



**UNIVERSITI TUN HUSSEIN ONN MALAYSIA**

**FINAL EXAMINATION  
SEMESTER I  
SESSION 2016/2017**

COURSE NAME : CONSTRUCTION ENGINEERING  
COURSE CODE : BNC 30202  
PROGRAMME : BNC  
EXAMINATION DATE : DECEMBER 2016/  
JANUARY 2017  
DURATION : 2 HOURS 30 MINUTES  
INSTRUCTION : ANSWER **FOUR (4)** QUESTIONS  
ONLY

**TERBUKA**

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

- Q1** The construction project can be described as a basic industry that fulfills human needs.
- (a) Define the construction team. (3 marks)
  - (b) State **SIX (6)** main reasons to conduct a soil investigation in construction site. (6 marks)
  - (c) Bored pile is another type of reinforced concrete pile which is used to support high building which has heavy vertical load and can bear the load of thousands of tons in unstable soil conditions. Propose the construction sequence of bored pile with suitable sketch. (16 marks)
- Q2**
- (a) Explain with sketches the distribution of load for building from the roof to the foundation. (4 marks)
  - (b) Describe briefly the purpose of the floor. (6 marks)
  - (c) There are **TWO (2)** types of floor, which is suspended floor and non-suspended floor. Explain the construction of non-suspended floor for ground level. (10 marks)
  - (d) As an engineer on site you will be required to make an inspection of column before concreting work. State **FIVE (5)** inspections required. (5 marks)
- Q3**
- (a) Discuss **FOUR (4)** main elements in project management. (10 marks)
  - (b) Explain the comparison between the functional organization and project organization. (10 marks)
  - (c) State **FIVE (5)** stage of development project. (5 marks)

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- Q4** (a) You have been appointed as a technology engineer at the construction site, explain **FOUR (4)** your responsibilities in the management of safety on construction sites. (8 marks)
- (b) Develop an arrow diagram for the project complete with their Early Start (ES) and Early Finish (EF) for each activity from **TABLE Q4(b)**.

**TABLE Q4(b)**

Activity	Duration (day)	Predecessor
A	3	-
B	4	-
C	4	A
D	5	B
E	4	C,D
F	3	C,D
G	5	E
H	4	F

(8 marks)

- (i) Evaluate total float from the **Q4(ii)** (4 marks)
- (c) Differentiate between dummy and critical path. (5 marks)
- Q5** (a) Give the comparison between planning and scheduling projects. (5 marks)
- (b) Carrying out the importance of time control and cost control in a construction project. (8 marks)
- (c) In a residential construction project in Parit Raja, it was found that the quality of construction has been categorized as failed to meet the requirements of customers. Discuss the matter that it happened and how to prevent from recurring. (12 marks)

**- END OF QUESTIONS -**