Universiti Tun Hussein Onn Malaysia

UNIVERSITI TUN HUSSEIN ONN MALAYSIA

FINAL EXAMINATION
(ONLINE)
SEMESTER II
SESSION 2019/2020

COURSE NAME	:	CONSTRUCTION ENGINEERING
COURSE CODE	:	BFR21503
PROGRAMME CODE	:	BFR
EXAMINATION DATE	:	JULY 2020
DURATION	:	6 HOURS
INSTRUCTION	:	ANSWER **ALL** QUESTIONS

THIS QUESTION PAPER CONSISTS OF **FOUR (4)** PAGES

Q1 (a) The purpose of Site Analysis is to determine the site's suitability for building, the environmental and the extent of preliminary work that will be needed. As an architect, explain the importance of gathering information from site investigation before the construction process begins.

(12 marks)

(b) As a project architect, you are required to monitor the construction flow of your project. Briefly explain the construction flow of a building project.

(13 marks)

Q2 (a) List **THREE (3)** factors that must be considered in selecting the type of foundation.

(9 marks)

(b) Explain the construction process of pad footing using suitable sketches of cross section and plan view.

(9 marks)

(c) Loads are distributed in many ways in building structure, based on your knowledge answer the following:

(i) Define the flow of the load distribution in a building and how the load is distributed.

(3 marks)

(ii) Sketch the load distribution in a double storey building.

(4 marks)

Q3 (a) Discuss **THREE (3)** differences between timber and steel formwork.

(6 marks)

(b) With the aid of sketches, explain a typical formwork beam at first floor of a building.

(7marks)

(c) As an architect for a project which is to be built on slope, explain the factors that you have to consider when proposing the level of the spaces in your design.

(12 marks)

Q4 (a) Scaffolding is an integral part of any construction project. Discuss **FIVE (5)** advantages of scaffolding system as valuable and life-saving structure for workers regardless of the size of the construction

(10 marks)

(b) **Figure Q4 (b)** shows a rectangular plot, which is to be excavated to the given reduced level. By assuming the area is subdivided into square method, calculate the volume of earth to be excavated (excavated level = 10.00m)

(15 marks)

END OF QUESTIONS

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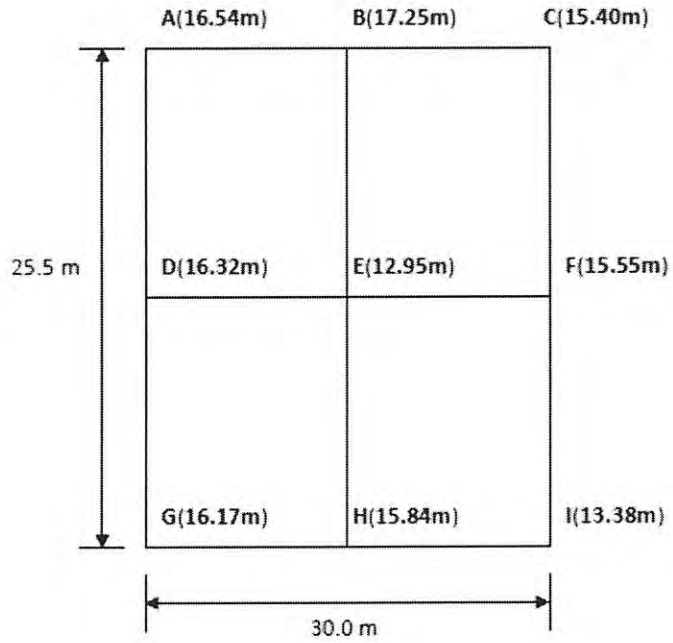

FIGURE Q4 (b)