

**KIIRA COLLEGE BUTIKI**

*Uganda Advanced Certificate of Edu.*

**BUILDING AND CONSTRUCTION**

**THEORY**

**Paper 3**

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|-----|--------------------------------------------------------------|----------------------------------------------------------------------------------|----------|
| 1a) | i)                                                           | Define a foundation.                                                             | (1mark)  |
|     | ii)                                                          | Name and define three loads applied to a foundation.                             | (3marks) |
| b)  | i)                                                           | Distinguish between under pinning and foundation settlement.                     | (2marks) |
|     | ii)                                                          | Give three causes of foundation settlement.                                      | (3marks) |
| c)  | i)                                                           | Define setting out.                                                              | (1mark)  |
|     | ii)                                                          | Briefly describe the three method of setting out.                                | (6marks) |
| d)  | i)                                                           | Write short notice about two types of exaction.                                  | (4marks) |
|     | ii)                                                          | Illustrate how timbering is done in moderately firm soils.                       | (5marks) |
| 2a) | i)                                                           | Define the term bonding as used in brickwork.                                    | (1mark)  |
|     | ii)                                                          | Write down three rules of bonding.                                               | (3marks) |
| b)  | With the aid of sketches define the following bonding terms. |                                                                                  | (8marks) |
|     | i)                                                           | Racking back.                                                                    |          |
|     | ii)                                                          | Toothing                                                                         |          |
|     | iii)                                                         | Return angle wall.                                                               |          |
|     | iv)                                                          | Perpend.                                                                         |          |
| c)  | i)                                                           | Differentiate between a damp proof course (DPC) and a damp proof membrane (DPM). | (2marks) |
|     | ii)                                                          | Give three properties of D.P.Cs.                                                 | (3marks) |
| d)  | i)                                                           | Define curing concrete.                                                          | (2marks) |
|     | ii)                                                          | Write down two advantages and dis-advantages of pre-casting concrete.            | (4marks) |
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- e) State two requirements which a successful form work/shuttering should fulfill. (2marks)
- 3a) Define the following door terms. (4marks)
- i) Jamb
  - ii) Mullion
  - iii) Transom
  - iv) Threshold
- b) Illustrate the following hinges. (4marks)
- i) Tee hinge
  - ii) Butt hinge
- c) i) Give three factors which influence the choice of roof types. (6marks)
- ii) Illustrate the following trusses.
    - King post truss
    - Queen post truss
- d) i) State two characteristics of good timber. (2marks)
- ii) Write down three reasons why timber should be seasoned. (3marks)
  - iii) List down two methods of applying preservatives on timber. (2marks)
- e) Define seasoning. (1mark)
- 4a) i) State the three basic components of paint and one use of each. (6marks)
- ii) Briefly describe the following paint defects. (3marks)
    - i) Blooming
    - ii) Chalking
    - iii) Saponification
- b) i) How are scaffoldings classified. (2marks)
- ii) Give three advantages of wooden scaffolds. (3marks)
- c) i) Define shoring? (1marks)
- ii) Draw a neat sketch showing a dead shore. (5marks)
- d) i) Give three functions of shores? (3marks)
- ii) Define attic and stucco. (2marks)
- 5a) Write brief notes about the following stair terms: (8marks)
- i) Spandrel
  - ii) Carriage
  - iii) Winders
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- iv) Headroom
- b) Draw a neat sketch of a stair and show the following. (6marks)
- i) Going
  - ii) Rise
  - iv) Tread
  - v) Pitch line.
- c) i) Define a floor? (2marks)
- ii) List down three functions of a ground floor. (3marks)
- d) i) Distinguish between pointing and jointing. (2marks)
- ii) Illustrate the following sections of bricks. (4marks)
- Bevelled closer
  - Mitred bat.
- 6a) i) Define trimming: (2marks)
- ii) Name and define three trimming members. (3marks)
- b) Write brief notes about the following fire place terms. (8marks)
- i) Hearth
  - ii) Pargeting
  - iii) Condensate
  - v) Flauching
- c) Define and draw neat sketches to differentiate between: (8marks)
- i) Single Flemish bond and double Flemish bond.
  - ii) Brick on edge and brick on end.
- d) Define the following arch terminologies. (4marks)
- i) Face joints
  - ii) Key brick
  - iii) Haunch
  - iv) Label course.
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