



**JARAMOGI OGINGA ODINGA UNIVERSITY OF SCIENCE AND TECHNOLOGY
SCHOOL OF ENGINEERING AND TECHNOLOGY
UNIVERSITY EXAMINATIONS FOR THE DIPLOMA IN CONSTRUCTION
MANAGEMENT (TVET)
1ST YEAR 2ND SEMESTER 2023/2024 ACADEMIC YEAR
CENTRE: MAIN CAMPUS**

COURSE CODE: TDC 2123

COURSE TITLE: CONSTRUCTION WORKS I

EXAM VENUE: STREAM: Dip CONSTRUCTION MGT

DATE: ../04/2024 EXAM SESSION:

DURATION: 2 HOURS

Instructions

- 1. Answer ALL questions in Section A (Compulsory) and ANY other three questions in Section B**
- 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**

SECTION A [40 MARKS]

Answer all the questions in this section

1. Use drawing to distinguish between tee precast floor and a convention cast –insulin for monolithic floor (4 marks)
2. When classifying roof according to their spans, we have flat roofs and pitched roofs. List any **FOUR** types of pitched roofs. (4 Marks)
3. Name **TWO** Materials that you would use as roof coverings. (2 Marks)
4. Floors are an important element of buildings, State the purposes of constructing suspended timber ground floor (3 Marks)
5. Draw the following to illustrate the bonding patterns used in walling
 - a. English bond
 - b. Flemish bond
 - c. Stretcher(6 Marks)
6. Before the foundation slab is constructed, backfilling may be done using hardcore.
 - i. Define hard core and state its functions (4Marks)
 - ii. Explain the importance of anti-termite treatment before casting concrete for foundation slab. (2 Marks)
7. List three functions of upper floor. (3 Marks)
8. Write brief notes on the following:
 - i. Partly wall
 - ii. Curtain wall
 - iii. Separating wall (6 Marks)
9. Foundation is the element of a structure which connects it to the ground transferring loads from the structure to the ground. Discuss **THREE** types of foundations. (6 Marks)

SECTION B (60 MARKS)

(Answer any **THREE** (3) questions in this section)

10. After the substructure works are completed, the superstructure works begin. Walls are a major component in superstructure works.

- i. Discuss two major classification of walls (6 marks)
- ii. Explain seven functions of walls. (12 Marks)
- iii. List any other **TWO** materials for constructing walls apart from clay. (2 Marks)

11. Staircases are used to access upper floors in buildings.

- i. Briefly discuss five safety requirements of a stair case (10 Marks)
- ii. Use sketches to illustrate these types of stair cases
 - a. Straight flight
 - b. Open well
 - c. Quarter turn
 - d. Dog leg (10 Marks)

12. For a roof to achieve its intended purpose it has to meet certain functional requirements.

- i. Discuss any five functional requirements of a roof. (10 Marks)
- ii. The roof is made up of different parts and structures. Draw and label the following parts of a roof.

Tie beam	Wall plate	Facia Boards
Rafter	Struts	
Purlins	King Post	
Ridge Piece	Roof coverings	(10 Marks)

13. A ceiling is an overhead interior surface that covers the upper limits of a room.

- i. Briefly explain five functional requirements of ceiling timbering. (10 Marks)
- ii. List six factors to be considered when selecting materials for ceiling finish. (6 Marks)
- iii. Discuss two factors that can affect the choice of ceiling construction. (4 Marks)