



UNIVERSITI TUN HUSSEIN ONN MALAYSIA

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

COURSE NAME : CONSTRUCTION TECHNOLOGY I
COURSE CODE : BPD 13103
PROGRAMME CODE : BPC
EXAMINATION DATE : JUNE/JULY 2016
DURATION : 2 HOURS AND 30 MINUTES
INSTRUCTION : ANSWER **ALL** QUESTIONS

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

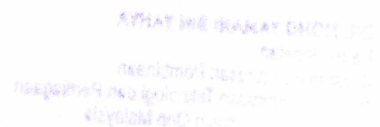
Q1 A client, Mr. Y wants to build a double storey bungalow for his newly wedded daughter. The client has appointed you as a contractor for the project and the important building details as requested by his daughter are illustrated in **Table Q1**. However, you are encouraged to propose additional room(s) and area(s) to the bungalow to enhance the building design.

Table Q1: Bungalow Construction Information

Description	Details	Additional Information
Storey	2	
Total floor area	1123 m ²	Equal area size
Soil type	Sand	Soft and weak Hard stratum 20m deep
Master Bedroom	1 unit	Level 1
Bedroom type 1	3 units	Level 1
Bedroom type 2	2 units	Ground floor
Self-service laundry room	units	Ground floor
Storage room	2 units	Level 1 & Ground floor
Swimming pool	1 unit	Outdoor
Dry and wet kitchen	2 units	Ground floor
Living area	2 units	Level 1 & Ground floor
Building Frame	Reinforced concrete	Grade 30
Floor (suspended)	Reinforced concrete	Grade 30
Roof (pitch)	Timber trusses	Concrete tile roof finishes
Total cost	RM 2 million	Design & Build

- (a) Draw a propose floor plan for the double storey bungalow. (10 marks)

- (b) Outline with the aid of sketches, the complete construction process of the following bungalow structures:
 - (i) Foundation (13 marks)
 - (ii) Frame (13 marks)
 - (iii) Floor (14 marks)



- Q2** (a) State **TWO (2)** advantages of deep foundation. (2 marks)
- (b) Describe with the aid of sketches, the differences between friction pile and end bearing pile. (8 marks)
- (c) Explain with the aid of sketches, the complete process of 1200mm x 1000mm x 900mm pile cap construction. The pile cap has a two-point 300mm spun pile driven at 16m depth. (10 marks)
- Q3** (a) Differentiate with the aid of sketches, the functions between door and window. (8 marks)
- (b) Illustrate the complete installation process of a flush door for a bathroom. (12 marks)
- Q4** Roof is a structure that located on the highest part of the building. It is used to protect the occupants from rain and heat. There are two types of roof available in the Malaysian construction industry such as pitch and flat roof. The type of the roof is depending on the purpose of the constructed building.
- (a) Sketch **FIVE (5)** shapes of pitch roof. (5 marks)
- (b) Discuss with the aid of sketches, the complete construction process of a pitch roof. (15 marks)

-END OF QUESTIONS-