

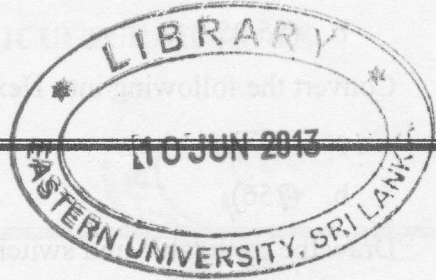
EASTERN UNIVERSITY, SRI LANKA

FIRST YEAR SECOND SEMESTER EXAMINATION IN AGRICULTURE – 2010/2011

IT 1201 INFORMATION AND COMMUNICATION TECHNOLOGY

Time: One hour

Answer all questions.



Q1.

- I. Discuss the differences between **Data** and **Information**.
- II. What is Computer? List any 5 characteristics of a computer.
- III. What is an Operating System? Give 5 examples of Operating Systems.
- IV. Explain Analog, Digital & Hybrid computer.
- V. What do you mean by **Hardware**? Give three functions of hardware.
- VI. Briefly explain, any three types of Secondary Memory.
- VII. Describe the following:
  - a. Input Devices
  - b. Output Devices
- VIII. Describe the following:
  - a. Laser Printer
  - b. Plotters

Q2.

- I. Convert the following into Octal.
  - a.  $(1023)_{10}$
  - b.  $(55.952)_{10}$
- II. Convert the following into Hex:
  - a.  $(952)_{10}$
  - b.  $(256)_8$
- III. Draw the truth table and switch representation diagram of the AND function.
- IV. Prove the **DeMorgan's** Theorem using the truth table.
- V. Prove the following identities using Boolean algebra:
  - a.  $(A + B)(A + \overline{AB})C + \overline{A}(B + \overline{C}) + \overline{A}B + ABC = C(A + B) + \overline{A}(B + \overline{C})$
  - b.  $\overline{\overline{AB} + \overline{A} + AB} = 0$
- VI. List the seven rules of "Karnaugh Map" simplification.
- VII. Simplify the following expression Karnaugh map and Draw logic circuit for the simplified function.

	AB			
CD	0	1	1	0
	1	1	1	1
	0	1	0	0
	0	1	0	0