



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

DEPARTMENT OF BUILDING & CIVIL ENGINEERING
DIPLOMA IN BUILDING & CIVIL ENGINEERING

ECV 2102: CIVIL ENGINEERING MATERIALS II

END OF SEMESTER EXAMINATION

SERIES: APRIL 2014

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 of the **FIVE** questions

All questions carry equal marks

Maximum marks for each part of a question are as shown
This paper consists of **TWO** printed pages

Question One

- a) Explain the following types of plastics giving TWO examples of each:
- (i) Thermoplastics
 - (ii) Thermosetting plastics
- (8 marks)**
- b) Name and explain FOUR ingredients which are added during the manufacture of plastics.
(8 marks)
- c) List FOUR defects of paints
(4 marks)

Question Two

With the aid of sketches, describe the following methods of manufacturing plastics:

- (i) Injection moulding
 - (ii) Extrusion method
- (20 marks)**

Question Three

- a) Describe the major constituents of paints.
(12 marks)
- b) State FOUR functions of paint
(2 marks)
- c) (i) List the main ingredients used in the manufacture of glass
(ii) State FOUR major uses of glass in construction industry.
(6 marks)

Question Four

- a) Describe the following types of paints:
- (i) Oil paints
 - (ii) Emulsion paints
 - (iii) Water paints
- (9 marks)**
- b) Define the following terms of adhesive:
- (i) Shelf life
 - (ii) Pot life
 - (iii) Closed assembly time
- (6 marks)**
- c) Describe vulcanization process of manufacturing rubber.
(5 marks)

Question Five

- a) Explain the following processes of manufacturing glass:
- (i) Blowing
 - (ii) Drawing
- (8 marks)**
- b) State SIX functional requirements of a good mortar
(6 marks)

c) Describe the procedure of painting the following backgrounds:

(i) Plastered wall

(ii) Old wood

(6 marks)