**P720/3**

**BUILDING DRAWING THEORY**

**Paper 3**

**Jul/Aug 2016**

**2 Hours**

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**MUKONO EXAMINATIONS COUNCIL**

**Uganda Advanced Certificate of Education**

**BUILDING DRAWING THEORY**

Paper 3

**2 Hours**

**INSTRUCTIONS TO CANDIDATES**

* *The question paper consists of* ***six*** *questions.*
* *Attempt any* ***four*** *questions.*
* *All questions carry equal marks.*
* *Use of sketches will earn you more marks.*

1. a) (i) Why is it necessary to clear a site prior to setting out? ***(01mark)***

(ii) Describe three factors that determine the method of demolition to be used in a

Building? ***(03marks)***

(iii) State three factors that determine the type of storage facilities required for any

particular material on the building site. ***(03marks)***

b) Give a brief description of the following as related to the site.

1. Fence
2. Boning rod
3. Base line
4. Datum level ***(04marks)***

c) (i) Outline the three types of shoring as applied in the building construction.

***(03marks)***

(ii) Sketch a put log scaffold and name any five parts. ***(05marks)***

d) (i) Differentiate between basement and trench excavation. ***(02marks)***

(ii)Sketch a form work for casting concrete strip foundation with battered sides.

***(04marks)***

1. a) State the difference between a partition wall and cavity wall. ***(02marks)***

b) State any two functions of;

* 1. windows
  2. doors
  3. lintels
  4. sill ***(08marks)***

c) Explain the term bond and describe by use of sketches the following

(i) English bond

(ii) Stretcher bond

(iii) Header bond ***(10marks)***

d) Using sketches only show the following types of bricks used in construction.

(i) mitred bat

(ii) beveled closer

(iii) king closer ***(03marks)***

e) State any two causes of dampness in walls. ***(02marks)***

1. a) (i) what is a sash as applied to a door construction. ***(01mark)***

(ii) Describe any three functional requirements of a door. ***(03marks)***

(iii) State any four principles to be observed when designing a wooden door.

***(04marks)***

(iv) Differentiate between glassed and fire check doors by use of sketches.

***(06marks)***

b) (i) draw an isometric view of a door lining with a planted rebate and an architrave

***(04marks)***

(ii) State any two methods of securing a door frame in an opening. ***(02marks)***

c) (i) Draw the back elevation of a framed, braced, ledged and battened door and show

the hanging side ***(03marks)***

(ii) Sketch the exploded view of a double mortice and tenon joint as used in door

construction. ***(02marks)***

1. a) (i) State the most effective method of timber preservation. ***(01mark)***

(ii) State any two reasons as to why it is necessary to preserve timber before use.

***(02marks)***

(iii) List any four characteristics of good timber. ***(02marks)***

b) State any four reasons as to why it necessary to season timber before use. ***(04marks)***

c) What is the difference between natural and artificial timber defects? ***(02marks)***

d) (i) State the two ingredients of paint. ***(02marks)***

(ii) Mention any four qualities of a good timber preservative. ***(04marks)***

e) Distinguish between:

(i) battened door and paneled door

(ii) door lining and door frame

(iii) an architrave and door stop ***(06marks)***

1. a) (i) Differentiate by use of sketches between an open riser and cut string timber stairs.

***(08marks)***

(ii) Outline two materials used in stair construction. ***(02marks)***

(iii) State any three functional requirements of a stair case. ***(03marks)***

(iv) Mention any two functions of the stairs to a building. ***(04marks)***

b) What do you understand by the following terms

(i) Nowel post

(ii) Ramp

(iii) Winders

(iv) Threshold ***(04marks)***

c) Describe the following types of stairs by sketches

(i) half turn

(ii) Three quarter turn

(iii) Bi-fur cated ***(06marks)***

1. a) What is a roof? ***(01mark)***

b) Describe each of the following roof structures;

(i) flat roof

(ii) hipped roof

(iii) gabled roof ***(03marks)***

c) Explain the following terms as used in roof construction.

(i) Eave

(ii) Pascia board

(iii) Barge board ***(03marks)***

d) Draw a portion of a roof structure covered with tiles and show the following

(i) Lap

(ii) Gauge

(iii) Margin

(iv) batten

(v) Rafter

(vi) Ridge piece ***(12marks)***

e) Mention any three advantages and disadvantages of galvanized corrugated iron sheet

used as a roofing material. ***(06marks)***

***End -***