



THE MOMBASA POLYTECHNIC UNIVERSITY COLLEGE

(A Constituent College of JKUAT)

(A Centre of Excellence)

Faculty of Engineering & Technology

DEPARTMENT OF BUILDING & CIVIL ENGINEERING

CERTIFICATE IN CONSTRUCTION TECHNICIAN (CI II 12S)

EBC 1128: WORKSHOP TECHNOLOGY

END OF SEMESTER EXAMINATION

SERIES: DECEMBER 2012

TIME: 2 HOURS

Instructions to Candidates:

You should have the following for this examination

- *Answer Booklet*
- *Drawing Instruments*

This paper consists of **FIVE** questions.

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

Maximum marks for each part of a question are as shown

This paper consists of **THREE** printed pages

Question One (Compulsory)

- a) State the importance of the Health and Safety at Work Act. **(4 marks)**
- b) Explain how safety may be enhanced in a workshop environment. **(6 marks)**
- c) (i) State the purpose of safety colours and safety signs.
(ii) Explain the meaning of the following safety colours and give examples of their use. **(6 marks)**
- d) Describe the First Aid to be given to a casualty in a workshop who has stopped breathing. **(4 marks)**

Question Two

- a) (i) Sketch a flat file and name all its parts.
(ii) Explain the following aspects of a file and state their importance:
(I) Cut
(II) Grade
(iii) Explain the term “pinning” with respect to a file. **(10 marks)**
- b) State **FIVE** care points of files **(5 marks)**
- c) Draw neat sketch of the following tools:
(i) Flat chisel
(ii) Ball pein hammer **(5 marks)**

Question Three

- a) Explain with the aid of sketches, **THREE** methods used in making out process. **(6 marks)**
- b) (i) Sketch a marking table
(ii) State the care and maintenance of a marking table. **(8 marks)**
- c) Explain the procedure of testing a first surface using a marking table. **(4 marks)**
- d) State **TWO** uses of an odd leg caliper **(2 marks)**

Question Four

- a) (i) Define the term “accuracy” with reference to a measuring instrument.
(ii) Sketch a micrometer screw gauge and label all its parts.
(iii) State **FOUR** precautions in the use of the micrometer. **(10 marks)**

- b) Differentiate between “measurement” and “testing” tool. **(4 marks)**
- c) A micrometer has thread pitch of 0.50mm. If the thimble is divided into 50 parts/divisions, establish the micrometer reading in figure below. **(6 marks)**

Question Five

- a) (i) List **FOUR** factors to consider when selecting a hacksaw.
- (ii) State the causes for each of the following faults on a hacksaw:
- (I) Blade Breakages
 - (II) Executive tooth wear
 - (III) Tooth breakages
 - (IV) Crooked cutting
- (8 marks)**
- b) (i) Explain the procedure of using Try Square.
- (ii) Draw a Try Square and explain function of its features. **(6 marks)**
- c) Explain with the aid of sketches **THREE** uses of a surface gauge. **(6 marks)**