



TECHNICAL UNIVERSITY OF MOMBASA
**Faculty of Engineering &
Technology**

DEPARTMENT OF BUILDING & CIVIL ENGINEERING
DIPLOMA IN BUILDING & CIVIL ENGINEERING (DBC 12S)

EBC 2107: CIVIL ENGINEERING MATERIALS II

END OF SEMESTER EXAMINATION

SERIES: APRIL 2013

TIME ALLOWED: 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 **TWO** printed pages

Question One

- a) Briefly explain the formation of the following concrete finishes:
- (i) Board mark finishes
 - (ii) Scrubbed and exposed aggregate finishes
 - (iii) Aggregate transfer
- (12 marks)**
- b) Briefly explain the preparation and placing of concrete at the construction joints.
- (8 marks)**

Question Two

- a) State **FOUR** methods of curing large horizontal surfaces.
- (4 marks)**
- b) Explain the following curing processes:
- (i) Curing compound
 - (ii) Steam curing
- (10 marks)**
- c) Briefly explain the correct use of internal vibrators.
- (6 marks)**

Question Three

- a) Briefly describe placing concrete in:
- (i) Deep lifts
 - (ii) Large pours
- (14 marks)**
- b) Explain the following modes of transporting concrete.
- (i) Wheel-barrows
 - (ii) Lorries
- (6 marks)**

Question Four

- a) With the aid of a sketch describe compaction factor test.
- (10 marks)**
- b) Briefly describe the laboratory determination of aggregate impact value test.
- (7 marks)**
- c) Briefly describe the general storage of aggregates.
- (3 marks)**

Question Five

- a) With the aid of a flow chart describe dry process of manufacturing cement.
- (8 marks)**
- b) State the advantages of grinding fine cement.
- (6 marks)**
- c) Briefly describe the laboratory determine of consistency of cement.
- (6 marks)**

