



TECHNICAL UNIVERSITY OF MOMBASA

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

DEPARTMENT OF BUILDING & CIVIL ENGINEERING

HIGHER DIPLOMA IN BUILDING ECONOMICS

EBE 3308: SITE ORGANIZATION, ADMINISTRATION & WORK STUDY II

END OF SEMESTER EXAMINATION

SERIES: APRIL 2015

TIME ALLOWED: 2 HOURS

Instructions to Candidates:

You should have the following for this examination

- *Answer Booklet*






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
 Use neat, large and well labeled diagrams where required
 This paper consists of **THREE** printed pages

Question One (Compulsory - 40 marks)

- a) Define the term “work study” and the use of the following key words as used in work study:
 - (i) Method study
 - (ii) Work measurement **(6 marks)**
- b) Work improvement can be achieved in various ways, briefly explain FOUR distinct roles of work study in reference to work improvement procedures **(8 marks)**
- c) Outline the objectives of materials management system **(6 marks)**

Question Two (30 marks)

- a) Table 1 shows the symbols used to record a broad range of activities on a process chart in work study. State the meaning of each symbol and the activity it represents **(10 marks)**

SYMBOL	ACTIVITY	MEANING
		
		
		
		
		

- b) Define “TIME STUDY” and explain the stages in time study **(10 marks)**

Question Three (30 marks)

- a) Briefly explain the following techniques of method study:
 - (i) Multiple activity chart
 - (ii) Scale models
 - (iii) Process charts
 - (iv) String diagrams **(12 marks)**
- b) The following data was obtained in a time study exercise:
 - Observed time for an element = 4 minutes
 - Rating of the element = 95%
 - Relaxation allowance = 2%
 - Contingency allowance = 2%
 - Determine:
 - (i) The basic time of the task

(ii) The standard time of the task

Question Four

- a) Describe in detail the TWO types of incentives giving FIVE examples in each case (12 marks)
- b) Explain how workers can add/contribute to the total time wasted (8 marks)

Question Five

- a) During procurement of materials, outline the roles played by the following: (12 marks)
- (i) Head office
 - (ii) Site Agent
- b) Explain how management can contribute to idle time (8 marks)