DEPARTMENT OF TECHNICAL DRAWING

MOCK 1 EXAMINATIONS, JUNE 2016

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:

1. Concrete strip foundation (03mks)
2. Raft foundation (03mks)
3. Piled foundation (03mks)
4. 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 nearly. (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.

(i) chimney

(ii) breast

(iii) hearth

(iv) flue

1. Rendering (10mks)

(b) With aid of sketch, name the appropriate lengthening joints for the following

roof members.

1. Wall plate (03mks)
2. Purlins (03mks)
3. 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)

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