## RAJARATA UNIVERSITY OF SRI LANKA
## FACULTY OF APPLIED SCIENCES

### B.Sc. (General) Degree in Information and Communication Technology
### First Year - Semester I Examination – June/July 2018.

### ICT 1201 – FUNDAMENTALS OF COMPUTER SYSTEMS (THEORY)
**Time: Two (02) hours**

**Answer all questions**

1.

a) Explain how sound is digitized in a computer?

(6 marks)

b) What are the main functions of CPU? Briefly describe each of them.

(5 marks)

c) Show scatter diagram of memory hierarchy of a computer.

(5 marks)

d) Justify the following statement using an appropriate example.
"All data must be present in registers before they can be processed"

(5 marks)

e) Is Random Access Memory volatile or non-volatile? Briefly describe reasons for your answer.

(4 marks)

2.

a) Briefly describe five types of computer ports.

(5 marks)

b) How does a single byte represent multiple colors in a computer?

(5 marks)

c) Compare and contrast machine level language and assembly level language.

(6 marks)

d) What are the types of language processors?

(3 marks)

e) Write an algorithm to find the area of a circle and display it.

(6 marks)

3.

    a)    Draw a flowchart for the following problem.

            Enter marks of four subjects and find the average. Display the grading as follows.

- If average is >= 90, A
- If average is >= 80, B
- If average is >= 70, C
- If average is >= 50, D
- If average is <  50, F

                                                        (10 marks)

    b)    Why database management software is used?

                                                         (3 marks)

    c)    Briefly describe the process of debugging.

                                                         (5 marks)

    d)    What are the disadvantages of software suits?

                                                         (2 marks)

    e)    What are the characteristics of good software?

                                                         (5 marks)


4.

    a)    What do boot programs do when your laptop is turned on?

                                                         (5 marks)

    b)    Compare and contrast distributed operating systems and network operating systems.

                                                            (5 marks)

    c)    Justify following statement.

             "Hub is an intelligence device"

                                                         (5 marks)

    d)    Differentiate WAN from LAN.

                                                         (5 marks)

    e)    Briefly describe computer crimes.

                                                         (5 marks)


**End**