



**TECHNICAL UNIVERSITY OF MOMBASA**

FACULTY OF ENGINEERING & TECHNOLOGY  
DIPLOMA IN BUILDING AND CIVIL ENGINEERING

END OF SEMESTER EXAMINATIONS

MAY 2016

**ECV 2102: CIVIL ENGINEERING MATERIALS I**

Instructions: Answer any **THREE** questions.

Use neat well labelled sketches where required.

**QUESTION ONE**

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- a) Differentiate between Thermoplastics and Thermosetting plastics (6 marks)
- b) State **THREE** uses of plastics in construction works (3 marks)
- c) Outline **FIVE** principal ingredients of plastics (5 marks)
- d) Outline **SIX** advantages of plastic as a construction material (6 marks)

**QUESTION TWO**

- a) Outline the classification of rubber and briefly explain its **FOUR** useful properties as a construction material (10 marks)
- b) Outline **FOUR** main ingredients of paint (4 marks)
- c) Explain **THREE** reasons for applying paint on construction works (6 marks)

**QUESTION THREE**

- a) Outline **FIVE** uses of glass in construction works (5 marks)
- b) Briefly explain the primary constituent materials of glass (5 marks)
- c) State **THREE** types of varnishes (3 marks)
- d) Outline **TWO** functions of varnishes in construction works (2 marks)
- e) Outline **FIVE** paint defects (5 marks)

**QUESTION FOUR**

- a) State **FIVE** types of adhesives used in construction work (5 marks)
- b) Outline **TWO** reasons that make gypsum plaster work well as a finishing coat (5 marks)
- c) Define the term Cementitious materials and outline **TWO** examples (5 marks)
- d) Outline **FIVE** uses of Bitumen in construction works (5 marks)

**QUESTION FIVE**

- a) Outline **FIVE** properties of materials that determine their suitability in construction works (5 marks)

b) Outline factors that cause deterioration of construction materials (5 marks)

c) Briefly explain the following terms

- Design
- Functionality
- Esthetic value
- Durability
- Economy

(10 marks)