



THE MOMBASA POLYTECHNIC UNIVERSITY COLLEGE

(A Constituent College of Jkuat)

Faculty of Engineering and Technology

DEPARTMENT OF BUILDING AND CIVIL ENGINEERING

CERTIFICATE IN CONSTRUCTION TECHNICIAN II (CT II 011)

EBC 1118: BUILDING TECHNOLOGY III

END OF SEMESTER EXAMINATION

SERIES: AUGUST/SEPTEMBER 2011

TIME: 2 HOURS

Instructions to Candidates:

You should have the following for this examination

- *Answer booklet*
- *Pocket calculator*

This paper consists of **FIVE** questions in **TWO** sections: **A** and **B**

Answer question **ONE** is compulsory from Section A and any other **TWO** questions from section B

Maximum marks for each question are as shown

This paper consists of **THREE** printed pages

SECTION A – COMPULSORY (30 MARKS)

Question 1

- a) State the **THREE** principle requirements of a fine place and flue (3 marks)
- b) State **FOUR** sets of conditions which can prevent the chimney from operating satisfactory (8 marks)
- c) Define the following terms
- (i) Fire place
 - (ii) Flue
 - (iii) Chimney
 - (iv) Chimney breast
 - (v) Hearths
- (10 marks)
- d) Sketch and label the details of a chimney stack section through a tiled roof (6 marks)
- e) State the purpose of flue lining

SECTION B (*Answer any TWO questions*)

Question 2

- a) Explain the procedure adopted when inspecting a smoky chimney (10 marks)
- b) With the aid of sketches, describe the following stanchion joints
- (i) Stanchion splice
 - (ii) Beam to stanchion joint
 - (iii) Stanchion cap
 - (iv) Gusseted base
- (10 marks)

Question 3

- a) Sketch and label the following concrete portal frames joints
- (i) Apex hinge detail
 - (ii) Column and spanning member splice detail
 - (iii) Column to foundation connection
- (15 marks)
- b) State **FIVE** advantages of timber portal frames (5 marks)

Question 4

- a) With the aid of a sketch, describe the construction of dry lining partition (8 marks)
- b) Describe a procedure of hanging a door to the frame (4 marks)

- c) (i) State the reasons for painting timber work
- (ii) Explain the procedure for painting new woodwork (8 marks)

Question 5

- a) State **FOUR** reasons for using suspended ceiling (4 marks)
- b) State **FOUR** requirements of suspended ceiling (8 marks)
- c) Sketch and label the parts of suspended open ceiling (8 mark)