



UTHM
Universiti Tun Hussein Onn Malaysia

UNIVERSITI TUN HUSSEIN ONN MALAYSIA

**FINAL EXAMINATION
SEMESTER I
SESSION 2018/2019**

COURSE NAME : CONSTRUCTION TECHNOLOGY I
COURSE CODE : BPD 13103
PROGRAMME CODE : BPC
EXAMINATION DATE : DECEMBER 2018 / JANUARY 2019
DURATION : 3 HOURS
INSTRUCTION : ANSWER ALL QUESTIONS

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

Q1 A client, Mr MYY plans to build a new multi-storey condominium at Parit Raja. The client has appointed your company to investigate the physical properties of the soil for the project. The physical properties of the soil are vital in determining a suitable type of foundation for the proposed building. The information of soil condition for this project is illustrated in **Figure Q1**.

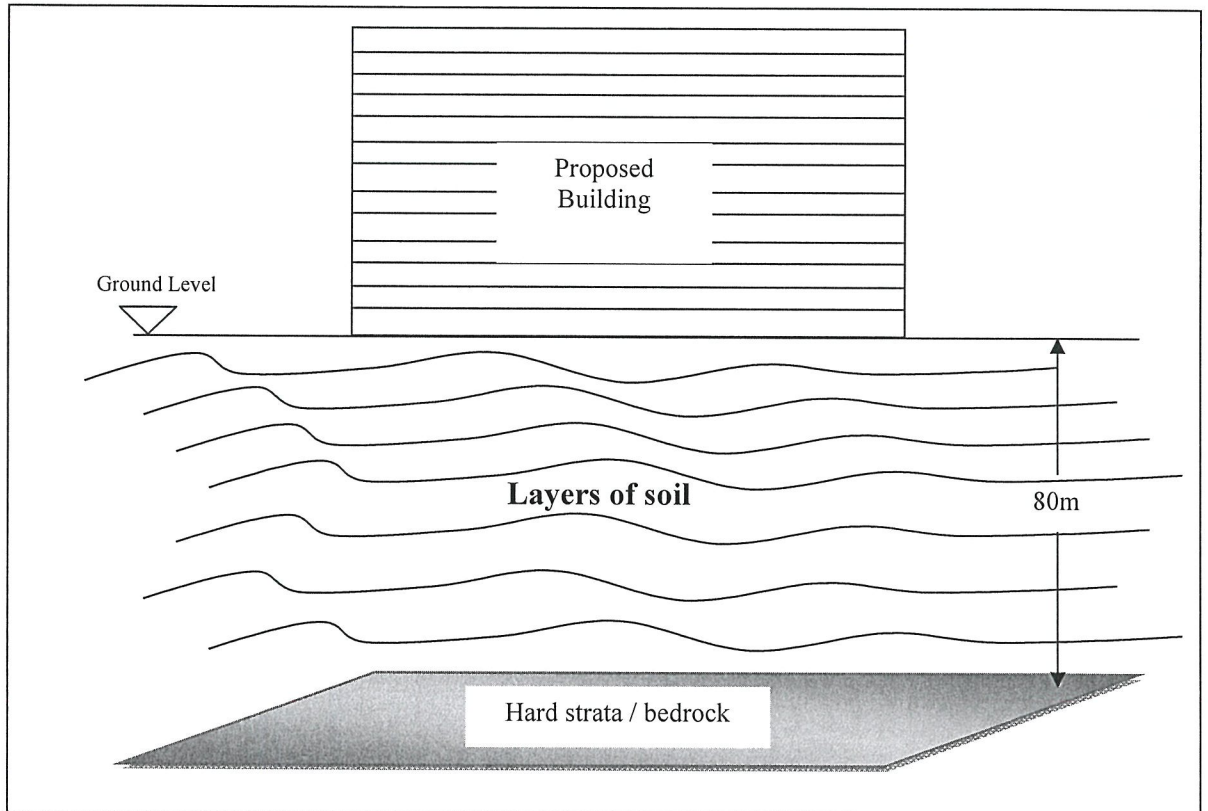


Figure Q1: The Information of Soil Condition

- (a) List **FOUR (4)** types of soil investigation methods. (4 marks)
- (b) Justify the appropriate soil investigation method for the project. (5 marks)
- (c) Outline with the aid of sketches, the complete construction process of the suitable foundation for the proposed building. (16 marks)

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- Q2**
- (a) Explain the importance of a concrete to the Malaysian construction industry.
(5 marks)
 - (b) Differentiate with the aid of sketches, the differences between friction pile and end bearing pile.
(6 marks)
 - (c) Outline with the aid of sketches, the complete construction process of a concrete building frame for a 30-storey building.
(14 marks)
- Q3**
- (a) Describe **THREE (3)** construction features for a floor slab.
(6 marks)
 - (b) Sketch a typical cross section for a solid concrete floor slab.
(9 marks)
 - (c) Illustrate the complete installation process of a 700mm x 2100mm flush door at 4000mm x 5000mm brick wall.
(10 marks)
- Q4**
- Finishes are used in the final part of a construction process, forming the final surface of building elements. The main purposes of the finishes are to protect the building elements and to enhance aesthetic value to the building. The types and materials of the finishes are depending on the function and cost allocation of the building.
- (a) List **FIVE (5)** types of wall finishes.
(5 marks)
 - (b) Explain the complete painting process on an external brick wall of a double storey bungalow.
(10 marks)
 - (c) Outline with the aid of sketches, the complete installation process of a 100mm x 200mm floor tile for a 4000mm x 5000mm floor area.
(10 marks)

-END OF QUESTIONS-

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