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UNIVERSITI TUN HUSSEIN ONN MALAYSIA

**FINAL EXAMINATION
SEMESTER II
SESSION 2023/2024**

- COURSE NAME : LAND SURVEY FOR CONSTRUCTION
COURSE CODE : BPD 20203
PROGRAMME CODE : BPC
EXAMINATION DATE : JULY 2024
DURATION : 3 HOURS
INSTRUCTION :
1. ANSWER ALL QUESTIONS
 2. THIS FINAL EXAMINATION IS CONDUCTED VIA
 - Open book
 - Closed book
 3. STUDENTS ARE **PROHIBITED TO CONSULT THEIR OWN MATERIAL OR ANY EXTERNAL RESOURCES DURING THE EXAMINATION CONDUCTED VIA CLOSED BOOK**

THIS QUESTION PAPER CONSISTS OF **FOUR (4)** PAGES

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TERBUKA

Q1 In order to secure construction site at Sri Gading, Batu Pahat, some layout planning must be done and not to mention the site clearance, setting up site facilities, demolition and groundworks on the first phase of construction.

- (a) Discuss the land surveying work involved in securing the above site. (10 marks)
- (b) Discuss the method of levelling works that can be used for the above site. (10 marks)
- (c) Compute volume of soil for cut & fill survey work for the above site as in **Figure Q1.1** with each corner from point A to I is a spot height and formation is 8m.. (20 marks)

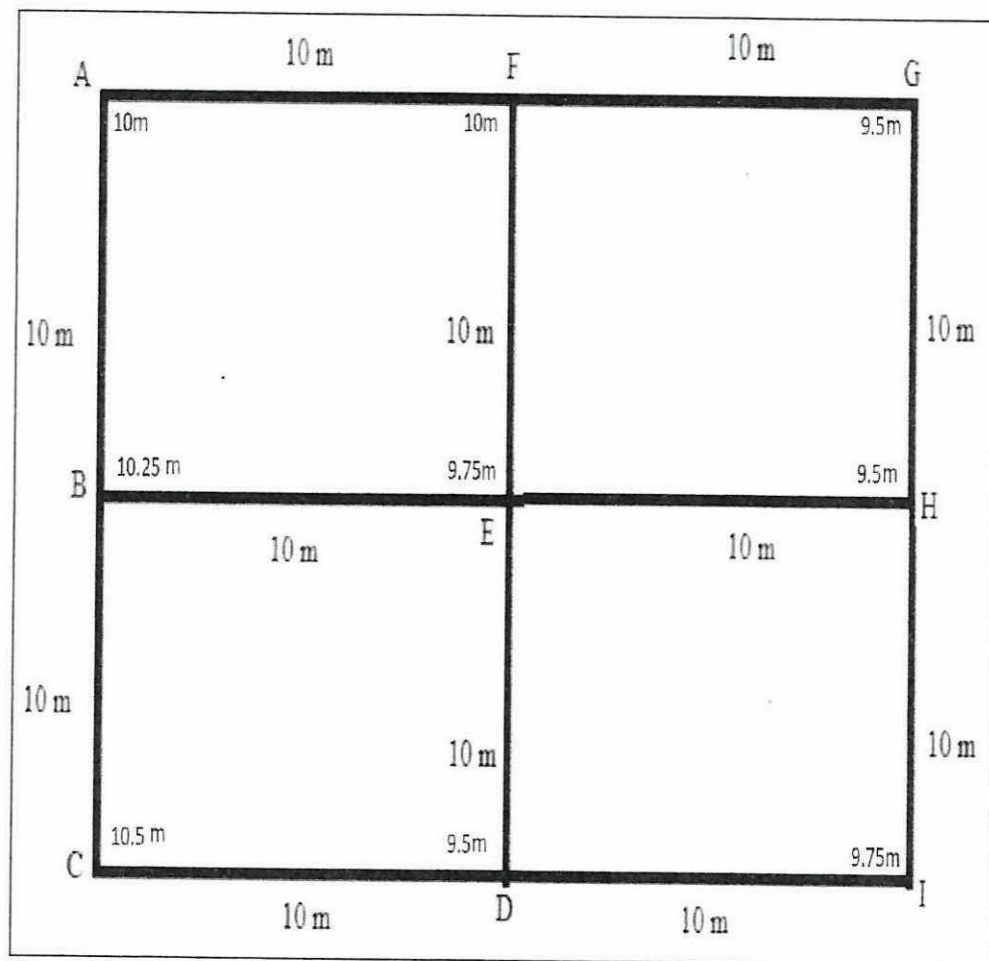


Figure Q1.1 Cut & Fill

TERBUKA

- Q2** (a) Identify **FIVE (5)** errors that can occur while working with land surveying instruments. (5 marks)
- (b) Calculate the data in **Figure Q2.1** using Height of Collimation. (25 marks)

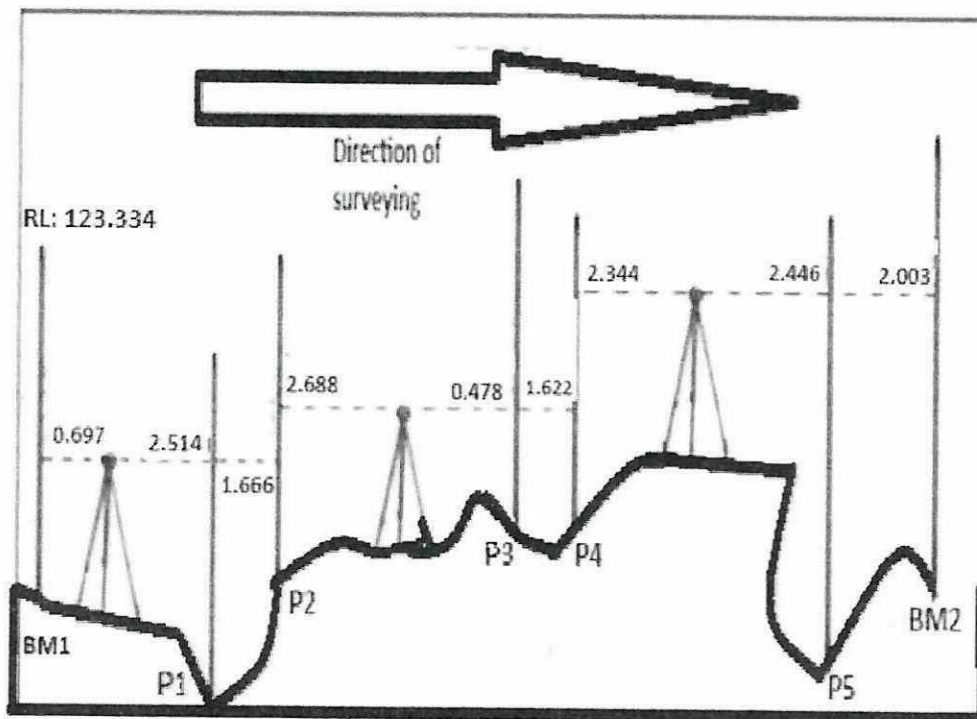


Figure Q2.1 Levelling Work

- Q3** a) Global Positioning System (GPS) is especially useful in surveying coasts and waterways, where there are few land-based reference points. Survey vessels combine GPS with sonar depth soundings to make the nautical charts that alert mariners and its also beneficial at constructions site.

Discuss **ONE (1)** application of GPS at construction site that suit the above statement.

(4 marks)

- b) Calculate the necessary initial data as shown in **Figure Q3.1**. (11 marks)

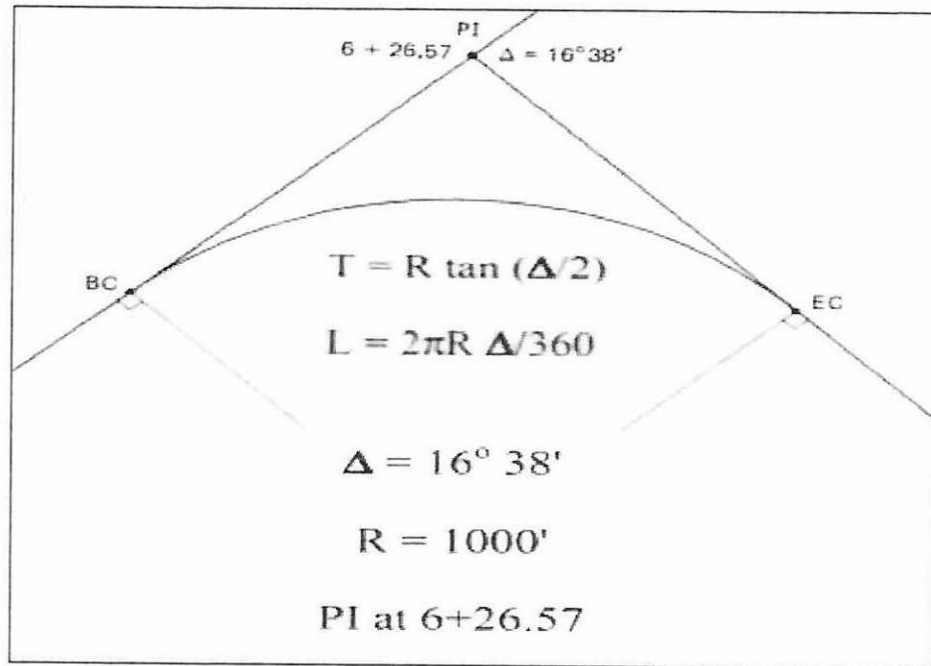


Figure Q3.1 Horizontal Simple Curve

- Q4** A traversing work using Total Station equipment will be conducted at the construction site for the development of new shop houses.

Propose the suitable traversing work if the site is far from known datum or point of references.

(15 marks)

- END OF QUESTIONS -