



UNIVERSITI TUN HUSSEIN ONN MALAYSIA

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

COURSE NAME : CONTRACT AND ESTIMATION
COURSE CODE : BFC 31602
PROGRAMME : BACHELOR OF CIVIL
ENGINEERING WITH HONOURS
EXAMINATION DATE : DECEMBER 2015/JANUARY 2016
DURATION : 2 HOURS
INSTRUCTION : ANSWER ALL QUESTIONS

THIS PAPER CONSISTS OF SEVEN (7) PAGES

- Q1**
- (a) Explain the working relationships among architect, engineer and quantity surveyor (as client's consultant) during design phase. (8 marks)
 - (b) Damages represent the most common head of remedies claim by an innocent party for breach of contract. Classify the damages under Part VII; Section 74, Section 75 and Section 76 of the Contract Act 1950. (5 marks)
 - (c) Point out **five (5)** forms of compensation that could be claimed in the case of breach of contract. (10 marks)
 - (d) Give **one (1)** example of relevant court case for each of the following terms;
 - (i) Offer – Unilateral offer (1 mark)
 - (ii) A mere invitation to treat – display of goods in shops (1 mark)
- Q2**
- (a) Once you get a degree in Civil Engineering, you plan to setup your own construction company. Discuss the procedures and matters required by Construction Industry Development Board (CIDB). (5 marks)
 - (b) The tendering process should be conducted in a transparent manner at all levels. Simulate in detail the tender process conducted in Malaysia. (10 marks)
 - (c) Explain the differences between Table Tender Document, Tender Document and Contract Document. (3 marks)
 - (d) State the importance of Performance Bond in a construction project. (2 marks)
 - (e) A design-build or turnkey contract is often used to shorten the time required to complete a project. Categorise the advantages and disadvantages of these types of contracts. (5 marks)

Q3 (a) Briefly explain the definition of “variation”. (2 marks)

(b) Elaborate **three (3)** examples of variation that may occur in construction project. (9 marks)

(c) Distinguish “provisional sums” from “prime cost sums”. Give **one (1)** example of work carried out under each of the provision. (6 marks)

(d) Calculate the maximum amount of advanced payment that can be claimed by a contractor based on the following project details:

Provisional Sums	RM	1,543,000.00
Prime Cost Sums	RM	14,216,760.00
Preliminaries	RM	1,607,124.00
Contingencies	RM	1,000,000.00
Contract Sum	RM	27,885,881.29

(3 marks)

(e) Discuss the importance of providing the clause for “extension of time” in a contract of a construction project. (5 marks)

Q4 (a) **Figure Q4(a)** depicts the floor plan and cross section of an octagon-shaped lecture hall with sloped roof and two covered walkways with flat roof connected to the lecture hall. The price rates for each building are as the following:

Lecture hall – RM 540.00 per cubic meter
 Covered walkway – RM 132.00 per cubic meter

Based on the **Figure Q4(a)** and the given price rates, estimate the construction cost of the lecture hall and covered walkways using building volume method.

(10 marks)

(b) Atlantis Development plans to construct an observation tower in its resort, Atlantis Wonderland Resort. Based on **Figure Q4(b)(i)** and **Figure Q4(b)(ii)**, measure the quantity of materials to construct the following element of the observation tower:

(i) Concrete for pad foundation, column stump and ground beam. (9 marks)

(ii) Formwork to pad foundation, column stump and ground beam. (6 marks)

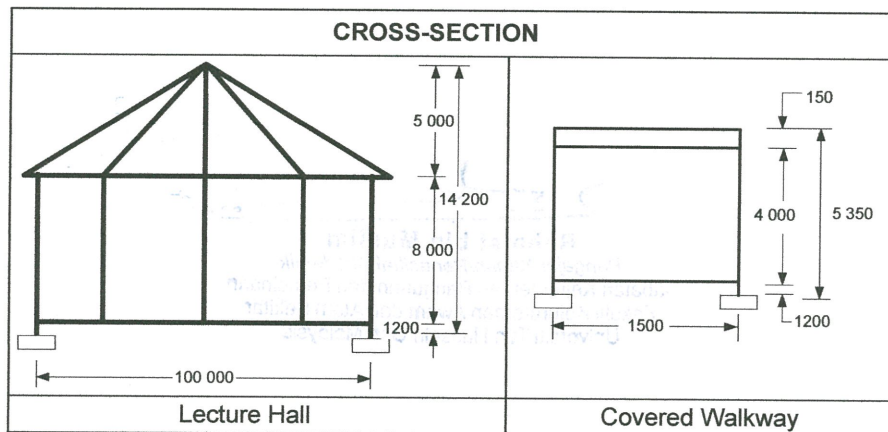
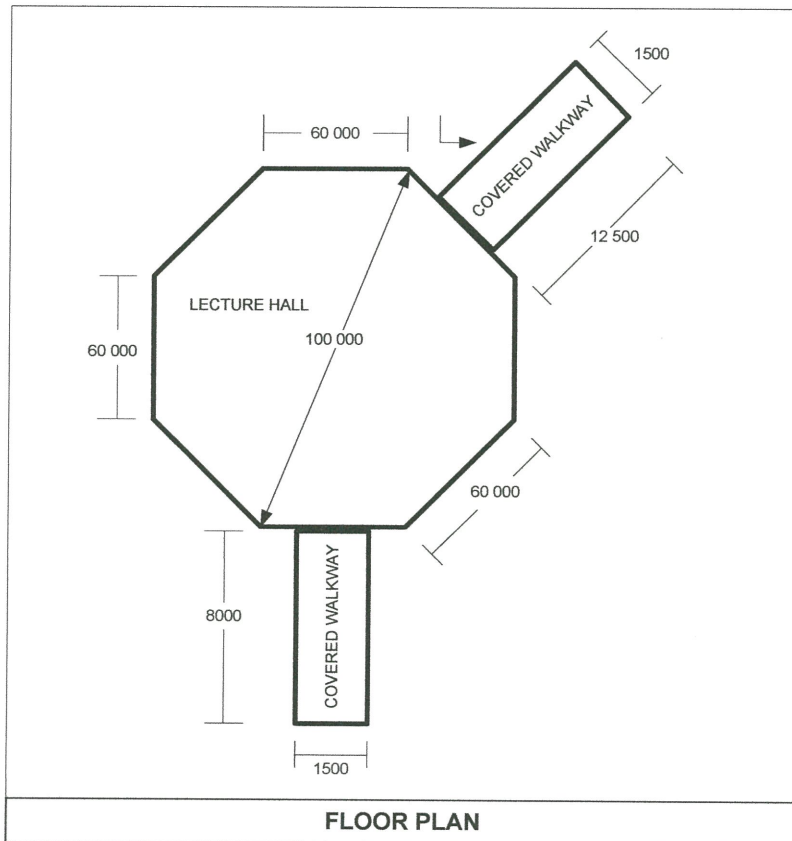
- END OF QUESTION -

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Notes:

1. All drawings are not to scale
2. All dimensions (outside dimension) are in millimetre

Figure Q4(a)

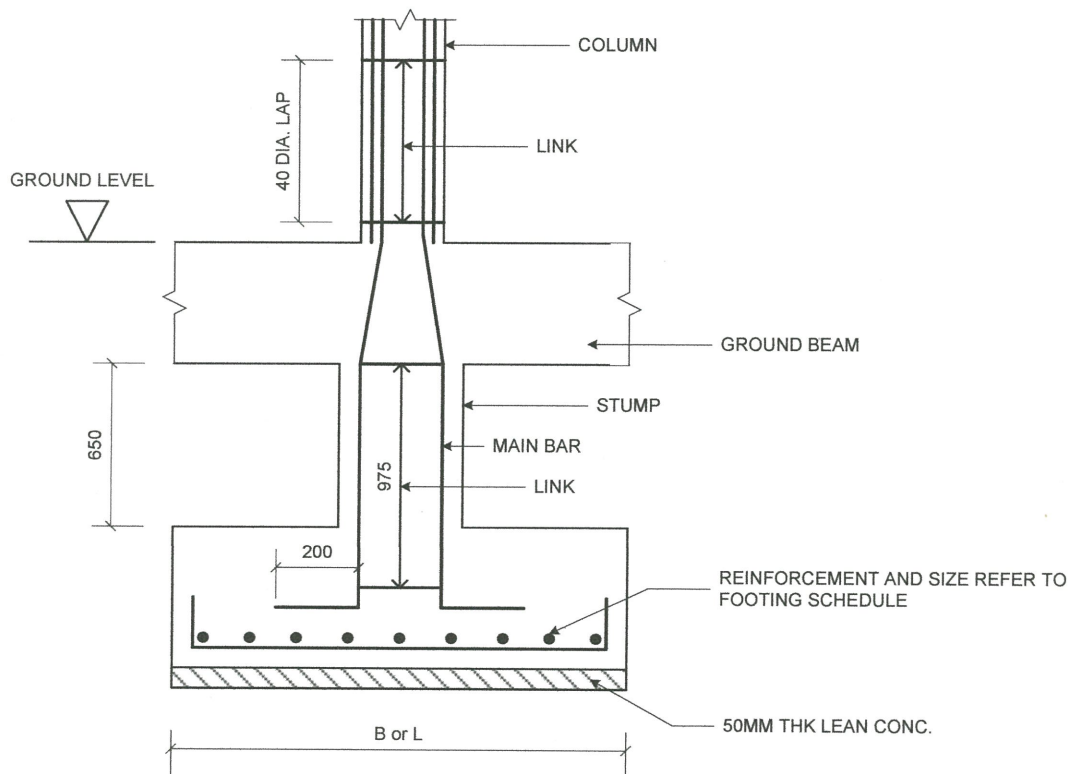
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FOOTING SCHEDULE

TYPE	B x D x H	MAIN REINF.
F3	3000 x 3000 x 650	18Y16-Ø175 (B/W)



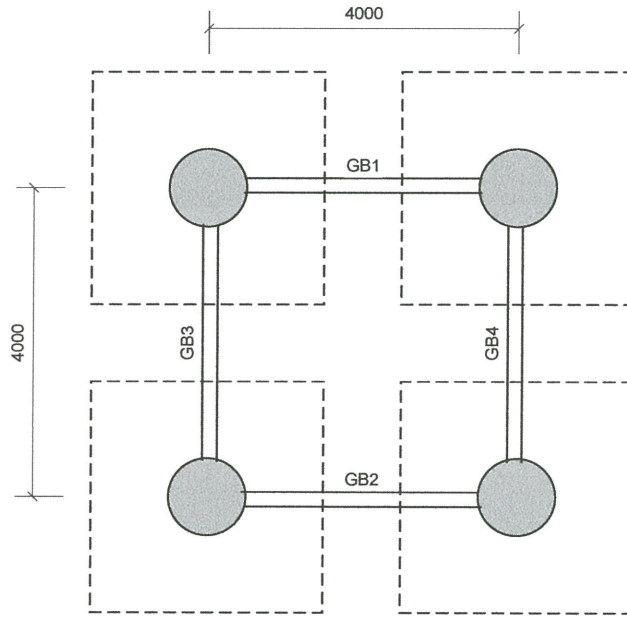
TYPICAL FOOTING DETAIL

Figure Q4(b)(i)

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GROUND FLOOR PLAN

Figure Q4(b)(ii)

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