UNIVERSITI TUN HUSSEIN ONN MALAYSIA

FINAL EXAMINATION
SEMESTER II
SESSION 2012/2013

COURSE NAME	:	CONSTRUCTION TECHNOLOGY I
COURSE CODE	:	BPD 13103
PROGRAMME	:	1 BPC
EXAMINATION DATE	:	JUNE 2013
DURATION	:	3 HOURS
INSTRUCTION	:	ANSWER **ALL** QUESTIONS

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

Q1 Foundation is the lowest part of building elements which receives and distributes the load of a sub and superstructure to the soil.

(a) State **FOUR (4)** types of shallow foundation.

(4 marks)

(b) Describe with the aid of sketches, the differences between friction pile and end bearing pile.

(6 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)

Q2 Roof is a structure located on the highest part of the building and used to protect the occupants from rain and heat.

(a) Describe **TWO (2)** differences between pitch roof and flat roof.

(4 marks)

(b) Sketch and label **THREE (3)** types of pitch roof.

(6 marks)

(c) Explain with the aid of sketches, the complete construction process of a pitch roof.

(10 marks)

Q3 Floor is a surface in a building which receives load from people and furniture.

(a) State **FOUR (4)** causes of floor defects.

(4 marks)

(b) Describe **THREE (3)** construction features for floor.

(6 marks)

(c) Explain with the aid of sketches, the complete construction process of a concrete suspended floor.

(10 marks)

Q4 Building frame usually consists of ground beam, column, and roof beam.

(a) Describe **TWO (2)** differences between ground and roof beam.

(4 marks)

(b) Explain with the aid of sketches, the complete construction process of a five-story building frame.

(16 marks)

Q5 (a) Site preparation includes a wide range of preconstruction activities encompasing subsurface investigation, preparing the site of construction, dewatering excavations, earthwork, installing piping, water distribution, sewerage, and drainage systems.

(i) Describe **TWO (2)** types of site investigation.

(4 marks)

(ii) Discuss **FOUR (4)** groundwater drainage systems during site preparation.

(8 marks)

(b) Explain with the aid of sketches, the complete installation process of a 1200mm x 1200mm aluminum casement window at brick wall.

(8 marks)

-END OF QUESTION-