



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

DEPARTMENT OF BUILDING & CIVIL ENGINEERING  
**DIPLOMA IN ARCHITECTURE (DA 12M)**

EAR 2302: ACOUSTIC DESIGN

**SPECIAL/SUPPLEMENTARY EXAMINATION**

**SERIES: FEBRUARY 2015**

**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**

Briefly explain:

- (i) Sound propagation
- (ii) Silence
- (iii) Wavelength
- (iv) Amplitude
- (v) Frequency

**(20 marks)**

### **Question Two**

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

**(20 marks)**

### **Question Three**

Sketch FIVE types of floor insulation constructions stating their reductions.

**(20 marks)**

### **Question Four**

Sketch FIVE types of wall insulation constructions stating their reduction.

**(20 marks)**

### **Question Five**

Explain:

- a) Echo
- b) Reverberation
- c) Room absorbents
- d) Room acoustic factors

**(20 marks)**