TECHNICAL UNIVERSITY OF MOMBASA

FACULTY OF ENGINEERING AND TECHNOLOGY

DEPARTMENT OF BUILDING & CIVIL ENGINEERING

UNIVERSITY EXAMINATION FOR:

DIPLOMA IN BUILDING AND CIVIL ENGINEERING

EBC 2107 BUILDING TECHNOLOGY I

END OF SEMESTER EXAMINATION

SERIES: DECEMBER 2016

TIME: 2 HOURS

DATE: 22 Dec 2016

Instructions to Candidates

You should have the following for this examination

-Answer Booklet, examination pass and student ID

-Drawing instruments.

-Scientific calculator

This paper consists of five questions.

Attempt any THREE questions.

Do not write on the question paper.

Question One

(a) Briefly explain the evolution of built environment **(4 marks)**

(b) Briefly explain the measures taken to ensure quality of work is achieved on site **(6 marks)**

(c) Describe the work involved in site clearance **(4 marks)**

(d) State the building code requirements for foundations **(6 marks)**

Question Two

(a) Using sketches, describe THREE methods used on site leveling **(6 marks)**

(b) State FOUR characteristics of dump proof course **(4 marks)**

(c) Sketch and label treatment of cavity wall to prevent dampness penetration in the following areas:-

i) At parapet wall

ii) Window head

iii) Window sill **(10 marks)**

Question Three

a) With the aid of a sketch, explain suspended timber floors (**10 marks)**

b) State the factors considered when selecting floor finishes **(6 marks)**

c) State FOUR functional requirements of roofs (**4 marks)**

Question Four

a) Briefly explain the following functional requirements of stairs

(i) Strength and stability

(ii) Fire resistance

(iii) Sound insulation **(6 marks)**

b) With the aid of sketches differentiate the following types of stairs

(i) Straight flight

(ii) Open well

(iii) Half turn **(9 marks)**

c) Sketch and label the following door hinges:-

(i) Rising butt

(ii) Broad butt hinge **(5 marks)**

Question Five

a) (i) State FOUR performance requirements of windows

(ii) State FOUR disadvantages of louvers (**8 marks)**

b) Outline the principles underlying the erection of scaffolding **(4 marks)**

c) With the aid of a sketch, describe independent scaffolding **(8 marks)**