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UNIVERSITI TUN HUSSEIN ONN MALAYSIA

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

COURSE NAME : CONSTRUCTION ENGINEERING
COURSE CODE : BFR21503
PROGRAMME CODE : BFR
EXAMINATION DATE : JUNE/JULY 2019
DURATION : 3 HOURS
INSTRUCTION : ANSWER ALL QUESTIONS

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

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- Q1** (a) Substructure is an important set of building structure. Identify **FIVE (5)** components of a substructure. (5 marks)
- (b) Shallow foundations are used for building construction on hard soil. Explain with sketches the **THREE (3)** shallow foundations commonly used in construction. (9 marks)
- (c) As an architect for a project to be built on slope, determine on the factors that you should consider when proposing the level of the spaces for your design. (11 marks)
- Q2** (a) Explain method of construction for column. Provide sketches to support your answers. (9 marks)
- (b) Differentiate the advantages and disadvantages between timber formwork and steel formwork. (6 marks)
- (c) Describe in sequence the construction process of a two-storey house according to your understanding based on **FIGURE Q2**. (10 marks)
- Q3** (a) Apart from giving impact to the design, groove lines on wall also have a purpose to reduce defects on construction work. Explain the function of groove lines on wall construction aspect. (6 marks)
- (b) Explain the meaning of isolation joint for concrete slab and provide sketches to support your explanation. (9 marks)
- (c) One of the common defects for building on soft soil is the cracking of the building apron. Based on your understanding, sketch and explain on how a building apron should be done to avoid the crack. (10 marks)

- Q4** (a) Briefly discuss the element of fabricated frame scaffolds and provide sketches to support your answers. (5 marks)
- (b) The ultimate goal for the construction industry is to reduce workplace accidents, injuries, and deaths to zero. Therefore controlling and monitoring procedures are very crucial in all construction process;
- (i) State your opinion on the reasons why construction projects need to be planned and scheduled effectively. (5 marks)
- (ii) Propose and explain **FIVE (5)** best practices that can be incorporated in the operation, monitoring and control of construction site. (15 marks)

– END OF QUESTIONS –

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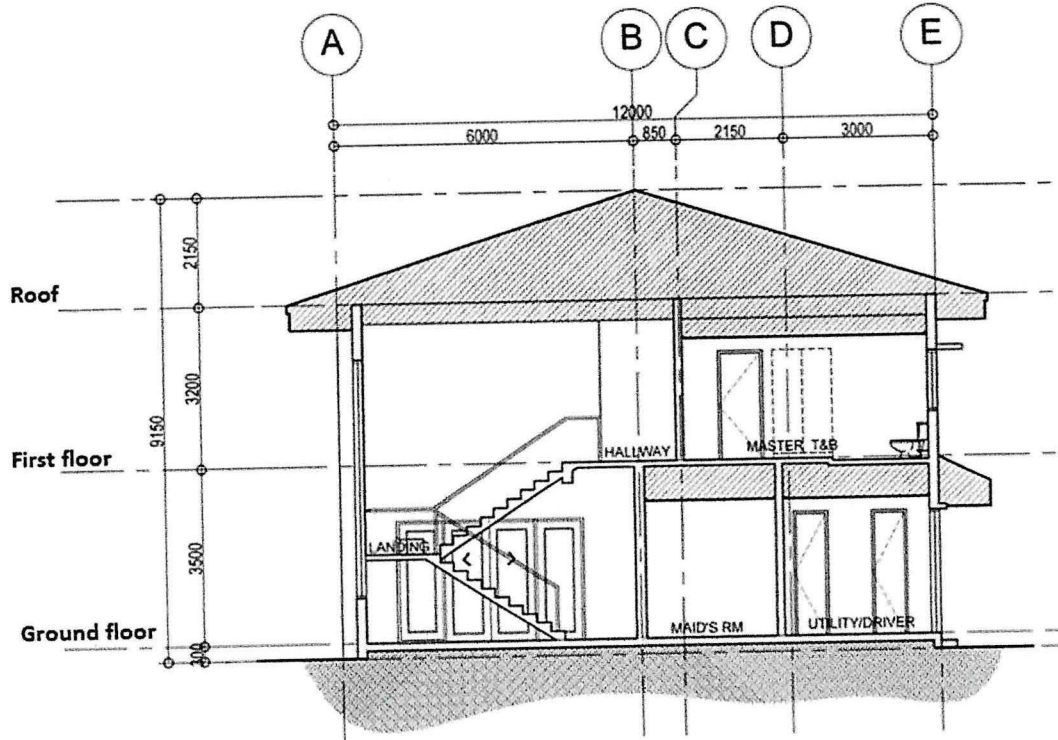


FIGURE Q2

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