

TECHNICAL UNIVERSITY OF MOMBASA

FACULTY OF ENGINEERING AND TECHNOLOGY

DEPARTMENT OF ARCHITECTURE & BUILT ENVIRONMENT

COURSE: DIPLOMA IN ARCHITECTURE

UNIT: MATERIAL SCIENCE II

UNIT CODE: EAR 2305

SPECIAL / SUPPLEMENTARY EXAMINATION

SERIES: SEPTEMBER 2017

INSTRUCTIONS TO CANDIDATES:

THIS PAPER CONSISTS OF FIVE QUESTIONS. ANSWER ANY THREE QUESTIONS.
MAXIMUM MARKS FOR EACH PART OF A QUESTION ARE AS SHOWN.

QUESTION ONE

Describe the composition of concrete.

(20 Marks)

QUESTION TWO

Explain factors that affect the properties of concrete

(20 Marks)

QUESTION THREE

Explain the following in reference to cement

(20 Marks)

- a) Hydration
- b) Gel Theory

QUESTION FOUR

Describe four types of cement

(20 Marks)

QUESTION FIVE

- a) Describe TWO standard tests for cement
- b) Describe TWO properties of aggregates

(10 Marks)

(10 Marks)