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UNIVERSITI TUN HUSSEIN ONN MALAYSIA

**FINAL EXAMINATION
SEMESTER II
SESSION 2015/2016**

COURSE NAME : BUILDING TECHNOLOGY
COURSE CODE : BPE 10102
PROGRAMME CODE : BPD
EXAMINATION DATE : JUNE/JULY 2016
DURATION : 2 HOURS
INSTRUCTION : ANSWER ALL QUESTIONS

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

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Q1 Appropriate construction of foundation will determine the stability of a building. Selection of different types of foundation for different types of soil is necessary in ensuring the building can accommodate an imposed load and dead load.

Discuss the followings:

- (a) Pad foundation (8 marks)
- (b) Strip foundation (8 marks)
- (c) Raft foundation (9 marks)

Your discussion should include sketching on each type of foundation and you should label for each component, and specify the type of land that is suitable for each type of foundation. You also need to state justification for your selection.

Q2 Building plans are categorized into two main categories, namely architectural drawings and engineering drawings. Normally architect will provide building drawings first and then engineers will design the structure of the building based on the architect's drawings. The combination of these two drawings will allow a building to be constructed properly.

- (a) Describe the following:
 - (i) Architectural drawings
 - (ii) Structural drawings (10 marks)
- (b) List **FIVE (5)** key information included in Architectural drawings. (5 marks)
- (c) Differentiate **FIVE (5)** characteristics between architectural drawings and structural drawings. (10 marks)

Q3 Retaining walls are often built in the construction project at the construction site.

- (a) Describe the function of the retaining wall (4 marks)
- (b) Sketch and label the main component of the following:
 - (i) Mass Retaining Wall (7 marks)
 - (ii) Cantilever Retaining walls (7 marks)
 - (iii) Pre Cast Concrete Retaining Wall (7 marks)

Q4 (a) Green technology in the construction industry is aimed at promoting sustainable development and environmentally friendly.

Based on the appropriate examples, apply the elements of green technology in the context of the use of resources and materials for two-storey building construction. (15 marks)

(b) Bricks are classified into several categories according to size, shape and purpose. Explain the following:

- (a) Common Bricks
- (b) Facing Bricks
- (c) Load Bearing Bricks
- (d) Engineering Bricks
- (e) Interlocking bricks (10 marks)

-END OF QUESTIONS -