



JARAMOGI OGINGA ODINGA UNIVERSITY OF SCIENCE AND TECHNOLOGY

SCHOOL OF ENGINEERING AND TECHNOLOGY

UNIVERSITY EXAMINATION FOR THE DIPLOMA IN BUILDING AND CIVIL ENGINEERING

3RD YEAR 1ST SEMESTER 2022/2023 ACADEMIC YEAR

SPECIAL EXAMS

CENTRE: MAIN CAMPUS

COURSE CODE: TBC 2226

COURSE TITLE: BUILDING CONSTRUCTION TECHNOLOGY II

EXAM VENUE: STREAM: Dip. BUILD & CIV ENG

DURATION: 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 (30marks)

- a) With the aid of diagrams explain the following terminologies commonly used in construction technology **(10marks)**
 - i. Friction pile
 - ii. Stretcher bond walling
 - iii. Lean to roof
 - iv. Double hang sash windows
- b) State the primary function of walls **(6marks)**
- c) With the aid of a well labelled diagram briefly explain a stepped foundation **(4marks)**
- d) With the aid of a well labelled diagram explain the difference between fascia and soffit of a timber roof structure **(4marks)**
- e) With the aid of a well labeled diagram briefly explain a top hung vent, side hung casement and fixed sub light of a steel casement window **(6marks)**

QUESTION TWO **(15marks)**

- a) With the aid of well labeled diagrams distinguish strip foundation from pad foundation including situations where each is applicable **(8marks)**
- b) Briefly explain what underpinning entails and also under what circumstances it can be applied **(5marks)**
- c) Explain the primary function of foundations **(2marks)**

QUESTION THREE **(15marks)**

- a) Differentiate between English and Flemish bonds of masonry walling **(4marks)**.
- b) With the aid of a well labelled diagram explain what a cavity wall entails and what properties makes them suitable for construction in cold climates **(5marks)**
- c) With the aid of sketches explain different types of arched masonry construction **(6marks)**

QUESTION FOUR **(15marks)**

- a) List the various functions of a roof **(6marks)**
- b) Sketch a timber roof structure with galvanized iron sheets and show by labelling components such as rafters, collar, struts, hangers purlins, tie beam, fascia board, soffit and wall plate **(9marks)**

QUESTION FIVE **(15marks)**

- a) With the aid of well labelled diagrams differentiate a mortice lock from a rim lock? **(5marks)**
- b) State six factors you would consider when selecting door types for application **(6marks)**
- c) Under what situations can you apply double glazing **(3marks)**.