

SIR ARTHUR LEWIS COMMUNITY COLLEGE

Division of Technical Education and Management Studies

End of Course Exam

Examination Session : **May 2014**

Tutor(s) : **Philip J Larodé, Gina Sifflet**

Programme Title : **Architectural Technology I
Construction Engineering I
Quantity Surveying I**

Programme Codes : **3BD-ART-AD
3BD-CON-AD
3BD-QUS-AD**

Course Title : **Building Technology II**

Course Code : **BLT106**

Exam Date : **6th May**

Commencement Time : **9:00am**

Duration : **3 hours**

Invigilators : **Scotland Yarde & R. JnBaptiste
T. Warner & K. Harris**

Room : **TRA-R1 & TRA-R2**



#B29

**YOU SHOULD HAVE THE FOLLOWING FOR THIS EXAMINATION****Pen, Pencil, Eraser****INSTRUCTIONS**

- 1) Answer any four (4) questions.
- 2) Start each new question on a new page.
- 3) Borrowing and lending of equipment is not allowed.
- 4) Do not detach sheets from the answer booklet.
- 5) Write only your ID number on your answer sheet.

QUESTION # 1

- a) Sketch and annotate a vertical section through a timber floor at its junction with a timber external wall. The floor is of local construction with an 8" reinforced concrete block pier foundation system; in your sketch include a termite barrier. *(11 marks)*
- b) Using a sketch to illustrate, describe flat slab floors. *(6 marks)*
- c) Raised access floors are categorised as either partial access floors or full access floors. Using sketches to illustrate describe these two types of floor and explain why they are used. *(8 marks)*

QUESTION # 2

- a) In wall construction what is a bond? Sketch and identify two types of bond. *(6 marks)*
- b) Sketch and annotate a vertical section through a thermally insulated timber frame wall at its junction with a one brick thick foundation wall. *(9 marks)*
- c) Using annotated sketches to illustrate, explain two methods of construction used to prevent water/moisture travelling through solid masonry walls to their internal surfaces. *(10 marks)*

QUESTION # 3

- a) Explain the following stair terms:
 i) Going, ii) Flight, iii) String, iv) Waist, v) Balustrade. *(5 marks)*
- b) Sketch and annotate the plan view of the following types of stair:
 i) Quarter turn with tapered steps, ii) Dog-legged, iii) Open newel with half spaced landing. *(9 marks)*
- c) A reinforced concrete string and trimmer stair consists of two landings separated by eight treads; the staircase is enclosed by 150mm concrete block walls. Sketch and annotate a vertical section through the staircase. *(11 marks)*

QUESTION # 4

- a) Using annotated single line diagrams sketch the following:
 i) Lean-to roof structure, ii) Couple roof structure, iii) Mansard roof structure. *(6 marks)*
- b) Using annotated sketches to illustrate describe the following:
 i) Fascia board, ii) Ventilated eaves, iii) Stepped lead flashing, iv) Jack rafter, v) Birdsmouth joint. *(10 marks)*
- c) Sketch and annotate a vertical section through the eaves of a gable roof given the following:
 External wall – 250mm insulated cavity; Roof covering – Plain tiles; Eaves – Closed. *(9 marks)*

QUESTION # 5

- a) Sketch the front view of a timber door and identify the following:
i) Stile, ii) Bottom rail, iii) Glazing bars. (7 marks)
- b) Sketch and annotate the following:
i) Framed, ledged and braced door, ii) Three panelled door, iii) Door lining,
iv) Recessed door jamb. (8 marks)
- c) Using annotated sketches to illustrate, describe the following:
i) Casement window, ii) Sash window, iii) Pivot window, iv) Bay window,
v) Dormer window. (10 marks)

QUESTION # 6

- a) Using an annotated sketch to illustrate, describe 'Facings' in terms of materials background and fixing. Also identify two materials used. (9 marks)
- b) Sketch and annotate a vertical section through precast reinforced concrete cladding at floor slab level. (10 marks)
- c) Explain/describe the following when used in 'Facings, Claddings and Infill Panels':
i) Weather Boarding, ii) Mastic, iii) Transom. (6 marks)

END OF PAPER