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UNIVERSITI TUN HUSSEIN ONN MALAYSIA

**FINAL EXAMINATION
SEMESTER II
SESSION 2021/2022**

- COURSE NAME : CONSTRUCTION TECHNOLOGY I
- COURSE CODE : BPD 13103
- PROGRAMME CODE : BPC
- EXAMINATION DATE : JULY 2022
- DURATION : 3 HOURS
- INSTRUCTIONS :
1. ANSWER ALL QUESTIONS
 2. THIS FINAL EXAMINATION IS CONDUCTED VIA **CLOSED BOOK**.
 3. STUDENTS ARE **PROHIBITED** TO CONSULT THEIR OWN MATERIAL OR ANY EXTERNAL RESOURCES DURING THE EXAMINATION CONDUCTED VIA CLOSED BOOK.

THIS QUESTION PAPER CONSISTS OF **THREE (3)** PAGES

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TERBUKA

Q1 Mr MYY, a client, intends to construct a new multi-story condominium in Parit Raja. The client has asked your firm to investigate the soil's physical properties for the project. The physical properties of the soil are critical in choosing the type of foundation that is appropriate for the planned structure. **Figure Q1** depicts the information on soil conditions for this project.

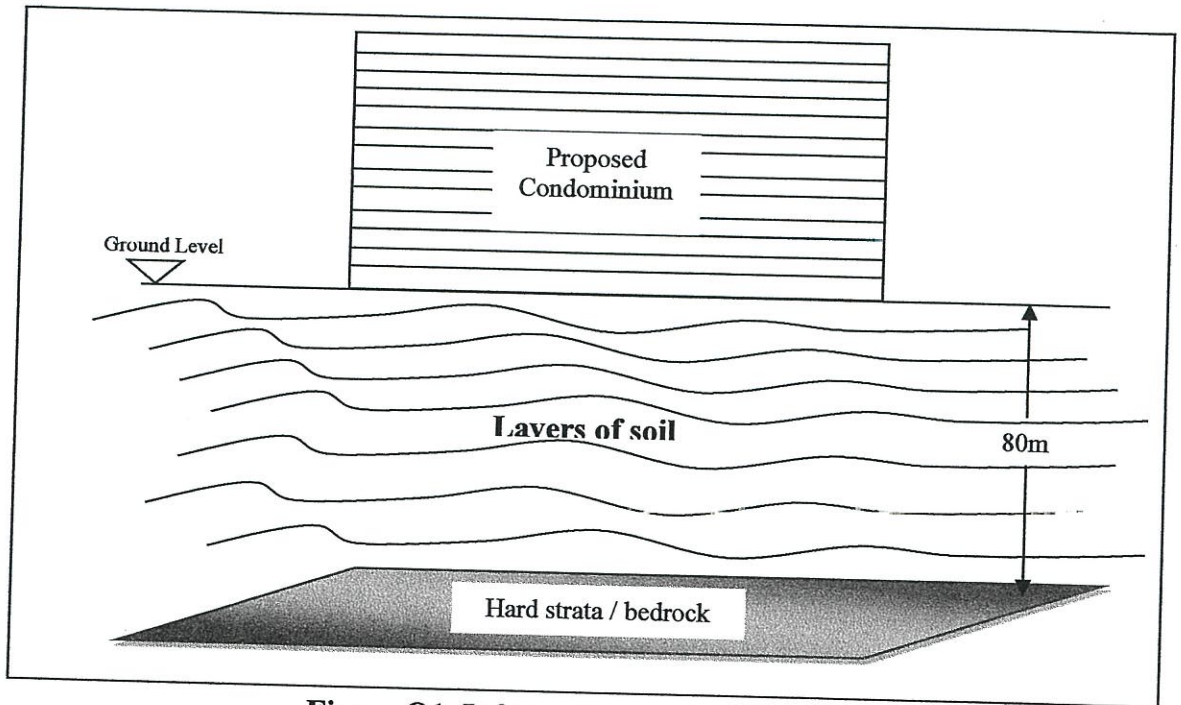


Figure Q1: Information on Soil Condition

- (a) Explain **FOUR (4)** advantages of a deep foundation. (8 marks)
- (b) Differentiate with the aid of sketches, **THREE (3)** differences between friction pile and end-bearing pile. (9 marks)
- (c) Propose the most appropriate type of foundation for the condominium based on **Figure Q1**. (10 marks)

- Q2**
- (a) Describe **TWO (2)** importances of a drainage system in a construction project site. (4 marks)
 - (b) Explain **FIVE (5)** selection factors in choosing a door for a building. (10 marks)
 - (c) Explain with the aid of sketches, the functions of door and window. (10 marks)

- Q3** (a) List **FIVE (5)** types of brickwork bonding. (5 marks)
- (b) Differentiate between a solid and a suspension floor. (10 marks)
- (c) Outline the features that influenced the construction of the building floor. (12 marks)

Q4 In the construction industry, the term 'frame' typically refers to a rigid structure that supports a building. Beams and columns are the primary structural elements that makeup building frames, and these elements are typically joined to one another in buildings by means of either pins or fixed connections.

- (a) Explain:
- (i) Column
 - (ii) Beam
- (6 marks)
- (b) Illustrate the complete construction processes of a concrete building frame for a 30 storey building. (16 marks)

-END OF QUESTIONS-