

 MURANG’A UNIVERSITY OF TECHNOLOGY

SCHOOL OF ENGINEERING AND TECHNOLOGY

UNIVERSITY EXAMINATIONS FOR THE DEGREE OF SCIENCE IN:

BUILDING CONSTRUCTION AND MANAGEMENT

2ND YEAR 1ST SEMESTER 2016/2017 ACADEMIC YEAR

CENTRE: MAIN CAMPUS

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**COURSE CODE: TLM 3212**

**COURSE TITLE: BUILDING TECHNOLOGY I**

**EXAM VENUE: W/S STREAM: BSc IN CONSTRUCTION**

**DATE: 25/4/17 EXAM SESSION: 2.00 – 4.00 PM**

**TIME: 2 HOURS**

**Instructions**

1. **Answer Question 1 (compulsory) and ANY other two questions**
2. **Candidates are advised not to write on question paper.**
3. **Candidates must hand in their answer booklets to the invigilator while in the examination room**

**QUESTION ONE**

1. With the aid of sketches, explain how the 3 – 4 – 5 method is used in setting out a rectangular shaped building. (9 marks)
2. Outline any FIVE factors to be considered in deciding the type of foundation to be used. (5 marks)
3. List any THREE considerations taken in the choice of an excavation method. (3 marks)
4. Define Timbering as used in excavation of trenches. (2 marks)
5. Sketch and label the details of Timbering in moderately firm soil. (5 marks)
6. With the aid of sketches differentiate between wide strip foundation and deep strip foundation. (6 marks)

**QUESTION TWO**

1. Define the following terms as used in roofs;
2. Batten
3. Hip
4. Rafter. (6 marks)
5. Sketch and label the details of a lean - to – roof (7 marks)
6. Outline any FIVE requirements of a good roof. (5 marks)
7. Name any TWO classifications of roofs. (2 marks)

**QUESTION THREE**

1. Sketch the details of a solid ground floor. (7 marks)
2. Explain the functions of hard core filling to a foundation. (3 marks)
3. Sketch and label a segmental arch. (7 marks)
4. Discuss any THREE causes of dampness in a building. (3 marks)

**QUESTION FOUR**

1. Define the following terms
2. Base line
3. Datum
4. Profile. (6 marks)
5. Outline the procedure carried out in constructing a wall in brick work. (7 marks)
6. Define bonding as used in brick work. (3 marks)
7. Differentiate between a stretcher bond and a Flemish bond. (4 marks)

**QUESTION FIVE**

1. Outline any THREE reasons for damp prevention in a building. (3 marks)
2. With the aid of a sketch show the following parts of a window
3. Soffit
4. Jamb
5. Lintel
6. Window sill. (5 marks)
7. Explain the FOUR reasons which necessitate the provision of a window to a building. (8 marks)
8. Explain the role of the following in a building team;
9. C.O.W
10. Quantity surveyor. (4 marks)