



## University of Vavuniya

First Examination in Information Technology - 2019

First Semester - December 2020/January 2021

Held on October/November 2021

IT1113 Fundamentals of Information Technology (Theory)

Online Examination

Question-Set 1 of 2

- Time Allowed : **30 Minutes**
- Answer **Two** Questions Only.
- This is a closed-book examination.

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- (a) Explain the technologies of second generation computers by comparing them with the first generation computers. [10%]
    - (b) Discuss the differences between volatile memory and non-volatile memory. [10%]
    - (c) State two disadvantages of Database Management System(DBMS). [05%]
  - (a) What do you mean by a computer virus? Briefly describe each of the following.
      - i. File virus
      - ii. Overwrite virus
      - iii. Boot virus [15%]
    - (b) Describe the 'Trojan horses' malware and explain how it differs from other types of malware. [10%]

3. (a) Describe each of the following terms with regard to computer networks.
- i. Hub
  - ii. Switch
  - iii. Router [15%]
- (b) Briefly describe the differences between the low-level and high-level programming languages. [10%]





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4. Calculate each of the following arithmetic of binary numbers.

(a)  $1011110_2 + 1011010_2$

(b)  $1110101_2 \times 1101_2$

(c)  $\frac{110110000_2}{1001000_2}$

[15%]

5. Perform each of the following conversions and show all intermediate steps.

(a) Convert  $25910_{10}$  to Binary, Octal and Hexadecimal number systems.

(b) Convert  $1101110011012_2$  to Decimal, Octal and Hexadecimal number systems.

(c) Convert  $56.18710_{10}$  to Binary and Octal number systems.

(d) Convert  $15273_8$  to Binary, Decimal and Hexadecimal number systems.

[35%]