

DEPARTMENT OF TECHNICAL DRAWING

MOCK 1 EXAMINATIONS, 2019

UGANDA ADVANCED CERTIFICATE OF EDUCATION

TECHNICAL DRAWING PAPER 3

TIME: 2 HOURS

Instructions:

- This paper consists of six questions.

Answer any **four** questions.

- All questions carry equal marks.

1. (a) Give two main functions of each of the following types of walls.

(i) Load bearing wall	(02mks)
(ii) Non – load bearing wall.	(02mks)

- (b) Mention the materials and mixes one would use to make concrete blocks.(02mks)

- (c) (i) Describe what is meant by the term bonding. (02mks)
(ii) Using sketches, explain the following bonds and state where each is suitably used:

- Stretcher bond	(02mks)
- English bond	(02mks)
- Flemish bond	(02mks)

(iii) What is the purpose of a closer in bonding a brick wall?
Use a sketch to illustrate your answer. (03mks)

- (d) State two uses of a cavity wall over a solid wall. (02mks)

- (e) Draw a sketch to show how:

(i) d.p.c is incorporated in a plinth wall of a cavity wall.	(03mks)
(ii) a door opening in a cavity wall is bridged.	(03mks)

2. (a) (i) State five performance standards of a door. (05mks)
(ii) Draw a well labelled structure of a ledged and braced door. (08mks)

- (b) Draw exploded pictorial sketches of a framed door showing:
- (i) the joint between lock rail and stile. (03mks)
 - (ii) Stile and top rail. (03mks)
3. (a) Illustrate clearly the following foundations and state where each type is suitably used:
- (i) Concrete strip foundation (03mks)
 - (ii) Raft foundation (03mks)
 - (iii) Piled foundation (03mks)
 - (iv) Stepped strip foundation (03mks)
- (b) (i) With aid of sketches, describe how boning rods are to establish the correct levels of foundations. (03mks)
- (ii) Why should the top soil be removed from a building before digging the foundation? (03mks)
- (c) Identify a mechanical equipment used to each of the following:
- (i) clearing site (01mk)
 - (ii) digging narrow trenches for foundation (01mk)
 - (iii) Removing soil from an excavation and depositing it nearby. (02mks)
- (d) Explain the meaning of the following terms in connection to concrete foundation:
- (i) graded aggregate (01mk)
 - (ii) bulking of sand (01mk)
 - (iii) slump (01mk)
4. (a) (i) Describe the term scaffolding. (01mk)
- (ii) Draw a putlog scaffold indicating the important parts. (07mks)
- (b) Outline four functional requirements of a formwork. (04mks)
- (c) Draw a labeled sketch of a formwork for casting a lintel over a door opening.

(07mks)

5. (a) Sketch and describe the following parts of a fire – place. (10mks)
- (i) chimney
 - (ii) breast
 - (iii) hearth
 - (iv) flue
 - (v) Rendering
- (b) With aid of sketch, name the appropriate lengthening joints for the following roof members.
- (i) Wall plate (03mks)
 - (ii) Purlins (03mks)
 - (iii) Tie beam (03mks)
- (c) (i) Why it is necessary to preserve roof timber members? (02mks)
- (ii) Explain any four methods of applying preservatives. (04mks)
6. (a) Explain any five functional requirements of a floor. (05mks)
- (b) (i) Outline the procedure of constructing timber strip finish on a sub – floor. (04mks)
- (ii) Draw a vertical section through a suspended ground floor and label all members that constitute it. (07mks)
- (c) (i) Distinguish between monolithic topping and granolithic topping constructions. (04mks)
- (ii) Give two reasons for using a d.p.c on a building. (02mks)
- (iii) Mention any three types of d.p.c's. (03mks)

END