



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 II

Instructions: Answer any **THREE** questions.

Use neat well labelled sketches where required.

Time: 2 hours

QUESTION ONE

- a) Briefly explain the classification of plastics (6 marks)
- b) State **THREE** uses of plastics in construction works (3 marks)
- c) Outline **FIVE** principal ingredients of plastics (5 marks)
- d) Briefly explain the role of each of the following additives of plastics (6 marks)
 - Carbon black
 - Flame retardants
 - Lubricants

QUESTION TWO

- a) (i) Outline the classification of rubber
- (ii) 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 as in material technology (10 marks)
 - Design
 - Functionality
 - Esthetic value
 - Durability
 - Economy

