



THE MOMBASA POLYTECHNIC UNIVERSITY COLLEGE

Faculty of Engineering & Technology

DEPARTMENT OF CIVIL AND BUILDING ENGINEERING

CERTIFICATE IN CONSTRUCTION TECHNICIAN II (09A)

FINAL EXAMINATION

APRIL/MAY 2010 SERIES

EB 1119 : BUILDING TECHNOLOGY 4

TIME: 2 HOURS

Instructions to Candidates

You should have the following for this examinations:

- Answer booklet
- Writing materials

This paper consists of **FIVE Questions**.

Questions **ONE** is **COMPULSORY**.

Answer any other **TWO** questions.

Maximum marks for each part of a question is as shown.

Question ONE

- (a). A three-storey duplex is built as a Load bearing wall construction. It has leaned on one side and after an investigation; the structural engineer has diagnosed “sub-base failure” on the side the building is leaning. The solution he has prescribed is to take the foundation to a lower ground. With the aid of well anoted sketches, outline how this will be achieved. **(20 Marks)**
- (b). With the aid of a sketch, describe the **Amoured cable** and give one situation where it can be used. **(5 Marks)**
- (c). Outline **THREE** disadvantages of mechanical ventilation. **(5 Marks)**

Question TWO

- (a). With the aid of a sketch, describe the safety regulations required in all electric installations. **(8 Marks)**
- (b). Describe the domestic consumer unit with the aid of a sketch. **(12 Marks)**

Question THREE

- (a). With the aid of a well anoted sketch describe the construction of the:
- (i). Rigid type of paving
 - (ii). Flexible paving **(10 Marks)**
- (b). Briefly discuss **FOUR** factors that affect the spacing of joints in RiGID paving. **(4 Marks)**
- (c). Reinforced concrete is composed of materials of different coefficients of thermal expansions. Designs have to allow for CONTRACTION movements. With the aid of a sketch, describe how this is achieved in rigid paving. **(6 Marks)**

Question FOUR

With the aid of a sketch, outline the DIRECT cold water supply system when the mains pressure is low and there is adequate space to store storage in the building. **(20 Marks)**

Question FIVE

- (a). With the aid of a sketch, describe the construction of a road gully. **(10 Marks)**
- (b). With the aid of a sketch, describe the water type portable fire extinguisher. **(10 Marks)**