



# **MURANG'A UNIVERSITY OF TECHNOLOGY**

## **SCHOOL OF ENGINEERING AND TECHNOLOGY**

**DEPARTMENT OF BUILDING AND CIVIL ENGINEERING**

**UNIVERSITY ORDINARY EXAMINATION**

**2018/2019 ACADEMIC YEAR**

**THIRD YEAR SECOND SEMESTER EXAMINATION FOR, DIPLOMA IN  
CIVIL ENGINEERING**

**SEB 1308 - CONSTRUCTION MANAGEMENT**

**DURATION: 2 HOURS**

**DATE: 11/12/2018**

**TIME: 9.00 – 11.00 A.M.**

**Instructions to candidates:**

1. Answer question One and Any Other Two questions.
2. Mobile phones are not allowed in the examination room.
3. You are not allowed to write on this examination question paper.

**SECTION A: ANSWER ALL QUESTIONS IN THIS SECTION**

**QUESTION ONE (30 MARKS)**

- a. Define the following terms;
- i. Work study
  - ii. Organization
  - iii. Contract (6 Marks)
- b. Highlight FIVE importance of construction industry (5 Marks)
- c. Explain the following types of contractors;
- i. Small contractors
  - ii. Medium contractors
  - iii. Large contractors (6 Marks)
- d. State FOUR objectives of construction planning (4 Marks)
- e. Outline the stages of constructing a science complex (6 Marks)
- f. Differentiate between method study and time study as used in work-study (3 Marks)

**SECTION B – ANSWER ANY TWO QUESTIONS IN THIS SECTION**

**QUESTION TWO (20 MARKS)**

- a. Explain any THREE methods of contract planning (6 Marks)
- b. Consider the following activities in the following table:

ACTIVITY	DURATION (DAYS)	PRECEDED BY	NUMBER OF WORKERS
A	5	-	3
B	3	-	4
C	4	A	5
D	2	B, G	7
E	5	C, D	2
F	1	D	6
G	4	A	3
H	3	E	4
I	1	A	2
J	4	E	5
K	2	I, J	4
L	2	F, H	2

- i. Prepare a network diagram for the project
- ii. Calculate the latest start and earliest start of the activity hence determine the critical path
- iii. Calculate the number of workers required in this critical path

(14 Marks)

**QUESTION THREE (20 MARKS)**

- a. Explain FOUR essentials of a valid contract (8 Marks)
- b. Discuss the ways that a contract can be discharged (12 Marks)

**QUESTION FOUR (20 MARKS)**

- a. State SIX importance of work-study in a construction industry (3 Marks)
- b. Highlight EIGHT factors to consider when preparing a site layout (4 Marks)
- c. Discuss the procedures of work-study (13 Marks)