



# ST. LAWRENCE HIGH SCHOOL

A JESUIT CHRISTIAN MINORITY INSTITUTION

Pre - Test Examination - 2018



Sub :Computer Application

Class: 11 B,C,D

FM: 70

Duration:3hrs 15 Mins.

Date: 06.08.2018

[Special credit will be given for answers which are brief and to the point. Marks will be deducted for spelling mistakes, untidiness and bad handwriting. Figures in the margin indicate full marks for the questions.]

## GROUP A

### [Multiple Choice Type Questions]

#### 1. Choose the correct option:

[1×21=21]

- (i) Which generation computers used Integrated Circuits?  
(a) First (b) Second  
(c) Third (d) Fourth
- (ii) Which of the following is used as storage locations both in the ALU and in the control section of a computer:  
(a) Accumulator (b) Register  
(c) Adder (d) Decoder
- (iii) The first functional automatic calculator was invented by:  
(a) Blaise Pascal (b) Charles Babbage  
(c) Hermon Hollerith (d) Joseph Marie Jacquard
- (iv) Stored Program concept was introduced by:  
(a) Charles Babbage (b) John von Neumann  
(c) John Napier (d) Blaise Pascal
- (v) EDVAC is an example of \_\_\_\_\_ generation computers.  
(a) Second (b) Third  
(c) Fourth (d) First
- (vi) The Boolean expression  $(A + C)(B + C)$  simplifies to:  
(a)  $C + A B$  (b)  $C (A + B)$   
(c)  $BC + A$  (d) None of these
- (vii) CRAY-1 is an example of \_\_\_\_\_ generation computers.  
(a) Second (b) Third  
(c) Fourth (d) First
- (viii) Which computer can be held in the palm of the hand?  
(a) PDA (b) PC  
(c) Laptop (d) Mini Computer
- (ix) The term 'memory' applies to which one of the following:  
(a) Logic (b) Storage  
(c) Input Device (d) Output Device
- (x) A list of instructions used by a computer is called:  
(a) Program (b) Information  
(c) Text (d) Output

- (xi) Which runs on computer hardware and serve as platform for other software to run on:  
 (a) Operating system (b) Application software  
 (c) System software (d) All of the above
- (xii) The process of copying data from a memory location is called:  
 (a) Reading (b) Writing  
 (c) Controlling (d) Booting
- (xiii) Which of the following is the most powerful type of the computer?  
 (a) Mainframe (b) Super computer  
 (c) Micro computer (d) None of these
- (xiv) Accumulator is a \_\_\_\_\_  
 (a) Hardware unit (b) Sequential circuit  
 (c) Finite state machine (d) Register
- (xv) Which of the following memory is volatile?  
 (a) RAM (b) ROM  
 (c) PROM (d) EPROM
- (xvi) The fastest type of memory is \_\_\_\_\_  
 (a) Tape (b) Semiconductor memory  
 (c) Disk (d) Bubble memory
- (xvii) In magnetic disks data is organised on the platter in a concentric sets or rings called:  
 (a) Sector (b) Track  
 (c) Head (d) Block
- (xviii) Which device is used for entering x-y coordinates:  
 (a) Card Reader (b) Joystick  
 (c) Keyboard (d) None of these
- (xix) Which of the following device can be used to directly input printed text?  
 (a) OCR (b) Mouse  
 (c) MICR (d) None of these
- (xx) What is the decimal value of the binary number 1111?  
 (a) 15 (b) 14  
 (c) 64 (d) 16
- (xxi) Which of the following is an example of Non-impact printer:  
 (a) Dot matrix printer (b) Laser printer  
 (c) Drum printer (d) None of these

### GROUP B

(2) Answer the following questions: [Alternatives are to be noted]

[1×14=14]

(i) Mention the full form of EBCDIC.

OR,

What is the full form of ASCII?

(ii) What is 'Optical disk'?

OR,

What is a 'Plotter'?

(iii) Define Super Computer.

- (iv) What is distributive law in Boolean algebra?  
(v) Draw the truth table for a 2 variable Boolean AND operation.  
(vi) Mention the full form of MICR.

OR,

Mention the full form of EPROM

- (vii) What do you mean by Non Positional number system?  
(viii) What is the function of a Light Pen?

OR,

Mention the full form of VLSI.

- (ix) Convert the binary number 101101 into its decimal form.  
(x) What is Radix?  
(xi) Convert  $(375)_8$  to  $(?)_{16}$   
(xii) Give the truth table of Logical OR operation.  
(xiii) What is a ROM?

OR,

What is Flash memory?

- (xiv) What is 'Blue Ray' disk?

### GROUP C

**(3) Answer the following questions: [Alternatives are to be noted]**

**[7×5=35]**

- (i)(a) What are the different generations of computers? Explain the advantages and disadvantages of third generation of computers. (3)  
(b) What is the difference between analog and digital computers? (2)  
(c) Differentiate between RAM and ROM. (2)

OR,

- (a) What is CPU? Explain the different parts of it. (3)  
(b) What is address bus? (2)  
(c) Differentiate between Impact printers and Non-Impact printers. (2)

- (ii) (a) Write down the different categories of memory and explain them. (3)  
(b) What is Cache memory? (2)  
(c) Mention two functions of Bar code reader. (2)

OR,

- (a) Differentiate between data and information. (2)  
(b) Mention the full form of: EDVAC and UNIVAC. (2)  
(c) Differentiate between SRAM and DRAM. (3)

- (iii) (a) Write a short note on Stored Program Concept. (4)  
(b) Convert the hexadecimal number 9CB6 into its decimal form. (3)

OR,

- (a) Write a short note on: (i) MICR (ii) OCR (2+2)  
(b) Discuss about the different types of printers. (3)

- (iv) (a) Prove that  $X+YZ=(X+Y)(X+Z)$  (2)  
(b) Write down the laws of addition and multiplication in Boolean algebra. (2)  
(c) State and explain De' Morgan's theorem. (3)

- (v) (a) Convert  $(235)_{10}$  into its hexadecimal form. (3)  
(b) Convert  $(3402)_8$  to  $(?)_2$  (2)  
(c) What is a Mainframe computer? (2)

**OR,**

- (a) Mention three functions of Computers in Modern Society. (3)  
(b) Convert  $(8A6D)_{16}$  to  $(?)_8$  (2)  
(c) Discuss Data Processing Cycle. (2)





FOR GOD AND COUNTRY

# ST. LAWRENCE HIGH SCHOOL

A Jesuit Christian Minority Institution

First Term Examination- 2018



Sub: Computer Application

Class: XI B/C/D

F.M.: 70

Duration: 3 Hours & 15 Minutes

Date: 6<sup>th</sup> August, 2018

[Special credit will be given for answers which are brief and to the point. Marks will be deducted for spelling mistakes, untidiness and bad handwriting. Figures in the margin indicate full marks for the questions.]

## SOLUTION

### GROUP A

#### [Multiple Choice Type Questions]

#### 1. Choose the correct option:

- (i) Which generation computers used Integrated Circuits?  
Answer: (c) Third
- (ii) Which of the following is used as storage locations both in the ALU and in the control section of a computer?  
Answer: (b) Register
- (iii) The first functional automatic calculator was invented by:  
Answer: (a) Blaise Pascal
- (iv) Stored Program concept was introduced by:  
Answer: (b) Johnvon Neumann
- (v) EDVAC is an example of \_\_\_\_\_ generation computers.  
Answer: (d) First
- (vi) The Boolean expression  $(A + C)(B + C)$  simplifies to:  
Answer: (a)  $C + AB$
- (vii) CRAY-1 is an example of \_\_\_\_\_ generation computers.  
Answer: (c) Fourth
- (viii) Which computer can be held in the palm of the hand?  
Answer: (a) PDA
- (ix) The term 'memory' applies to which one of the following:  
Answer: (b) Storage
- (x) A list of instructions used by a computer is called:  
Answer: (a) Program
- (xi) Which runs on computer hardware and serve as platform for other software to run on:  
Answer: (a) Operating system
- (xii) The process of copying data from a memory location is called:  
Answer: (a) Reading
- (xiii) Which of the following is the most powerful type of the computer?  
Answer: (b) Super computer
- (xiv) Accumulator is a \_\_\_\_\_  
Answer: (d) Register

(xv) Which of the following memory is volatile?

Answer: (a) RAM

(xvi) The fastest type of memory is \_\_\_\_\_

Answer: (b) Semiconductor memory

(xvii) In magnetic disks data is organised on the platter in a concentric sets or rings called:

Answer: (b) Track

(xviii) Which device is used for entering x-y coordinates:

Answer: (b) Joystick

(xix) Which of the following device can be used to directly input printed text?

Answer: (a) OCR

(xx) What is the decimal value of the binary number 1111?

Answer: (a) 15

(xxi) Which of the following is an example of Non-impact printer:

Answer: (b) Laser printer

### GROUP B

(2) Answer the following questions: [Alternatives are to be noted]

(i) Mention the full form of EBCDIC.

Extended Binary Coded Decimal Interchange Code.

OR,

What is the full form of ASCII?

American Standard Code for Information Interchange.

(ii) What is 'Optical disk'?

Optical disks are used for back up memory. Information is written to or read from an optical disk using laser beam

OR,

What is a 'Plotter'?

A Plotter is a pen-based output device that is attached to a computer for making vector graphics. It is used to draw high resolution charts, graphs, blueprints, maps etc.

(iii) Define Super Computer.

These are the most powerful computers. They are used for very complex computation work.

(iv) What is distributive law in Boolean algebra?

$$x+(y.z) = (x+y).z \quad \& \quad x.(y+z) = (x.y)+z$$

(v) Draw the truth table for a 2 variable Boolean AND operation.

X	Y	F=X.Y
0	0	0
0	1	0
1	0	0
1	1	1

(vi) Mention the full form of MICR.

Magnetic Ink Character Reader.

OR,

Mention the full form of EPROM

Erasable Programmable Read Only Memory

(vii) What do you mean by Non Positional number system?

Hints: Roman Number System.

(viii) What is the function of a Light Pen?

It facilitates drawing images and select objects on the display screen by directly pointing with the pen.

OR,

Mention the full form of VLSI.

Very Large Scale Integration.

(ix) Convert the binary number 101101 into its decimal form.

Answer:  $(45)_{10}$

(x) What is Radix?

Hints: Base of the number system. Example: For binary 2, Decimal 10, Octal 8 etc.

(xi) Convert  $(375)_8$  to  $(?)_{16}$

Answer:  $(FD)_{16}$

(xii) Give the truth table of Logical OR operation.

X	Y	F=X+Y
0	0	0
0	1	1
1	0	1
1	1	1

(xiii) What is a ROM?

Read Only Memory

OR,

What is Flash memory?

Flash memory is a variation of EEPROM. It is used in digital phones, cameras etc.

(xiv) What is 'Blue Ray' disk?

Blue-Ray disk is an optical disc storage medium designed to supersede the dvd format. It has huge storage capacity used to store video material such as feature films.

### GROUP C

(3) Answer the following questions: [Alternatives are to be noted]

(i)(a) What are the different generations of computers? Explain the advantages and disadvantages of third generation of computers.

Hints: First, Second, Third, Fourth and Fifth.

(b) What is the difference between analog and digital computers?

Hints: Digital and without digital.



(c) Differentiate between RAM and ROM.

Hints: Volatile and Non volatile.

**OR,**

(a) What is CPU? Explain the different parts of it.

Central Processing Unit. Hints: Parts: ALU, Control Unit and Registers.

(b) What is address bus?

Hints: Memory can be divided for the purpose of reading or writing any information on to memory CPU needs to specify the address of a particular location.

(c) Differentiate between Impact printers and Non-Impact printers.

Hints: Use of striking device.

(ii) (a) Write down the different categories of memory and explain them.

Hints: Primary memory and Secondary memory. Explain with the help of flow chart.

(b) What is Cache memory?

Hints: High speed memory placed between CPU and RAM.

(c) Mention two functions of Bar code reader.

Bar code is a machine readable code in the form of a pattern of parallel vertical lines of varying widths.

**OR,**

(a) Differentiate between data and information.

Hints: One is processed data & another one is non processed data.

(b) Mention the full form of: EDVAC and UNIVAC.

EDVAC: Electronic Discrete Variable Automatic Computer.

UNIVAC: Universal Automatic Computer.

(c) Differentiate between SRAM and DRAM.

Hints: Compare based on speed and Processing.

(iii) (a) Write a short note on Stored Program Concept.

Hints: Introduced by John von Neumann in 1940.

(b) Convert the hexadecimal number 9CB6 into its decimal form.

Answer:  $(40118)_{10}$

**OR,**

(a) Write a short note on: (i) MICR: Magnetic Ink Character Reader

(ii) OCR : Optical Mark Reader



(b) Discuss about the different types of printers.

Hints: Impact and Non Impact Printers.

(iv) (a) Prove that  $X+YZ=(X+Y)(X+Z)$

Hints: By applying Boolean Algebra.

(b) Write down the laws of addition and multiplication in Boolean algebra.

Hints: Associative Law and Commutative Law.

(c) State and explain De' Morgan's theorem.

Hints: Sum theorem and Product theorem.

(v) (a) Convert  $(235)_{10}$  into its hexadecimal form.

Answer:  $(EB)_{16}$

(b) Convert  $(3402)_8$  to  $(?)_2$

Answer:  $(11100000010)_2$

(c) What is a Mainframe computer?

A mainframe is a ultra high performance computer made for high volume, processor intensive computing.

**OR,**

(a) Mention three functions of Computers in Modern Society.

Hints: E commerce, Education Sector, Industry, E notes etc.

(b) Convert  $(8A6D)_{16}$  to  $(?)_8$

Answer:  $(105155)_8$

(c) Discuss Data Processing Cycle.

Answer: Origination, Input, Manipulation, Output, Storage.