



THE MOMBASA POLYTECHNIC UNIVERSITY COLLEGE

((A Constituent College of JKUAT)

(A Centre of Excellence)

**Faculty of Engineering &
Technology in Conjunction with
Kenya Institute of Highways and
Building & Technology (KIHBT)**

DEPARTMENT OF BUILDING & CIVIL ENGINEERING

HIGHER DIPLOMA IN BUILDING & CIVIL ENGINEERING

EBE 3308: SITE ADMINISTRATION & ORGANIZATION WITH WORK STUDY II

END OF SEMESTER EXAMINATION

SERIES: AUGUST 2012

TIME: 2 HOURS

Instructions to Candidates:

You should have the following for this examination

- *Answer Booklet*
- *Calculator*

This paper consists of **FIVE** questions

Answer question **ONE (COMPULSORY)** any other **TWO** questions

Maximum marks for each part of a question are as shown

This paper consists of **TWO** printed pages

Question One (20 Marks)

- a) (i) Briefly explain **FIVE** steps undertaken in time study. **(10 marks)**
(ii) Briefly describe any **THREE** types of rest allowances. **(6 marks)**
- b) Briefly describe any **TWO** types of financial incentives. **(4 marks)**

Question Two (20 marks)

- a) A worker is observed to complete a task within 4 minutes. His rating is 85% and allowance factor is 13%. Determine the following:
(i) Normal time
(ii) Standard time **(4 marks)**
- b) The following activities were observed on site with allowance factor of 15%:

| Job Element | Cycle Observed (in minutes) | | | | | Performance Rating |
|-------------------------------|--------------------------------|----|---|----|----|-----------------------|
| | 1 | 2 | 3 | 4 | 5 | |
| (A) Walking & Picking Shovel | 8 | 10 | 9 | 10 | 11 | 120% |
| (B) Excavating | 2 | 3 | 2 | 1 | 3 | 105% |
| (C) Moving Excavated Material | 2 | 1 | 5 | 2 | 1 | 110% |

- i) Compute average times for each element
ii) Compute the normal time for each element
iii) Compute the total normal time
iv) Compute the standard time for the job **(16 marks)**

Question Three (20 marks)

- a) (i) Briefly explain **FOUR** importance of cost control in construction industry with relevant examples. **(8 marks)**
(ii) Briefly explain **FOUR** advantage of non-financial incentive scheme. **(8 marks)**
- b) Briefly explain **TWO** issues that may necessitate variations in a construction contract. **(4 marks)**

Question Four (20 marks)

- a) Briefly explain **FIVE** work measurement techniques. **(10 marks)**
- b) Briefly explain **FIVE** importance of standard times in construction industry. **(10 marks)**

Question Five (20 marks)

- a) Briefly describe **FIVE** factors taken into consideration towards designing a financial incentive scheme. **(10 marks)**

b) Briefly describe **FOUR** categories of financial incentive schemes.

(10 marks)