NALANDA COLLEGE – COLOMBO 10
G.C.E. (A/L) EXAMINATION – 2020

Unit Test
Unit 2

Information & Communication Technology

Index Number/ Name : ……..……

Part - 1

A - Select the most suitable answer for the following questions

1) The 'Input, process, output' concept was introduced by?
   (i). Blaise Pascale
   (ii). Charles P. Babbage
   (iii). Ada Augusta
   (iv). Allen Turing
   (v). John Vonn Neumann

2) Consider the following statements about the Difference Engine.
   a) Was the first mechanical computer.
   b) Was created by Allen Turing.
   c) Was invented in the Electronic era.

Which of the above can be considered true?

(i). A only (iii). C only (v). All of the above
(ii). A and B only (iv). A and C only

3) The technology used in Third Generation computers was:
   (i). Transistor
   (ii). Vacuum Tube
   (iii). Integrated Circuits
   (iv). Microprocessor
   (v). Artificial Intelligence

4) Select the correct statement regarding Super computers.
   (i). Employed for specialized applications that require immense amounts of computing power.
   (ii). A very large and expensive computer capable of supporting hundreds, or even thousands, of users simultaneously.
   (iii). Handle a specific problem or to perform a specific task.

(iv). Mid-size computers mainly used as small or mid-range servers operating business and scientific applications.

5) Which part of the CPU carries out the mathematical and logical operations?
   (i). ALU
   (ii). CU
   (iii). Registers
   (iv). Cache memory
   (v). Schedulers

6) consider the following storage devices ;
   a) CD, DVD, Blue Ray Disc
   b) Hard disk, Floppy disk, Magnetic tape
   c) Flash drive, Memory card

   Which of the above can be considered as an example for magnetic storage devices?

   (i). A only
   (ii). A and B only
   (iii). C only
   (iv). A and C only
   (v). B only

7) From the following which device cannot be considered as a scanning device?
   (i). optical mark reader (OMR)
   (ii). optical character reader (OCR)
   (iii). Barcode reader
   (iv). Digitizer
   (v). Magnetic ink character reader(MICR)

8) ".....was the first automatic computer invented by Professor Howard Aiken in 1939.".
   Select the correct answer needed to complete the above sentence.
   (i). EDVAC
   (ii). ENIAC
   (iii). Mark 1
   (iv). Analytical engine
   (v). Pascaline

9) "..... is used for cache memory and register memory and will retain data bits in its memory as long as power is being supplied while..... has the capability to hold saved data even if the power is turned off."

Select the correct set of answers that will complete the above sentence.

(i). ROM, RAM
(ii). SRAM, DRAM
(iii). EPROM, PROM
(iv). RAM, ROM
(v). EPROM, SRAM

10) Consider the following statements about the Difference Engine.

a) Solid-state storage (SSS) is a type of computer storage media made from silicon microchips.
b) Optical storage is any storage method in which data is written and read with a laser.
c) Magnetic storage is the manipulation of lasers on a medium in order to record audio, video or other data..
d) Examples for Solid state storage are CDs , DVDs and flash drives.

Which of the above can be considered true?

(i). A & B only (iii). A & D only (v). All of the above
(ii).B & C only (iv). A & C only

11) Consider the following computer classifications:

a) Super ,mainframe , mini , micro
b) Digital , Analog, Hybrid
c) Personal , Laptop, Palmtop, Desktop
d) General purpose, Special purpose

Which of the above **cannot** be considered as true classification of computers:

(i). A (iii). C (v). All of the above
(ii).B (iv). D

12) Which of the following devices could be considered to have the highest access speed?

(i). Compact Disk
(ii). Digital Versatile Disk
(iii). Internal Hard Disk
(iv). Magnetic Tape
(v). Flash drive

13) The stored Program Concept was introduced by:

(i). Charles Babbage
(ii). Ada Augusta Lovelase

(iii). John Von Neumann
(iv). Howard Aiken
(v). John Vincent Atanasoff

14) Select the answer that depicts the ascending order of the capacity of the storage devices.
(i). CD, DVD, Blue Ray Disc, Hard Drive.
(ii). Blue Ray Disc, CD, DVD, Had Disc.
(iii). DVD, CD, Flash Drive, Hard Drive.
(iv). Hard Disc, Flash Drive, DVD, CD.
(v). Hard Drive, DVD, Blue Ray Disc, CD.

15) Consider the following memory types
A. RAM
B. ROM
C. Cache
D. Registers

Which of the following can be considered as non - volatile memory?

(i). A only
(ii). A and B only
(iii). C only
(iv). A and C only
(v). B only

B- Provide suitable answers for the following questions.

1) List Volatile and Non Volatile Memories of a computer.

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2) Explain the differences between SRAM and DRAM.

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3) Give the difference between RAM and ROM.

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4) Give the four types of Read Only Memory (ROM).

(i). .....
(ii). .....
(iii). .....
(iv). .....

5) Which type of ROM can be erased by exposing it to ultraviolet light?

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6) Give two advantages of using direct entry input devices over keyboard entry input devices..

(v). .....
(vi). .....
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7) Briefly explain the Basic Input Output System (BIOS).

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8) Give the two types of software and briefly explain them.

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9) Give 4 examples for application (instances) of automatic data processing

(i). .....
(ii). .....
(iii). .....
(iv). .....

10) Briefly explain the following:

a) Parallel Computing.

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b) Grid Computing

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c) Schedulers

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d) Data bus and Control bus.

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e) Optical Storage Devices.

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f) Licensed / unlicensed software

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Part 2

1.
   1) Illustrate the memory hierarchy using a suitable diagram.
   2) Give the types of cache memories.
   3) Give the two memory access methods and briefly explain them using suitable diagrams.

2.
   1) Draw a diagram to depict the fetch and execute cycle of an instruction.
   2) What are multi core processors?
   3) Briefly describe and depict the need for multi core processors in computing. Explain using suitable examples.

3.
   1) Give the main technology used in each computer generation.
   2) Give the classifications of computer according to the following conditions:
      a) Size
      b) Technology
      c) Purpose of use

4.
   1) Illustrate the Vonn Neumann Architecture using a suitable diagram.
   2) Briefly explain the functionality of the components of the Vonn Neumann Architecture.
   3) Name the medium that carries the instructions, data and information to and from the above components: explain how it is carried out.