global environment today. *(10 marks)*
 3. (a) Explain in detail the problem based approach in solving civil engineering problems. *(10 marks)*
 - (b) What is labour-based method of construction? Compare this method with the mechanized method. *(5 marks)*
 4. (a) Explain how you would carry out a feasibility study for a new water supply project. What kind of data will you require? *(10 marks)*
 - (b) Outline the main stages of a project development such as putting up the new standard gauge railway (SGR). *(5 marks)*
 5. (a) Give any TEN development projects which have a direct relation to social - economic development of a country. *(5 marks)*
 - (b) Explain the mitigation measures that may be applied to reduce the noise level caused by traffic on a highway. *(5 marks)*
 - (c) What is the importance of planning construction projects? *(5 marks)*
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