



MACHAKOS UNIVERSITY COLLEGE

(A Constituent College of Kenyatta University)

University Examinations for 2014/2015

SCHOOL OF ENGINEERING AND TECHNOLOGY

DEPARTMENT OF BUILDING AND CIVIL ENGINEERING

EXAMINATION FOR CERTIFICATE IN CONSTRUCTION TECHNOLOGY
BCE BT 113

CONSTRUCTION MANAGEMENT

DATE: 7/4/2015

TIME: 3 HRS

Instructions

- *This paper consists of five questions.*
- *Answer questions one (compulsory) and any other two questions*
- *Maximum marks for each part of a question are as shown*
-

1. A) State and explain three methods that are used to enhance safety in the operation of equipment during the maintenance operation. (6 marks)
 - ii) Explain the two methods used in plant and equipment maintenance. (4 marks)
- b) i) State and explain four reasons as to why plant, tools and equipment should be maintained. (8 marks)
 - ii) Define the term preliminary items. (3 marks)
- c) Name three reasons as to why electricity is required in a building site. (3 marks)
 - ii) A young entrepreneur or contractor intends to build a house for a cheat. Draw a site plan and indicate the following.
 - Sand damps
 - Aggregate dumps
 - Building stones

- Workers huts
 - Site office's
 - Sentry box (6 marks)
2. a) Explain the three factors considered when deciding on the type of plants and machines to acquire. (3 marks)
- ii) State and explain three preliminary items that have to be considered before carrying out the site works. (3 marks)
- b) i) Briefly explain six factors to be considered when planning a building site for a factory (6 marks)
- ii) List four essential services of a workshop. (4 marks)
- c) State two advantages of identifying dumps (spoils) with sign boards prior to the arrival of materials (4 marks)
3. a) Explain why a constructor should construct a corrugated iron sheets boarding all round the construction site (5 marks)
- ii) Explain four requirements by Kenya power (KPLC) that should be provided before the site is connected to the metered supply. (4 marks)
- b) i) Name three factors to be considered when storing materials in a building site. (3 marks)
- c) Briefly explain the following methods as used in plant tools and equipment maintenance.
- i) Planned maintenance
- ii) Routine maintenance (4 marks)
- ii) explain what a constructor should focus on to enhance safety in the operation of the equipment during the maintenance operation by explaining two methods (4 marks)
4. a) i) State and explain two purposes of preliminary items. (2 marks)
- ii) Explain how water can be got in a building site from the council mains. (3 marks)
- b) Briefly explain five factors to be considered when selecting a site for a factory. (5 marks)
- ii) State five advantages of buying a plant and five advantages of hiring a plant. (5 marks)
- c) Draw a site plan and by using suitable signboards indicate the lorry drivers the positions for dumping the following materials.

- i) Sand
- ii) Building stones
- iii) Aggregate
- iv) Hard core (5 marks)

5. a)i) Explain how the following materials should be stored in a workshop or site.

- i) Cement and lime
- ii) Timber (6 marks)

iii) Name and explain two factors that are considered when storing materials in a building site. (8 marks)

b) Explain the term face of communication in relation to the factors considered in selecting a workshop site. (3 marks)

c) State three advantages of using mechanical plant on a construction site. (3 marks)