

FACILITATION EXAMINATIONS 2017
Uganda Advanced Certificate of Education
Building Construction Theory
Paper 3
2 Hours

INSTRUCTIONS TO CANDIDATES

Attempt any four questions

Use neat illustrations to amplify your answers where necessary

All questions carry equal marks

1. (a) Explain how the following building materials can be stored on a building site. *(08 marks)*
- (i) Cement
 - (ii) Timber
 - (iii) Paint
 - (iv) Bricks
- (b) Briefly explain the two types of excavation in building. *(04 marks)*
- (c) Differentiate between the following terms as used in building preliminary works. *(06 marks)*
- (i) Boning rod and profile board
 - (ii) Peg and large builders square
 - (iii) Bottoming and datum level
- (d) (i) Give two reasons why a building site should be fenced. *(02 marks)*
- (ii) State any three factors that determine the choice of fence to use on a building site. *(03 marks)*
- (e) State any two materials used for scaffolding. *(02 marks)*

2. (a) A floor needs to satisfy a number of functional requirements. Outline any five of these requirements. *(05 marks)*
- (b) State any three advantages and disadvantages of a suspended timber ground floor. *(06 marks)*
- (c) Using a neat labeled sketch, explain a double upper floor. *(04 marks)*
- (d) Using sketches, show the three ways of strutting timber joists. *(06 marks)*
- (e) With the aid of a sketch, show the joint that is used to join the following timber floor members.
- (i) Trimmer and trimmed joist
- (ii) Joist and binder *(04 marks)*
3. (a) (i) What is bonding? *(01 mark)*
- (ii) Using sketches, explain the principle of bonding. *(04 marks)*
- (b) Use only one sketch to show the following terms. *(10 marks)*
- (i) Cross joint
- (ii) Bed joint
- (iii) Perpend
- (iv) Wall joint
- (v) Racking back
- (c) (i) What is batching of concrete? *(01 mark)*
- (ii) Explain the two types of batching of concrete. *(04 marks)*
- (d) (i) State any three means used to transport concrete from the mixer to the point of deposition. *(03 marks)*
- (ii) What are the two considerations to note when transporting concrete from the mixer to the point of deposition? *(02 marks)*
4. (a) State seven functions of a roof to a building. *(07 marks)*
- (b) (i) What is a flat roof? *(01 marks)*

- (ii) State two advantages and disadvantages of flat roofs. (04 marks) (c)
Draw a neat annotated cross sectional sketch of a timber flat roof. (07 marks)
- (d) Outline six basic requirements of roof covering materials. (06 marks)
5. (a) What is a door?
- (b) Using sketches only, describe the following types of doors. (06 marks)
- (i) Paneled door
- (ii) Flush door
- (iii) Match boarded door
- (c) The core used in a particular flush door differentiates flush doors. Use sketches to show the three cores used in flush doors. (09 marks)
- (d) Using sketches, explain the following types of hinges used to attach doors.
- (i) Parliament hinge (09 marks)
- (ii) Rising butt hinge
- (iii) Band and hook hinge
6. (a) State eight factors that determine the type of finish to be applied to a floor. (08 marks)
- (b) With relevant examples. Write short notes on the following types of floor finishes. (06 marks)
- (i) In – situ floor finishes
- (ii) Applied floor finishes
- (iii) Timber floor finishes
- (c) Differentiate between the following terms as used in wall finishes. (06 marks)
- (i) Lime plaster and cement plaster.
- (ii) Tyrolean finish and dry lining.
- (iii) Priming and undercoating paints.
- (d) What is the cause of the following paint defects? (05 marks)

- (i) Adhesion failure
- (ii) Cracking
- (iii) Chalking
- (iv) Blistering
- (v) Loss of gloss

END