SIR ARTHUR LEWIS COMMUNITY COLLEGE

FACULTY OF ENGINEERING

ACADEMIC YEAR (2024/2025) – SEMESTER TWO

END OF SEMESTER EXAMINATION

LECTURER(S)	**:**	**O'Brien Richards, Stephen Auguste**
PROGRAMME TITLE	**:**	**Architectural Technology, Construction Engineering & Quantity Surveying.**
COURSE TITLE	**:**	**Building Technology II**
COURSE CODE	**:**	**BLT121**
LEVEL	**:**	**Associate Degree / Year One & Two**
PAPER	**:**	**One**
DATE	**:**	**Friday 9th May, 2025**
COMMENCEMENT TIME	**:**	**1:00 p.m.**
DURATION	**:**	**Two (2) hours**
INVIGILATOR(S)	**:**	**D. P-Alfred (Chief), E. Thomas, S. Roman, M. St. Clair K. Samuel**
ROOM(S)	**:**	**LFT-1R-05**

GENERAL INFORMATION AND INSTRUCTIONS

- This paper consists of One (1) Section. All questions must be attempted on the foolscap provided.
- **Section A** contains Six (6) Long Questions. You are required to answer **ANY FOUR (4)** questions. Marks are awarded accordingly.
- Students must sign **IN** and **OUT** on the examination class list.
- Students must **not** write their names on their answer sheets, only their ID number.
- Students are reminded to read **all** questions and instructions in each section very carefully.
- Please number your responses accordingly.

DO NOT TURN THIS COVER SHEET UNTIL

YOU ARE TOLD TO DO SO!!!

SECTION A: Long Answer Questions

Answer any FOUR (4) questions. (Marks are awarded accordingly)

Question 1

A) State Five (5) functional requirements of a roof? [5 marks]

B) With the aid of well-annotated sketches, identify four (4) roof forms/types, [8 marks]

C) Draw a sketch each of '**closed-eaves**' & '**Sprocket Eaves'** detail for a roof and name the parts. Identify the roof drainage elements attached to the eaves. [8 marks]

D) What are the reasons and functional requirements for roof drainage? [4 marks]

Question 2

A) Differentiate between a reinforced concrete retaining wall and a gravity retaining wall. [5 marks]

B) You are required to design a gravity retaining structure on the side of a roadway where there are underground water sources constantly flowing. With the aid of well-annotated sketches, identify your design option for that device and why you chose that option. [12 marks]

C) List four (4) functional requirements of a 'retaining structure'. [8 marks]

Question 3

A) What do you understand by the term '**Hoardings**'. [4 marks]

B) You are required to erect 'hoarding' for a construction site along with overhead protection for pedestrians. With the aid of well-annotated sketches, identify your design options for your recommendation and identify the constituent parts, and why you chose those options. [10 marks]

C) List four (4) functional requirements of a Hoarding. [6 marks]

D) What are the safety precautions associated with the erection and maintenance of hoarding. [5 marks]

Question 4

A) What do you understand by the term '**Scaffolding.**' [4 marks]

B) You are required to erect 'Scaffolding' for a construction site along with safety measures for the protection of workers. With the aid of well-annotated sketches, identify your design options for your recommendation of putlog scaffolding, and identify the constituent parts, and why you chose those options. [10 marks]

C) List four (4) functional requirements of Scaffolding. [6 marks]

D) What are the safety precautions associated with the erection and maintenance of Scaffolding. [5 marks]

Question 5

A) What do you understand by the term '**Formwork**' [4 marks]

B) You are required to erect 'Formwork' for a reinforced concrete suspended beam and slab at the outside of the structure. With the aid of well-annotated sketches, show a detail of that formwork and identify the constituent parts, and why you chose that formwork option. [10 marks]

C) Produce well-annotated sketches to recommend formwork for a reinforced concrete column. Show suitable bracing. [10 marks]

Question 6

A) Name the three (3) types of shoring [6 marks]

B) You are required to erect 'Shoring' for construction works to be carried out between two (2) existing buildings in the city of Castries. With the aid of well-annotated sketches, show details of that shoring and identify the constituent parts, and why you chose that shoring option. [8 marks]

C) Produce details of your shoring at the point where they touch the buildings and at bracing points. [8 marks]

D) Name Three (3) health and safety considerations for your shoring. [3 marks]

END OF EXAMINATION!!!