



E I,II

First Term Test - 2023

Grade 12

General Information Technology I.

03 hours

Note :

- (i) Answer all questions.
- (ii) In each of the questions 1 to 40, select and underline one of the alternatives (1), (2), (3), (4) which you consider as correct or most appropriate.

1. Class teacher asks from the students to gather marks for mathematics of each student to select the **best student** in the class for mathematics. The words that are **bold** respectively refer to,

- (1) Qualitative Data and Quantitative Data
- (2) Qualitative Data and Qualitative Data
- (3) Quantitative Data and Qualitative Data
- (4) Quantitative Data and Quantitative Data

2. ^{Data}.....A..... is processed in to ^{Information}.....B..... by an information system. Which of the following pair of term is appropriate for A and B respectively.

- (1) Data and information
- (2) Data and instructions
- (3) Instructions and information
- (4) Information and data

3. Consider the following computer devices

A - Mouse

B - scanner

C - printer

D - speaker

Which of the above could be used as input devices of the computer.

- (1) A and C
- (2) A and B only
- (3) C and D
- (4) All ABCD

4. Which row of the given table matches the two column compact disk and scanner correctly?

A	Input	Output
B	Storage	Input
C	Input	Storage
D	Output	Input

- (1) A
- (2) B
- (3) C
- (4) D

5. Piyal has taken a photo using a digital camera, and shows the photo to Aruna using the display at the camera. In this scenario the camera serves as;

- (1) Output device only
(3) Input device only

- (2) Communication device only
(4) Both Input Output device only

6. Sugath prepares a report using word processing software, what is the most suitable device that can be used to insert a picture from a book.

(1) Mouse

(2) Keyboard

(3) Printer

(4) Scanner

7. Which of the following is the correct list of storage media in ascending order of increasing capacity?

(1) DVD, Hard disk, CD

(2) CD, DVD, Hard disk

(3) DVD, CD, Hard disk

(4) Hard disk, CD, DVD

8. When a computer is operate data and instructions are directly brought into the CPU through the cache memory from the.....

(1) CD

(2) Hard disk

(3) Main memory

(4) Processor

9. The numbers, words, images and symbols which do not bear a meaning, when they are standing alone.

(1) Information

(2) Data

(3) Process

(4) None of these

10. You have typed a letter and save it in a..... . You save the..... by giving a name and computer itself provide an relevant to its file type .

(1) File / folder/ extension

(2) Folder / file / extension

(3) Extension / file / folder

(4) File / extension/ folder

11. What is the answer included only system software

(1) Operating system, utility software, graphic software

(2) Ms Office package, operating system, language translators

(3) Utility software, Language Translators, operating system

(4) Ms Office package, graphic software, web browser

12. Which of the following ports is used simultaneously for both digital TV and digital audio devices?.

(1) HDMI port

(2) Serial port

(3) Parallel port

(4) USB port

13. When a new printer connected to a computer, installing a special software is usually required for the proper functioning of the printer. What is this special software is called

(1) Defragmenter

(2) Device drivers

(3) File manager

(4) Task manager

14. Which of the following shows the storage devices arranged according to their access speeds from slowest to the fastest?

(1) Floppy disk, Hard disk, Main memory

(2) Hard disk, Floppy disk, Main memory

(3) Hard disk, Main memory, Floppy disk

(4) Main memory, Hard disk, Floppy disk

15. Components of the CPU in a personal computer are.....

- (1) Memory, Control unit, storage
- (2) CU, ALU, ROM
- (3) Control unit, ALU, memory register
- (4) ALU, Control unit, cache

16. Considering the number 10012_x , this number is,

P – Binary Number.

Q – Decimal Number

R – Hexadecimal Number.

The correct answer is,

- (1) Only P
- (2) Only P and Q
- (3) Only Q and R
- (4) All P, Q, R

17. The Decimal equivalent of the Binary number 10011 is?

- (1) 18
- (2) 19
- (3) 21
- (4) 11

18. The binary equivalent of the decimal number 75 is?

- (1) 1001011
- (2) 1001010
- (3) 1001101
- (4) 1110001

19. Which of the Following is the smallest

- (1) 100101_2
- (2) 110110_2
- (3) 110011_2
- (4) 100111_2

20. Which is the Boolean operator that performs the Boolean expression $A+B$?

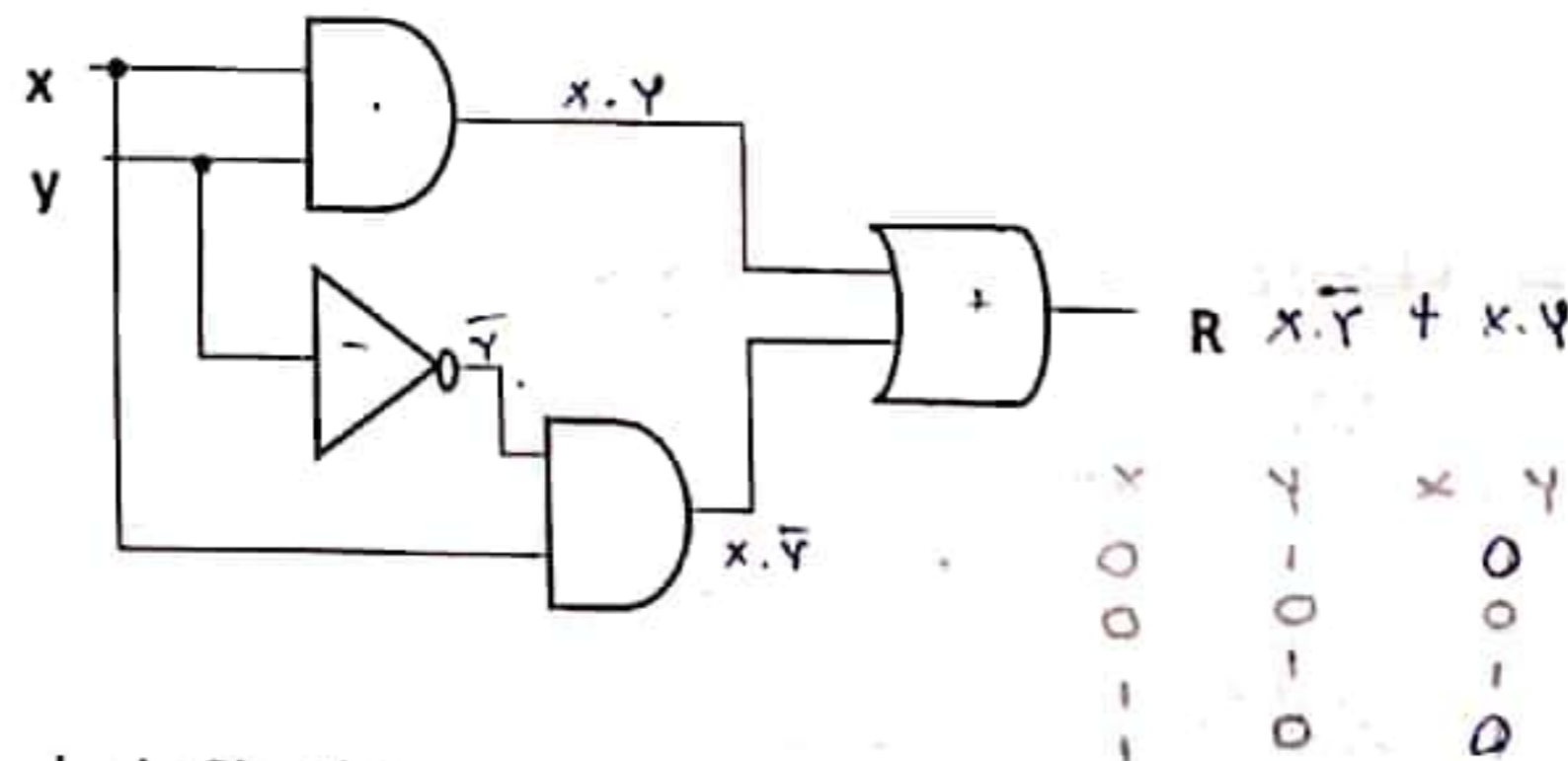
- (1) AND
- (2) OR
- (3) NOT
- (4) NOR

21. Which Boolean logic is represented by the truth table below?

A	B	R
0	0	0
0	1	1
1	0	1
1	1	1

- (1) AND
- (2) OR
- (3) NOT
- (4) NOR

• Answer questions 22 and 23 using the logic circuit below



22. The output of above logic Circuit is.

- (1) $(X+Y).(X+\bar{Y})$
- (2) $X.Y+X.\bar{Y}$
- (3) $X.\bar{Y}+X.Y$
- (4) $X.Y+X.\bar{Y}$

23. The truth table of the above circuit is?

(1)

X	Y	R
0	0	0
0	1	0
1	0	1
1	1	1

(2)

X	Y	R
0	0	1
0	1	1
1	0	0
1	1	0

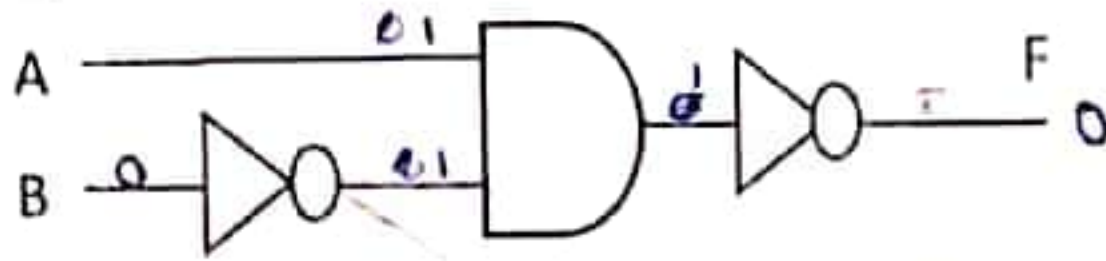
(3)

X	Y	R
0	0	0
0	1	1
1	0	1
1	1	1

(4)

X	Y	R
0	0	0
0	1	1
1	0	1
1	1	0

24. If the output of the following logic circuit is 0 then the inputs A and B respectively are



(1) 1 and 1

(2) 0 and 0

(3) 1 and 0

(4) 0 and 1

25. If 01000011 represents "C" in ASCII code, What is the ASCII code for letter "A"?

(1) 01000010

(2) 01000001

(3) 01000100

(4) 01000111

26. Thushari uses fingerprint as well as pin number to unlock her mobile phone. It is possible to unlock using either or both of these. Accordingly, the Boolean operator represent here is?

(1) AND

(2) OR

(3) NOT

(4) NOR

27. According to the file extension to which type of files belongs to .jpg extension?

(1) Word file

(2) Audio file

(3) Video File

(4) Image file

28. Which of the following software cannot be considered as Utility software?

(1) Kaspersky

(2) Character Map

(3) Java compiler

(4) Device driver

29. Which of the following free and open source Operating system comes with the given symbol?

(1)



(2)



(3)



(4)



30. Consider the following statements regarding Windows Operating system.

a - It has a graphical user interface

b - It is a free and open source mobile operating system

c - Its source code can be edited

(1) Only a is correct

(2) only and b are correct

(3) Only a and c are correct

(4) All are correct

31. In a graphical user interfaces the following set of icons can be seen in right corner top. The are



(1) Restore, maximize, close

(2) Minimize, Maximize, close

(3) Minimize, Restore, close

(4) Restore, Maximize, close

32. Which of the following utility/utilities can be used to identify and remove unnecessary files?

(1) Disk Defragment

(2) Check Disk

(3) Disk Clean-Up

(4) Recycle bin

33. A graphical user interface has four main elements. Which of the following is the answer that contains them correctly?

(1) Window, Menu, Icon, Pointer

(2) Window, Menu, Item, Pointer

(3) Window, Menu, Icon, Power

(4) Window, My computer, Icon, Pointer

34. All the Programs that are installed in the computer can be removed from

(1) Recycle bin

(2) Task manager

(3) Windows explorer

(4) Programs and features

35. Which of the following cannot be a function of an operating system

(1) Changing the system date and time

(2) Re arranging the files and folders in alphabetical order

(3) Switching between user accounts

(4) Changing the font of the application

36. Which of the following is **incorrect** regarding Microsoft word packages?

(1) It can be saved with the .doc extension.

(2) Ctrl+U can be used to insert a link to www.nie.lk in a word document

(3) Abiword, word perfect and iWork pages can be considered as word processing software

(4) All of the above

37.  Can be used to

(1) To highlight text

(2) To insert a word art

(3) To wrap text

(4) To change the font color of the text

38. The key board short cut Ctrl+Y is for

(1) Paste

(2) Cut

(3) Copy

(4) Redo

39. The formatting changes that are applied to the following text are

Formatted text in 1st paragraph

have to be selected

(1) Font, Italic, underline, superscript, center

(2) Bold, Italic, underline, superscript, Justify

(3) Word art, underline, Center, subscript

(4) Text effect, underline, justify, italic, superscript

40. Which of the following is the most appropriate way to include following element in a word document?

First		
Second	Third	Fourth

(1) Smart Art

(2) Table

(3) Text box

(4) Shape

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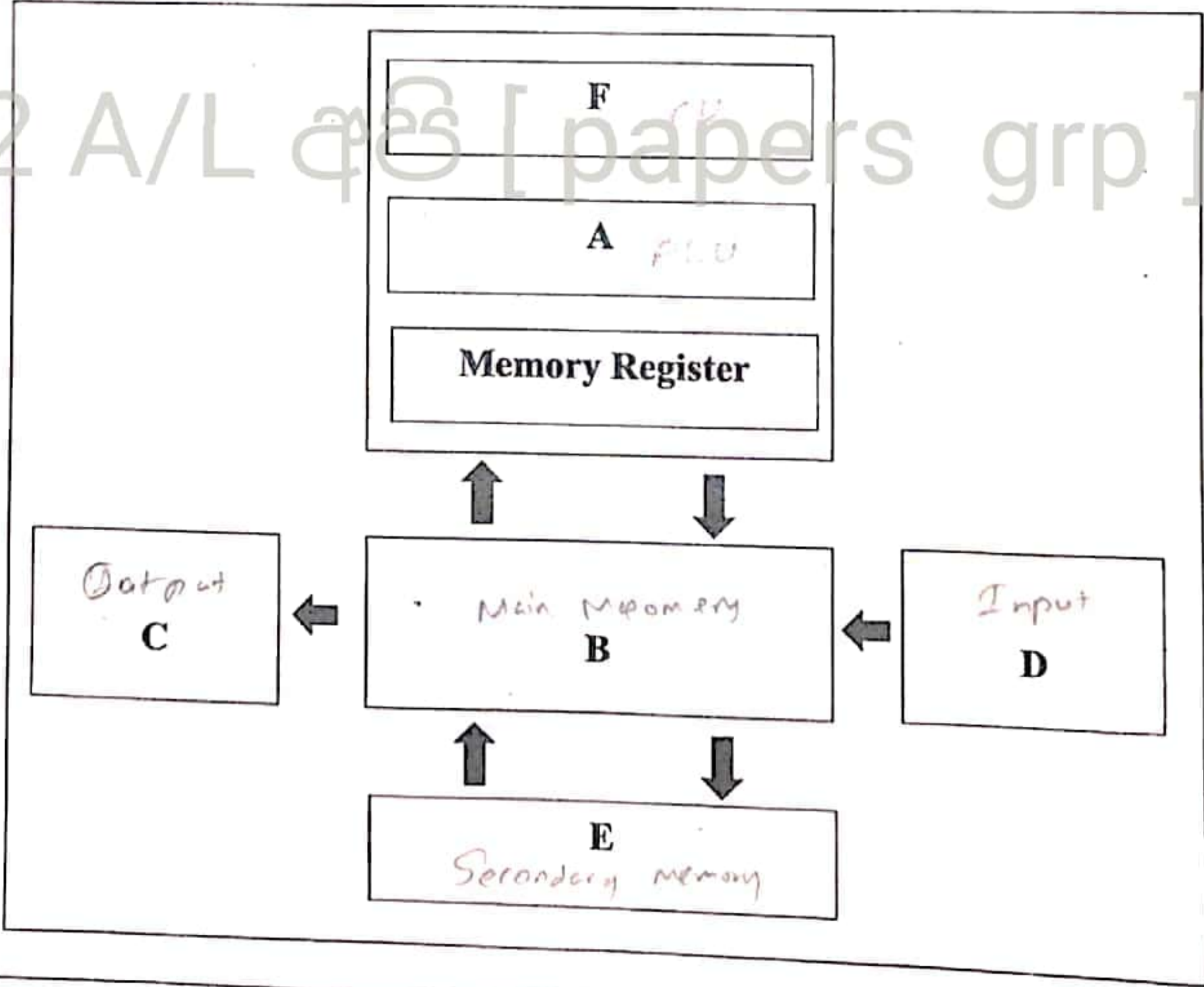
General Information Technology II

- Answer only 04 questions
- Each of the questions carries 15 marks.

(I) (1) In our daily life we come across many information systems. Among them, information systems such as computers and ATMs can be taken as examples.

- (a) Briefly explain what is meant by information system.
- (b) Apart from the information system mentioned above, write three examples for other information systems.

(2) A computer is basically an electronic device that acts as an information system. Its internal structure is shown here by using Von Neumann architecture. Based on that, answer the questions given below.



- (a) Name the parts A to F here respectively.
- (b) Write two examples of devices that can be used for D and two examples of devices that can be used for C.
- (c) Each item in Table X can be matched with an item in Table Y Write down the labels of the **most suitable** matching pairs on your answer script.

Table X		Table Y	
A	Connecting a multimedia projector to a system unit	P	PS/2 Port
B	Connecting a key board to a system unit	Q	VGA Port
C	Connecting a speaker to a system unit	R	Parallel Port
D	Connecting a printer to a system unit	S	Audio Port
E	Connecting a digital TV to a system unit	T	HDMI Port

(02) (1) Information is an essential factor in making every decision in our daily life. The use of technology to produce and distribute information is called information and communication technology.

- (a) Give two examples of data used to produce information.
- (b) Write three examples of information used to make decisions in daily life.
- (c) Write four characteristics that a quality information should have.

(2) Mark the following sentences as true if they are true and false if they are false.

- A. When buying a computer, you should consider its main memory capacity and clock speed.
- B. When considering the size of a computer screen, it is taken in the horizontal direction of the computer screen.
- C. Just as a computer can have multiple antivirus software installed, it is best to have multiple antivirus software running on a computer at the same time.
- D. When buying a computer, it is not necessary to determine the speed of its processor according to the task it will be used for.
- E. Onsite is a type of warranty that can be used when buying a computer.
- F. It is mandatory to install the OS before installing all application softwares.

(03) (1) An operating system is system software that manages computer hardware, software, - resources and provides common services for computer program.

- (a) An operating system has two basic functions. Resource management is one of the above. Write other basic function of an operating system. *Providing user interface*
- (b) Write two examples of operating systems that must be purchased and two examples of operating systems that can be downloaded for free. *Windows Linux Android*

(2)(a) Operating systems can be classified into three types. Fill the following table related to that classification with the help of the given list.

Stand-alone	Network	Embedded

Word list – Mac OS, GPS System, Linux, MS Windows Server, Heart Pacemaker, DOS

(b) Name three utility programs that are commonly included as operating system tools.

disk formatting antivirus program

(04) (1) Gamini, who was a fruit seller, had 80 mangoes. He has sold 100010_2 of them. The rest was brought home to make fruit drinks and sell.

- State the number of mangoes initially held by the Gamini as a binary number.
- Write the number of mangoes sold by Gamini as a decimal number.
- Write the number of mangoes brought home to make the drink as a binary number.
- Write down the number of mangoes that the above Gamini had initially, the number of mangoes he sold and the number of mangoes he brought home to make the drink in descending order.

(2) Central Processing Unit is made up of a collection of a large number of logic gates. Logic gates are based on three basic Boolean operators.

(i) Draw a Logic circuit for the following Boolean expression

$$F = (P \text{ AND } Q) \text{ AND } (\text{NOT}(P) \text{ OR } Q) \quad (P \cdot Q) \cdot (\bar{P} + Q)$$

(ii) Draw a Truth Table for the following Boolean expression

$$F = (X+Y) \cdot (X \cdot \bar{Y}) + (\bar{X} + \bar{Y})$$

(3) State whether the following sentences are true or false.

- A system in which numbers are named or represented is called number system.
- Hexadecimal is a base 6 number system
- A byte is the smallest unit used to represent characters, images, audio and video in a computer system.
- Unicode is used to uniquely represent a maximum of 65536 characters.

(05) (1) Write down two examples for word processing software

(2) Write down the key board shortcuts which are used to do the following tasks

- (a) Undo
- (b) Cut a text
- (c) Paste a text
- (d) Save document
- (e) Copy a text

(3) State why some of the words in the word documents are underlined with red?

(4) The following is a part from a document with some formatting.

A → Working with word

B → Video provides a powerful way to help you prove your point. When you click Online Video, you can paste in the embed code for the video you want to add. You can also type a keyword to search online for the video that best fits your document.





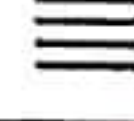



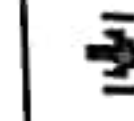
C → To make your document look professionally produced, Word provides header, footer, cover page, and text box designs that complement each other. For example, you can add a matching cover page, header, and sidebar. Click Insert and then choose the elements you want from the different galleries.

D → Themes and styles also help keep your document coordinated. When you click Design and choose a new Theme, the pictures, charts, and SmartArt graphics change to match your new theme. When you apply styles, your headings change to match the new theme.

Reading is easier, too, in the new *Reading view*. You can collapse parts of the document and focus on the text you want. If you need to stop reading before you reach the end, Word remembers where you left off - even on another device.

E ← **F**

Below are icons of some of the formatting tools available in word processing software

1	2	3	4	5	6	7	8	9	10	11	12	13
B	I	U	14 ▾									

Identify the icons using the formatting tool required to perform each formatting task indicated by labels A to F, from the labels 1 to 13. Write the labels A to F and the suitable formatting tool icon label.