



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

DEPARTMENT OF BUILDING & CIVIL ENGINEERING
DIPLOMA IN ARCHITECTURE (DARC 12S – Y3 S1)

EAR 2302: ENVIRONMENTAL SCIENCE – ACCOUSTIC DESIGN

END OF SEMESTER EXAMINATION
SERIES: AUGUST 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

All questions carry equal marks

Maximum marks for each part of a question are as shown
Use neat, large and well labeled diagrams where required.
This paper consists of **TWO** printed pages

Question One

Briefly explain:

- a) Sound sources
- b) Frequency
- c) Amplitude
- d) Reflection
- e) Refraction
- f) Decibel scale

(20 marks)

Question Two

- a) Differentiate between act-borne sound and transmitted sound.
- b) Explain octane bands of music spectrum

(20 marks)

Question Three

List TEN factors of sound insulation in building.

(20 marks)

Question Four

Briefly explain:

- a) Echo
- b) Reverberation
- c) Beam absorbents
- d) Acoustic factors

(20 marks)

Question Five

- a) Sketch FIVE wall constructions stating their reductions.
- b) Sketch FIVE floor constructions stating their reductions.

(20 marks)