

INSTRUCTIONS.

Answer **question one** and any other **Two** from the subsequent questions.

DCE 062 Building Technology 1

SECTION A

1. a) Briefly state each Five (5) roles of an architect and a civil engineer as professionals on a building project. (5marks)
- b) With the aid of a neat sketch draw a well labeled diagram showing the sub-structure and superstructure of a building from foundation to roof. (10marks)
- c) Define foundation as used in building construction. (2marks)
- d) With the aid of neat sketches write short notes on the following types of foundations
 - i) Raft foundation
 - ii) Strip foundation
 - iii) Pad foundation (6marks)
- e) List three essential requirements of a good foundation. (3marks)
- f) Where are pile foundations used and explain three (3) types of pile foundations. (4marks)

SECTION B

2. (a) Differentiate between load bearing walls and non- load bearing walls as used in building construction. (4marks)
- (b) State five (5) functions of internal walls. (5marks)
- (c) Distinguish between jointing and pointing as used on wall finishes. (2marks)
- (d) Define arches and state the way they are classified on openings. (4marks)
- (e) State five (5) functional requirements which a floor constructed must satisfy in a building. (5marks)
3. (a) What are the requisite requirements of a well-planned roof and list five (5) Roofing materials used in building industry. (5marks)
- (b) With the aid of sketches explain these various types of roofs.
 - i) Double or purlin roof.
 - ii) Lean to roof.
 - iii) Couple close roof
 - iv) Triple membered or framed or trussed roof (8marks)
- (c) How do we classify roofs and what determines the slope of the roof. (3marks)
- (d) List eight (8) factors which are considered in the selection of roofing materials. (4marks)
4. (a) State five (5) Kenya building code requirements with respect to domestic water Supply. (5marks)

- (b) Draw and explain a complete installation of cold water mains and down service to a double storey domestic house. (8marks)
- (c) Define a water meter and list six (6) characteristics a water meter should possess (7marks)
5. (a) what are cells and explain primary cells and secondary cells giving an example of each. (3marks)
- (b) Briefly explain the four (4) sources of electricity stating their advantages over the other.
- i) hydroelectric power
 - ii) solar energy
 - iii) nuclear energy
 - iv) wind power (8marks)
- (c) Define the term storm water and state four management practices which must be adhered to in its management. (5marks)
- (d) What do you understand by sewerage system and state three (3) types of sewerage System. (4marks)