



Technical University of Mombasa

Faculty of Engineering and Technology

DEPARTMENT OF BUILDING AND CIVIL ENGINEERING
HIGHER DIPLOMA IN BUILDING & CIVIL ECONOMICS
(KIHBIT)

EBE 3106 : CONSTRUCTION TECHNOLOGY II

SEMESTER: EXAMINATIONS

SERIES: APRIL 2014

TIME: 2 HOURS

INSTRUCTIONS TO CANDIDATES:

1. You should have the following for this paper
 - *Answer booklet*
 - *Drawing instruments*
2. This paper consists of **FIVE** questions.
3. Answer any **THREE** Questions
This paper consists of 2 PRINTED pages

QUESTION ONE

- a) State the safety precautions to be observed in Timbering of deep trench excavation works. (4 marks)
- b) With the aid of sketches describe the three types of shoring systems (12 marks)
- c) State the classification of lifting equipment in civil engineering. (4 marks)

QUESTION TWO

- a) State five types of shuttering in concrete works (6 marks)
- b) With the aid of a sketch describe or scaffolding system suitable for high rise building construction. (8 marks)
- c) State the safety precautions to be observed in the use of a scaffolding system. (6 marks)

QUESTION THREE

- a) Briefly describe the various techniques of jointing structural members in the construction of framed structures (5 marks)
- b) With the aid of or sketch describe the various types of frame layout in multi-storey framed buildings. (10 marks)
- c) State the various methods of protecting structural steel works from the different agents of corrosion. (5 marks)

QUESTION FOUR

- a) Briefly describe the various forms of upper floor construction. (6 marks)
- b) With the aid of a sketch describe a concrete composite floor construction (8 marks)
- c) Explain three methods of insulating walls against elements of weather (6 marks)

QUESTION FIVE

- a) State the advantages of lattice roof structures. (6 marks)
- b) With the aid of a sketch describe the construction of a laminated box portal frame. (9 marks)
- c) State the advantages of using prefabricated roof structures. (5 marks)