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UNIVERSITI TUN HUSSEIN ONN MALAYSIA

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

COURSE NAME : LAND SURVEY FOR
CONSTRUCTION

COURSE CODE : BPD 20203

PROGRAMME CODE : BPC

EXAMINATION DATE : JUNE/JULY 2016

DURATION : 3 HOURS

INSTRUCTION : ANSWER ALL QUESTIONS

THIS QUESTION PAPER CONSISTS OF SIX (6) PAGES

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Q1 (a) Discuss **TWO (2)** important aspects of total station work with regards to the accuracy of measurement for location in the high risk building construction. (8 marks)

(b) Land surveying is the art of making measurements of the relative positions of natural and man-made features on the Earth's surface, and the presentation of this information either graphically or numerically. Therefore:

Discuss **TWO (2)** application of land surveying in the construction industry for housing development and transportation.

(8 marks)

(c) Total Station needs to be levelled (Temporary Adjustment) before it can be used for surveying work. If not, it will affect the reading of the data and calculation involved in the surveying work.

Describe **THREE (3)** main steps in the Temporary Adjustment for Total Station.

(9 marks)

Q2 (a) There are two types of calculation method in the levelling work. Site supervisor should have knowledge of these methods and know when to apply it in the construction site survey.

Discuss those **TWO (2)** types of calculation method.

(6 marks)

(b) Calculate the data of levelling work using Height of Collimation (HC) method based on the attached data in **Table Q2**:

(19 marks)

Q3 (a) One of the uses of Geographical Information System (GIS) is for planning in the development of housing scheme. In relation to the statement:

Discuss the importance of GIS to the construction organisation.

(6 marks)

(b) Based on the data from the attached **Table Q3(b)**;

Calculate the following values using the provided form.

(i) Average Bearing (6 marks)

(ii) Correction Value (6 marks)

(iii) Final Bearing (7 marks)

Q4 Based on the data in the attached **Table Q4**;

Calculate the necessary information using the provided form.

(i) Latit & Dipat and Positional Misclosure (7 marks)

(ii) Latit & Dipat (Corrected value) (9 marks)

(iii) Width (9 marks)

- END OF QUESTIONS -

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TABLE Q2: DATA OF LEVELLING WORK

BS	FS			RL
1.258				1.009
1.149	1.134			
1.329	1.359			
1.224	1.264			
1.138	1.305			
1.374	1.278			
1.45	1.265			
1.329	1.485			
1.305	1.205			
1.072	1.438			
	0.671			

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TABLE Q3(b): TRAVERSING DATA

STATION (Stn)	BEARING			From	LINE	to	distance
	face left (FL)	face right (FR)	Average Bearing	Stn	Final Bearing	Stn	
3	372 58 05	192 58 00					
1							
2	46 09 33	226 09 23					109.48
1	226 09 03	46 09 06					
2							
3	278 10 00	98 00 40					63.08
2	98 10 40	278 10 10					
3							
1	192 59 00	372 58 50					86.898

