

**CONFIDENTIAL**



**UTHM**  
Universiti Tun Hussein Onn Malaysia

**UNIVERSITI TUN HUSSEIN ONN MALAYSIA**

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

COURSE NAME : CONSTRUCTION INDUSTRY  
& BUILDING TECHNOLOGY

COURSE CODE : BPE 13502

PROGRAMME CODE : BPD

EXAMINATION DATE : JUNE / JULY 2019

DURATION : 2 HOURS

INSTRUCTION : ANSWERS ALL QUESTIONS

THIS QUESTION PAPER CONSISTS OF THREE (3) PAGES

**TERBUKA**

**CONFIDENTIAL**

**Q1** Earthworks are engineering works created through the processing of parts of the earth's surface involving quantities of soil or unformed rock.

(a) Explain the following forms of earthwork:

- (i) Stabilizing
- (ii) Excavating
- (iii) Moving
- (iv) Disposing
- (v) Finishing

(10 marks)

(b) Discuss **THREE (3)** factors that are considered for construction site preparation.

(15 marks)

**Q2** A retaining wall is a structure that holds or retains soil behind it. There are many types of materials that can be used to create retaining walls like concrete blocks, poured concrete, treated timbers, rocks or boulders.

(a) Differentiate between foundation wall and retaining wall in the aspect of structural loads with reasonable sketch.

(10 marks)

(b) Describe **THREE (3)** basic types of retaining walls with reasonable illustrations.

(15 marks)

**Q3** Dewatering and construction dewatering are terms used to describe the action of removing groundwater or surface water from a construction site.

(a) Explain **FOUR (4)** methods of dewatering with their type of construction work.

(20 marks)

(b) Explain briefly **TWO (2)** common problems related to dewatering.

(5 marks)

**TERBUKA**

**CONFIDENTIAL**

- Q4** (a) A green building is a building that, in its design, construction or operation, reduces or eliminates negative impacts, and can create positive impacts, on our climate and natural environment.

Explain **SIX (6)** main criteria of Green Building Index Malaysia (GBIM) classification.

(12 marks)

- (b) Industrialized Building System (IBS) has been widely used for building construction in Malaysia due to several factors.

- (i) List **FIVE (5)** benefits of IBS in residential building projects.

(5 marks)

- (ii) Discuss **TWO (2)** challenges in the implementation of IBS in Malaysia.

(8 marks)

**-END OF QUESTIONS-**

**TERBUKA**

**CONFIDENTIAL**