



THE MOMBASA POLYTECHNIC UNIVERSITY COLLEGE

(A Constituent College of JKUAT)

**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
(BUILDING SERVICES OPTION)**

EBE 3109: SITE ORGANIZATION I

END OF SEMESTER EXAMINATION

SERIES: DECEMBER 2012

TIME: 2 HOURS

Instructions to Candidates:

You should have the following for this examination

- *Answer Booklet*

This paper consists of **FIVE** questions. Answer any **THREE** questions

Maximum marks for each part of a question are as shown

This paper consists of **THREE** printed pages

Question One (20 marks)

- a) Briefly explain how to address the following in a restricted/congested site:
- (i) Vehicular and human traffic
 - (ii) Storage of materials and equipment
 - (iii) Machinery location **(6 marks)**
- b) (i) State **TWO** types of hutments found in a construction site.
(ii) Briefly explain safety techniques employed to prevent collapse of excavation. **(5 marks)**
- c) (i) Describe independent tied scaffolds.
(ii) Briefly explain application of independent tied scaffolds. **(6 marks)**
- d) Describe **ONE** unique property for each of **THREE** materials used for scaffolding. **(3 marks)**

Question Two (20 marks)

- a) (i) State **FOUR** importance of notices on construction site. **(2 marks)**
(ii) Briefly explain **THREE** measures to ensure safety to tower cranes when operating them. **(6 marks)**
- b) (i) State **FOUR** safety practices observed when working with hand tools. **(2 marks)**
(ii) Briefly describe first aid administered due to electric shock. **(4 marks)**
- c) (i) Briefly describe **FOUR** steps taken on site to reduce noise.
(ii) State **TWO** practices used on site to address issues related to respiratory protection. **(6 marks)**

Question Three (20 marks)

- a) Briefly explain **THREE** factors that influence organization of safety on construction site. **(6 marks)**
- b) (i) Briefly describe a putlog scaffold.
(ii) With relevant examples, state situations putlog scaffold is utilized in a construction site. **(6 marks)**
- c) (i) Describe **THREE** principal causes of accidents during demolition.
(ii) State **TWO** duties of a safety officer/manager. **(8 marks)**

Question Four (20 marks)

- a) (i) Briefly explain **FIVE** standards that should be observed regarding washing facilities on site. **(5 marks)**
(ii) Briefly describe **FIVE** arrangements on site for the supply of safe drinking water. **(5 marks)**
- b) (i) State **TWO** types of portable fire extinguisher. **(1 marks)**
(ii) Briefly describe suitability of these types of portable fire extinguisher. **(4 marks)**

c) State **FIVE** aims of safety policies on site. (5 marks)

Question Five (20 marks)

a) (i) Briefly describe **FIVE** duties and responsibility of a safety committee.
(ii) Briefly describe the **THREE** categories of vehicle maintenance. (10 marks)

b) (i) State **TWO** advantages of using a portable toilet. (2 marks)
(ii) Briefly explain **THREE** factors considered in purchasing a suitable crane. (3 marks)

c) (i) Describe briefly **SIX** hazards related to use of power-driven machinery on site. (3 marks)
(ii) State **TWO** forms of security on played on site. (2 marks)