



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

**B.Sc. (General) Degree in Applied Sciences
First Year - Semester I Examination – June/July 2018**

**FDN 1202 – INTRODUCTION TO COMPUTERS
CMP 1204 – INTRODUCTION TO COMPUTERS**

Time: Two (2) hours

Answer all questions on this paper itself.

(100 Marks)

Index No:

Instructions to Candidates:

- The paper contains 12 pages and two parts, PART A and PART B.
- PART A has 02 questions and PART B has 03 questions.

For Examiner's use only	
Question No	Marks
01	
02	
03	
04	
05	
Total	

PART A

1. Underline the most appropriate answer.

(1*15 = 15 Marks)

a) Not a first generation computer

i. UNIVAC

ii. ENIAC

iii. EDSAC

iv. Pascaline

b)refers to the physical or logical arrangement of a network.

i. Data flow

ii. Mode of operation

iii. Topology

iv. Architecture

c) Which of the following is not a part of the CPU?

i. Control unit

ii. ALU

iii. Registers

iv. Primary Storage

d) A device that enables a computer to communicate over telephone lines is,

i. Repeater

ii. Modem

iii. Switch

iv. Wireless access point

e) An example to an output device is,

i. The keyboard

ii. The mouse

iii. The power cord

iv. The monitor

f) What is an NIC?

i. Network Interface Card

ii. Network Interference
Controller

iii. No Internet Connection

iv. New Infrared Controller

g) A central processing unit (CPU) consists of two main parts which are,

i. Control Unit and

* Arithmetic and Logic Unit.

ii. Control Unit and RAM.

iii. Motherboard and

Arithmetic and Logic Unit.

iv. Control unit and

Motherboard.

h) is not a function of an operating system.

i. Memory Management

ii. Error detection and
correction

iii. File Management

iv. Control over CPU
performance

i) Which of the following is NOT an operating system software?

i. Windows

ii. Linux

iii. Macintosh

iv. Open Office

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- j)is a software application that provides comprehensive facilities to computer programmers for software development.
- | | |
|---------|----------|
| i. IDE | iii. ALU |
| ii. GUI | iv. VGA |
- k) A computer can be defined as an electronic device that can
- | | |
|--------------------------------------|---|
| i. carry out arithmetical operations | iii. accepts input data and process according to their instructions |
| ii. carry out logical functions | iv. do complicated calculations |
- l) The analog computer deals directly with
- | | |
|--|--|
| i. number or codes | iii. signals in the form of 0 or 1 |
| ii. measured values of continuous physical magnitude | iv. signals in discrete values from 0 to 9 |
- m) If you want to improve the performance of your PC, you need to upgrade the
- | | |
|---------------|-------------|
| i. CPU | iii. Cache |
| ii. Registers | iv. Monitor |
- n) Which of the following is the key technology for making first generation electronic computers?
- | | |
|------------------------|-------------------|
| i. Transistor | iii. Vacuum tube |
| ii. Integrated circuit | iv. Dual Core CPU |
- o) Main components of second generation computers were
- | | |
|-----------------|--------------------------|
| i. Vacuum Tubes | iii. Integrated Circuits |
| ii. Transistors | iv. Microprocessors |

2. Fill in the blanks with most appropriate answer.

(1*10 = 10 Marks)

- a) A is the fastest type of computer.
- b) Computer resource that can be seen or touched is called
- c) The computer on the network that manages the network resources is called
- d) A is a computer on a network that request services from servers.
- e) A computer program that converts assembly language in to machine language is called
- f) software helps you carry out tasks, such as typing a document or creating a spreadsheet.
- g) are computers that support hundreds or thousands of users simultaneously.
- h) is a private network that can be accessed only by company staff to share data, share resources and communicate with each other.
- i) The process that convert an analog wave into digital form is called
- j) The is the program that manages the hardware of the computer system, including the CPU, memory, storage devices, and input/output devices.

PART B

3.

- a) A computer is an electronic device that process data, converting it into information that is useful to people. Describe the basic components of a computer. **(8 Marks)**

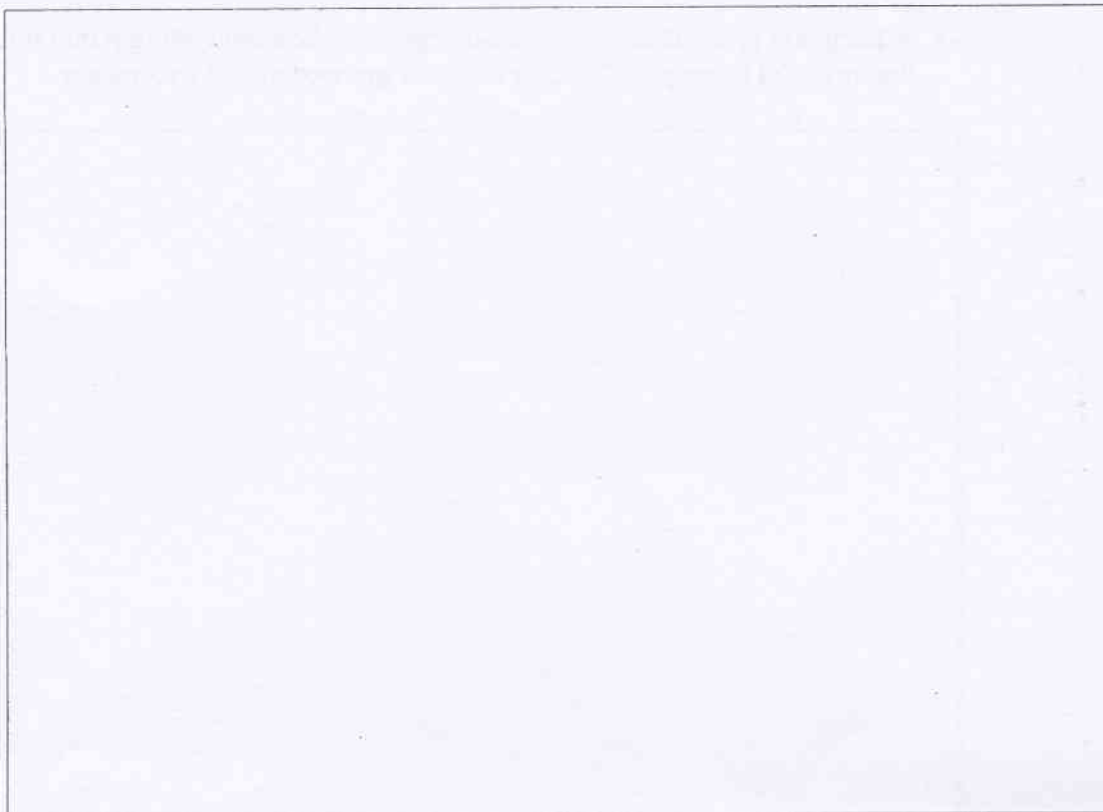


- b) Define the usage of CPU registers for the functioning of the computer? **(5 Marks)**



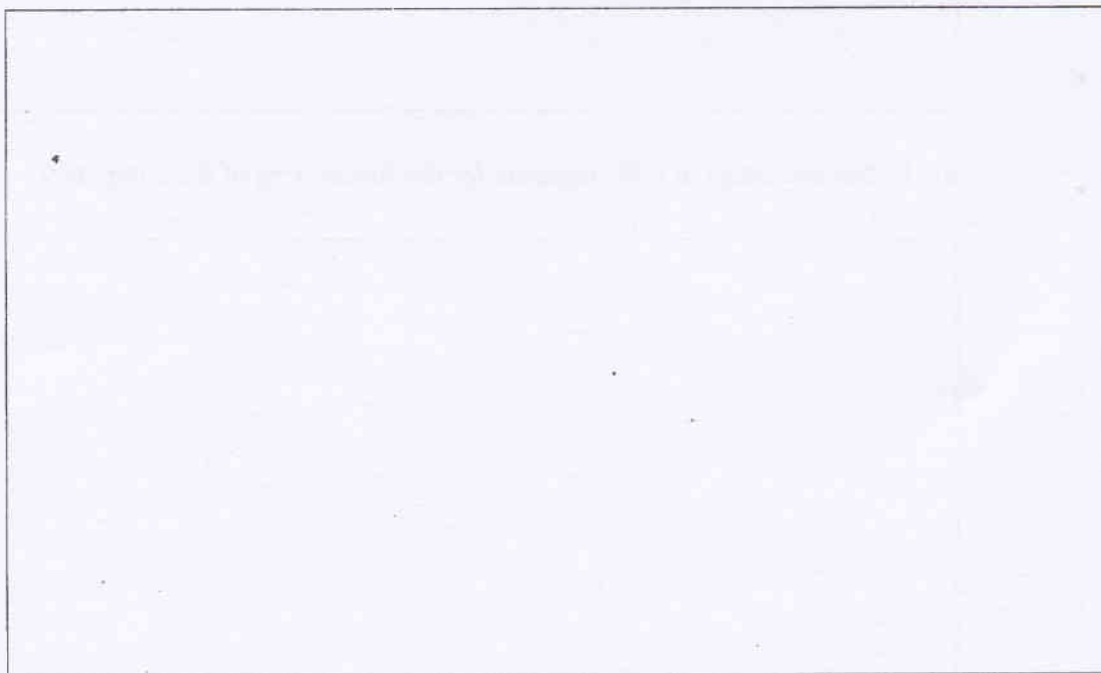
c) What is software? Briefly explain four (4) characteristics of good software.

(7 Marks)



d) Computer ethics are set of moral principles that regulate the use of computers. Write down five (5) such principles that we need to follow when we use computers.

(5 Marks)



Total: (25 Marks)

4.

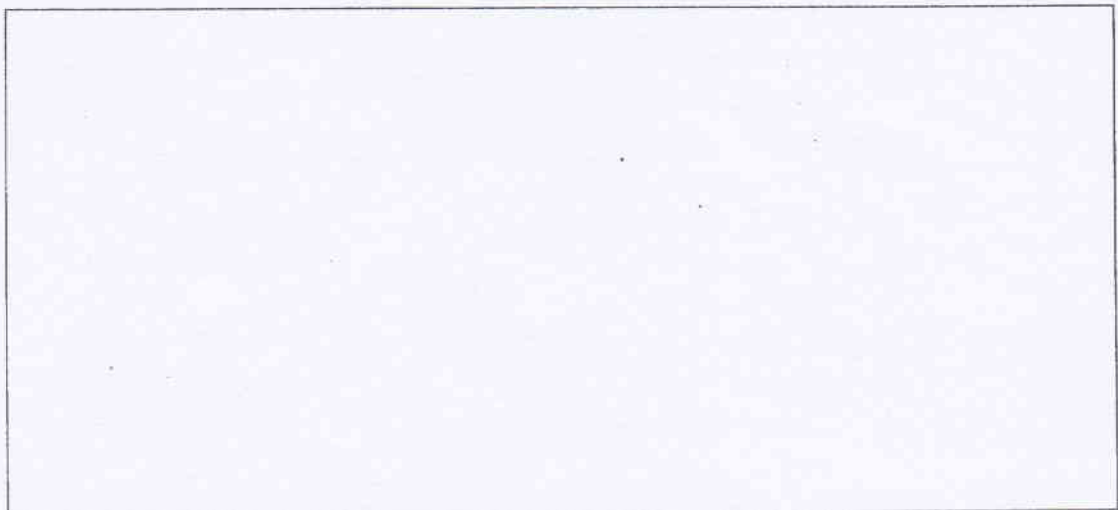
- a) Language Processors / Translators are used to convert the high level language to machine level language. What are the two types of translators? Compare and Contrast those translators by using four (4) facts.

(6 Marks)



- b) What are the components of a programming language? Briefly Explain.

(6 Marks)



- c) What is an algorithm? State two ways that we can represent algorithms.

(5 Marks)

- d) Draw a flow chart for the following scenario.

Read an employee name (NAME), overtime hours worked (OVERTIME), hours absent (ABSENT) and then determine the bonus payment (PAYMENT) by using following chart.

Bonus Schedule	
OVERTIME – (2/3) * ABSENT	Bonus Paid (PAYMENT)
If ≥ 40 hours	\$ 50
If ≥ 30 hours	\$ 40
If ≥ 20 hours	\$ 30
If ≥ 10 hours	\$ 20
If < 10 hours	\$ 10

5.

- a) Computers and other digital devices work with text, numbers, music, images, speech and video. How are these data represented in computers? Briefly Explain.

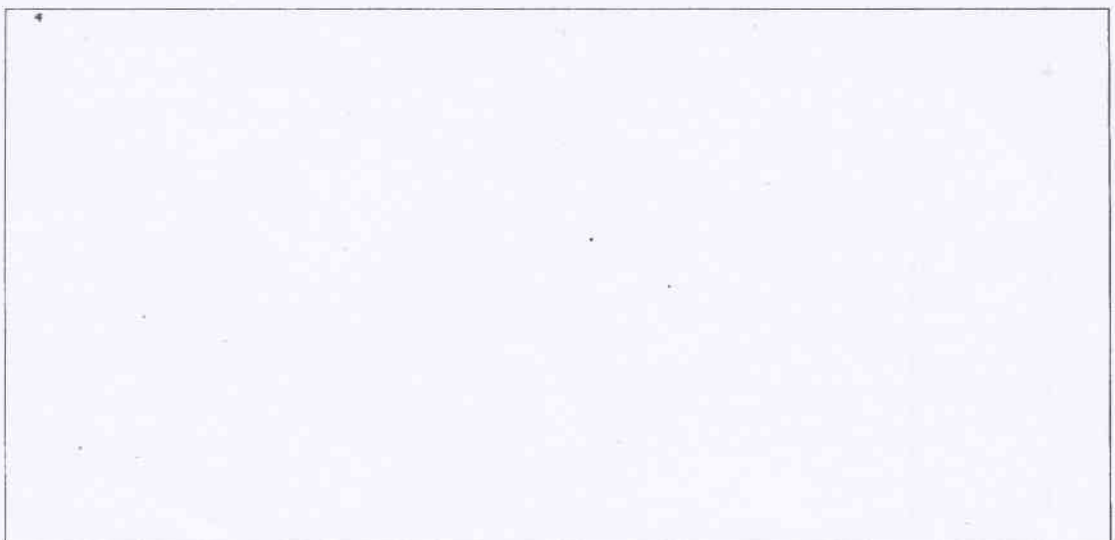
(4 Marks)



- b) Convert the following numbers in the stated to base. (Show all your workings.)

- i. 1110101_2 to hexadecimal
- ii. $1AF_{16}$ to octal
- iii. 33_{10} to binary
- iv. 703_8 to decimal

(8 Marks)



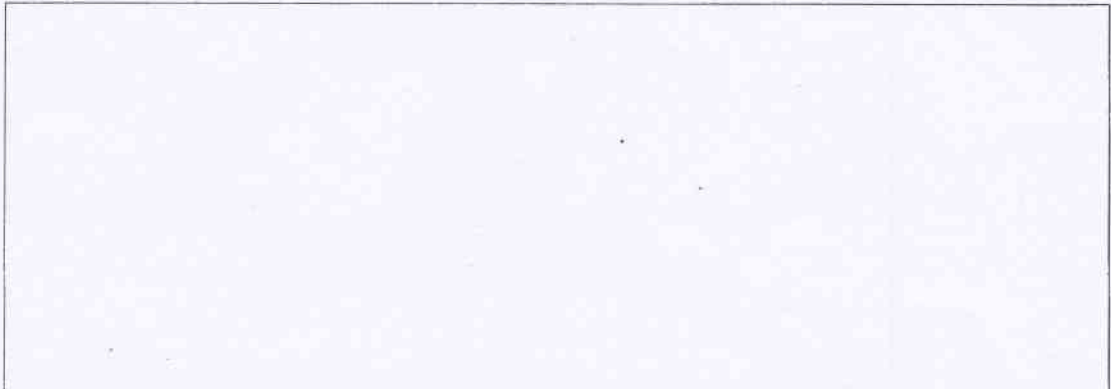
- c) Star topology is one of the ways that we can arrange the nodes in a network. Explain what star topology is and write three (3) advantages and disadvantages of it.

(8 Marks)



- d) “Operating system can be act as a resource manager”. Briefly explain this term.

(5 Marks)



Total: (25 Marks)

END