

Uva Wellassa University of Sri Lanka  
 Faculty of Applied Sciences  
 Department of Science and Technology  
 3<sup>rd</sup> Year 1<sup>st</sup> Semester Examination – July/August 2019

Uva Wellassa  
 University

**MRT 352-2 Surveying and Leveling**

Number of questions: Part A – Ten (10) Structured, Part B – Five (05) Essay

Answer all questions

Time allocation: Two (02) hours

Mark allocation: 100 (Part A : 20, Part B: 80)

Index No.
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**Part A**

1. What is surveying?

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2. List two (02) surveying techniques that you have learnt.

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3. What is the “Principle of Surveying”?

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4. List the two (02) types of measurements in surveying.

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5. List two (02) applications where UAVs are most commonly used.

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6. Briefly describe what 'mine surveys' are.

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7. List two (02) characteristics of GPS surveying.

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8. List two (02) sources of errors in surveying.

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9. What is a 'traverse leg' in surveying?

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10. Give two (02) examples for errors in the Level instrument

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**Part B**

**Instructions to candidates**

**Number of questions: Six (06) structured questions**

**Mark allocation: 30**

**Answer all questions on the given space**

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1. Briefly explain three (03) types of Single Ordered Indexes.

- a. \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
- b. \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
- c. \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

(6 mark)

2.

a. Fill in the blanks in lock compatibility matrix given below (S: Shared mode, X: Exclusive mode).

	S	X
S	-----	-----
X	-----	-----

(2 mark)

b. Briefly explain two (02) pitfalls in lock based protocols used in concurrency control.

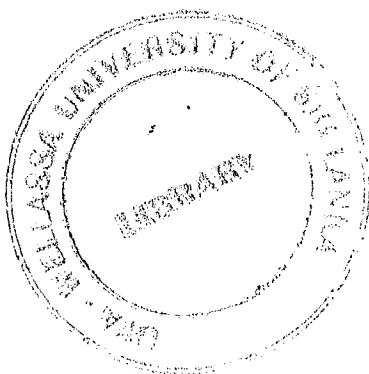
1. -----  
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2. -----  
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(4 mark)

3. Briefly explain two (02) types of file organizations.

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(4 mark)



4. List five (05) states of a transaction in database management systems.

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(5 mark)

5. For each of the following sentences, fill in each blank with the best word selected from the list below. Not all words or phrases will be used.

rigorous two-phase-locking , strict two-phase locking , collision , rollback ,  
linear hashing, extendible hashing, dynamic hashing

- a. A ..... occurs when the hash field value of a record that is being inserted hashes to an address that already contains a different record.
- b. In ..... is even stricter: here all locks are held till commit/abort.
- c. .... is allow a hash file to expand and shrink its number of buckets dynamically without directory.

(3 mark)

6. List three (03) advantages of Extendible hashing technique.

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(6 mark)

