



PROVINCIAL DEPARTMENT OF EDUCATION NORTH WESTERN PROVINCE
THIRD TERM TEST - 2019

Grade 10 INFORMATION & COMMUNICATION TECHNOLOGY - I **One Hour**

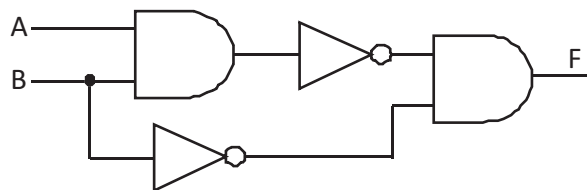
Name / Index No. :

• **Answer all the questions.**

01. Which of the following connection is CORRECT under the government concept of using ICT by providing facilities such as gazettes, circulars and forms?
- (1) G 2 C (2) G 2 G (3) G 2 B (4) G 2 E
02. Which is INCORRECT from the given statements in relation with using robots in modern industries?
- (1) Obtaining 24 hour service. (2) Minimal initial cost.
(3) Efficiency. (4) Accuracy and hygiene.
03. What is the unguided media (Radiated media) that is used to transmit data between two places of longest distance from the given data transmission media?
- (1) Infrared. (2) Fiber optics. (3) Micro waves. (4) Radio waves.
04. Select the feature that is first identified in fifth generation computer software's and not identified in other computer generations?
- (1) Operating system with GUI.
(2) Introduction of Linux Os.
(3) Voice recognition based on artificial intelligence.
(4) Use of high level computer languages.
05.A..... port is used to connect wires to a computer network.B..... port connects digital TV to any of the computers in the network when doing a presentation.C..... port connects a modern printer to the computer of this network.
- What is the answer that mentioned the suitable port respectively to fill in the blanks above A, B and C?
- (1) RJ 45, VGA, USB (2) VGA, USB, RJ 45
(3) VGA, RJ 45, USB (4) RJ 45, VGA, HDMI
06. Convert A_{16} into binary, octal and decimal and which answer gives the above values respectively?
- (1) $10101000_2, 250_8, 88_{10}$ (2) $10101000_2, 250_8, 168_{10}$
(3) $1000001_2, 250_8, 88_{10}$ (4) $10000011000_2, 88_8, 168_{10}$

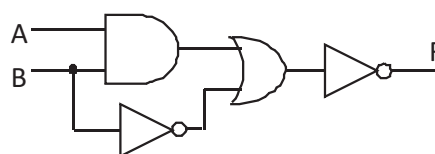
07. Which of the following is equivalent to 124 and 457 decimal values respectively?
- (1) $7C_{16}$ and $1C_8$ (2) 174_8 and $1C9_{16}$
 (3) 174_{16} and 711_8 (4) 1111100_2 and 147_8
08. What is the Most Significant Digit (MSD) and the Least Significant Digit (LSD) of 0.04320?
- (1) 4, 2 (2) 0, 2 (3) 0, 0 (4) 4, 0
09. A student says that some DVD's have been made with the capacity of 8GB. Which of the following gives the equal value of 8GB.
- (1) 2^{23} MB (2) 8×2^{20} KB (3) 2^{30} Bytes (4) 8×2^{30} KB
10. Which answer contains the secondary storage devices of magnetic, fiber and solid state respectively?
- (1) Harddisk, floppy disk, micro SD card.
 (2) Floppydisk, micro SD card, blue ray disk.
 (3) Floppydisk, compact disk, flash drive.
 (4) Flashdrive, micro SD cards, floppy disk.
11. What is the nonvolatile memory used in computers?
- (1) RAM, cache, memory register
 (2) RAM, cache, ROM
 (3) secondary memory, cache, ROM
 (4) cache, ROM, secondary memory
12. What is the device used to connect two or more networks of computer networking?
- (1) Switch (2) Hub (3) Modem (4) Router

13. What is the relevant Boolean Expression of the output F in the given logic circuit?



- (1) $\overline{(A+B)} \cdot \overline{B}$ (2) $(\overline{A} \cdot \overline{B}) + \overline{B}$ (3) $(\overline{A} \cdot \overline{B}) \cdot \overline{B}$ (4) $(\overline{A} + \overline{B}) \cdot \overline{B}$
14. Which of the following is NOT a BCD value?
- (1) 10010000 (2) 10011000 (3) 01111000 (4) 10101000

15. The following truth table shows the inputs for the given logic circuit. Which of the following gives the relevant output in the column F respectively?



| A | B | F |
|---|---|------|
| 0 | 0 | |
| 0 | 1 | |
| 1 | 0 | |
| 1 | 1 | |

- (1) 1, 0, 1, 1
 (2) 0, 1, 0, 0
 (3) 1, 1, 0, 0
 (4) 0, 0, 0, 1

16. is the first program activated in the booting process of the computer and reads the in the first boot device of

What answer shows the correct order to fill in the blanks above?

- (1) BIOS ,POST , Boot sequence
- (2) BIOS , Boot sequence , Master Boot Record(MBR)
- (3) Bootstrap loader , Boot sequence , Master Boot Record(MBR)
- (4) POST , Master Boot Record(MBR), Boot sequence

17. Following is the answer given by the student named Sachinthana to a question asked by the teacher about the requirements for partitioning a hard disk.

- A - It is needed to store different items in different places.
- B - It requires to allocate a separate partition for some operating systems.
- C - It is needed to have more than one operating system in the same machine.

Which is CORRECT from the given statements?

- (1) A and B only.
- (2) A and C only.
- (3) B and C only.
- (4) All A, B and C

18. What is the operating system that cannot be considered as an operating system that supports a single user to perform multiple tasks?

- (1) MS DOS
- (2) MS Windows 7
- (3) MacOS
- (4) Ubuntu

19. Which of the following cannot be considered as a utility program in operating system?

- (1) Task Manager
- (2) File Manager
- (3) Disk Formatting
- (4) Defragmentation

20. Mostly used Word processing software are shown below. What is the software that can be used to prepare documents using Cloud Computing?

- (1) Word perfect
- (2) Libre Office writer
- (3) MS Office word
- (4) Google Docs

21. Which is the short cut keys used for FIND and REPLACE in Word Processing?

- (1) Ctrl + R
- (2) Ctrl + H
- (3) Ctrl + V
- (4) Ctrl + F

22. Select the correct order of tools that is given below?

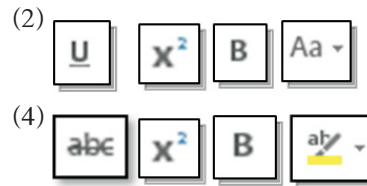
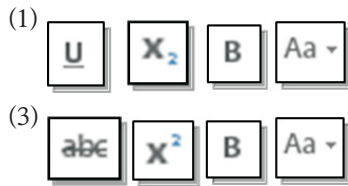


- (1) Left align , Indentation , Line spacing , Column
- (2) Indentation , Left align , Line spacing , Column
- (3) Left align , Line spacing , Indentation , Column
- (4) Right align , Indentation , Line spacing , Column

23. What are the tools that can be used to format the statement A into B?

A - the 1st institution of information security of sri lanka

B - **The 1st Institution Of Information Security Of Sri Lanka**



24. A document prepared using word processing software is given below. What is CORRECT regarding part A?

- (1) No of characters that is not printed.
- (2) Alternative symbol used instead of brackets.
- (3) Field names of a table that is used in mail merge.
- (4) A few records of a table that is used in mail merge.

Computer resource center,
Maharagama.
2019/08/01

<title><Name> } A
<Address 1> }
<Address 2> }

ICT Training Center

We will start our new courses in the near future. All the lessons are with complete step by step, easy to follow instructions.

25. What is NOT a valid function used in spreadsheet softwares?

- (1) =sum(A1:C1+D1)
- (2) =sum(A1:C1,A2:C2)
- (3) =average (A1,C1,A2,C2)
- (4) =average (A1:C1, C2)

26. What is the answer if the formula =COUNT(A2:A7) is entered in cellA8?

- (1) 6
- (2) 271
- (3) #NAME ?
- (4) 5

| | A | B |
|---|-------|-----|
| 1 | Maths | ICT |
| 2 | 23 | 50 |
| 3 | 43 | 45 |
| 4 | 90 | 65 |
| 5 | 75 | 80 |
| 6 | ab | 80 |
| 7 | 40 | 95 |
| 8 | | |

27. Road accidents that are occurred in Kurunegala police division in 2018 can be classified as motor bikes, cars and passenger transport buses and other. What is the most suitable chart type that depicts the percentage of them with all accidents?

- (1) Column charts
- (2) Bar charts
- (3) Line charts
- (4) (1).Pie charts

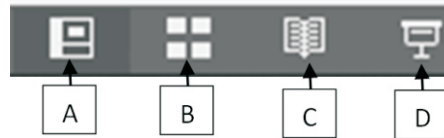
28. Data is entered in a spreadsheet worksheet as given below and A1 is selected as the active cell and if ctrl+ is used, the task that can be done is,

- (1) goes to right side one cell
- (2) goes to right side of the last cell of data entered range.
- (3) change from one worksheet to another
- (4) goes to right side of the last cell of the data entered range.

| | A | B | C | D |
|---|----|----|----|----|
| 1 | 60 | 45 | 75 | 30 |
| 2 | 75 | 50 | 60 | 35 |
| 3 | 50 | 45 | 50 | 20 |

29. What is the answer if entered the formula $=(3^3+3)/3*2-5$ in the cell of a spreadsheet worksheet?
 (1) 16 (2) 15 (3) 0 (4) 3

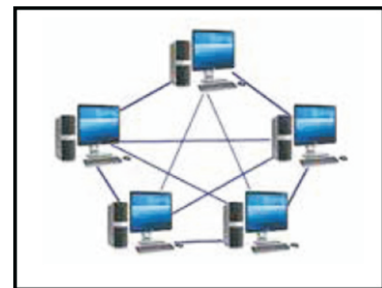
30. Select the answer which shows the following icons in the sequential order?



- (1) normal view , slide sorter view , reading view , slide show
- (2) slide show , normal view , reading view , slide sorter view
- (3) Normal view , slide show , slide sorter view , reading view
- (4) slide show , reading view , normal view , slide sorter view

31. What is the network topology given below?

- (1) Mesh Topology
- (2) Tree Topology
- (3) Bus Topology
- (4) Star Topology



32. Which is NOT a presentation software from the given below?

- (1) Apple Keynote (2) Libre office Impress
- (3) LyX (4) Corel presentation

33. In a slide show the keys P, N, B and Esc can be used for various types of activities. What is the correct sequence of activities that can be done using above keys?

- (1) Starting slide show, Goes to next slide, Screen becomes black, Getting withdraw from slide show
- (2) Goes to previous slide, Getting a new slide, Screen becomes black , Getting withdraw from slide show
- (3) Starting slide show , Goes to next slide , Goes to previous slide, Closing slide show
- (4) Goes to previous slide , Goes to next slide ,Screen becomes black , Getting withdraw from slide show

● **Following Tables are used by a tourist organization to maintain their database. Answer questions 34 to 37 using the tables in relation with them.**

34. Which answer shows the correct number of fields and records of the vehicle table?

- (1) 3 , 4
- (2) 3 , 5
- (3) 4 , 3
- (4) 5 , 3

Vehicle Table

| Vehicle No. | Vehicle Type | Fees per Day |
|-------------|--------------|--------------|
| BAH 2343 | LV001 | Rs.12000.00 |
| AGH 5643 | CL002 | Rs.10000.00 |
| CAK 7867 | LC001 | Rs.15000.00 |
| CBK 2332 | LC001 | Rs.16000.00 |

35. What is most relevant fields that can be used as the primary key of Drive Table?

- (1) Driving License No.
- (2) Name
- (3) Address
- (4) Vehicle No.

Driver Table

| Driving License No. | Name | Telephone No. | Vehicle No. |
|---------------------|----------|---------------|-------------|
| C 12321243 | Dinesh | 071-2443234 | BAH 2343 |
| A 13256645 | Kavinda | 072-7667543 | AGH 5643 |
| C 24378651 | Rukshan | 071-8900651 | CAK 7867 |
| C 20056340 | Lasantha | 077-2321124 | BAH 2343 |
| A 32456690 | Madawa | 071-5436232 | CBK 2332 |

36. This organization uses one vehicle for each driver and two drivers are used for some vehicles. What is the relationship that shows between Vehicle table and Driver table?

- (1) One-Many Relationship
- (2) Many-Many Relationship
- (3) One-One Relationship
- (4) One-Two Relationship

37. This organization needs to identify the driver and his vehicle using Drive Table and Vehicle Table. What is the object that can be used to have a table as given below?

- (1) Table
- (2) Queries
- (3) Reports
- (4) Forms

Driver_Vehicle Table

| Name | Vehicle Number |
|----------|----------------|
| Dinesh | BAH 2343 |
| Kavinda | AGH 5643 |
| Rukshan | CAK 7867 |
| Lasantha | BAH 2343 |
| Madawa | CBK 2332 |

38. What is the advantage of having Data Encryption in a table?

- (1) Validity of Data
- (2) More accuracy of Data
- (3) Data Consistency can be maintained
- (4) To avoid entering unauthorized access

39. Composite key is prepared ,

- (1) Using a uniquely identified record of a table.
- (2) Using a combination of two or more fields to identify records in a table.
- (3) Using a field in a table but records can be uniquely identified in another table.
- (4) Using equal field names of two fields to build a relationship between two tables.

40. If the same data is entered in a few records of a table it is called and if the same data is stored in several tables of a database, it is called

- (1) Data Redundancy, Data Duplication
- (2) Consistency, Data Redundancy
- (3) Data Redundancy , Consistency
- (4) Data Duplication , Data Redundancy



PROVINCIAL DEPARTMENT OF EDUCATION NORTH WESTERN PROVINCE
THIRD TERM TEST - 2019

Grade 10 INFORMATION & COMMUNICATION TECHNOLOGY - II Two Hours

Name / Index No. :

- Answer **three** questions only, selecting the **first** question and two others.
- First question carries 20 marks and each of the other questions carries 10 marks.

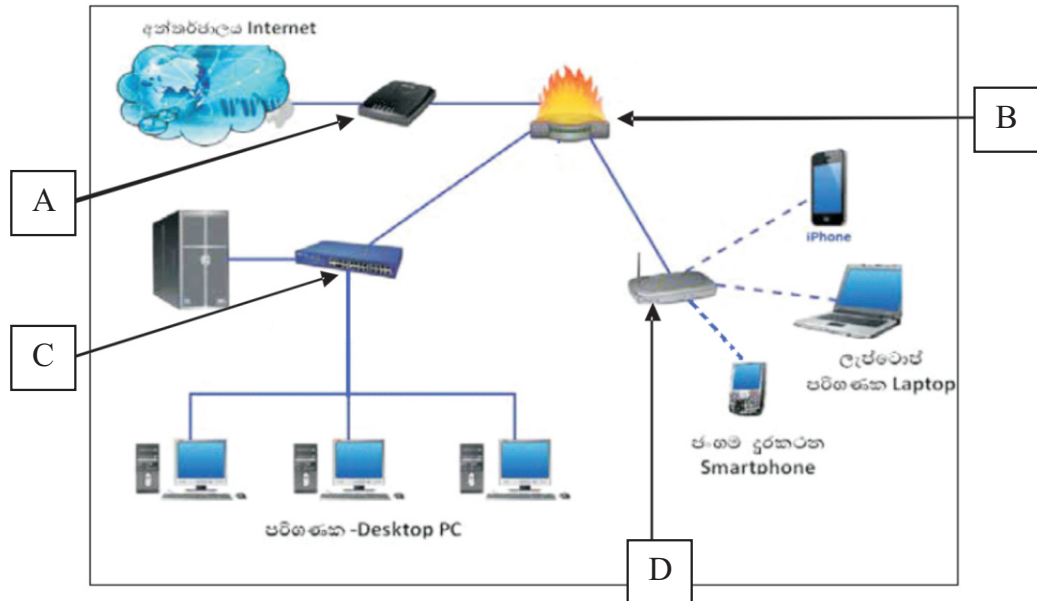
- (01) (i) Mention the input and output of the given machines in relation with Data Processing.
- (a) Obtaining money from ATM machine using the card.
- (b) Preparing reports of employee's attendance using finger print machine.
- (ii) Mention two services that students and teachers can provide through a Learning Management System.
- (iii) Mention two services that are available under Telemedicine.
- (iv) Mention two advantages a person can gain when purchasing an item through online shopping.
- (v) Write ONLY the CORRECT answers from the devices in column A in relation with column B of the following table.

| A | B |
|-----------------|---------------------------------------|
| Input Devices | Blu-Ray, RAM, Monitor ,Scanner |
| Output devices | RAM, Scanner, Monitor , Cache |
| Volatile Memory | RAM, Cache , Scanner, Mouse, CD |
| Fiber Optics | Monitor , Keyboard , Mouse , Blu-Ray. |

- (vi) Write the differences that exist between impact and non-impact printers.
- (vii) Copy the following table into your answer sheet and write one device that can be connected to each port.

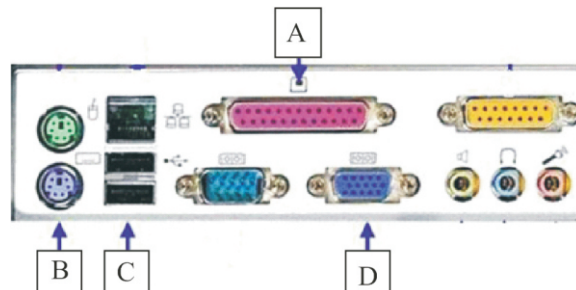
| <i>Name of the port</i> | <i>connected device</i> |
|-------------------------|-------------------------|
| VGA | |
| HDMI | |
| USB | |
| PS/2 | |

(viii) Below is a figure of computer networking.



Identify the devices A, B, C, D and write the task that can be done from each device.

- (ix) The use of electronic presentation is very popular today. Specify two features that should be included in the design of a quality presentation.
- (x) Identify the following A,B,C and D ports which are used to connect different devices to the computer and name them.



(02) Given below is a logical circuit related to an automatic safety brake system used in a modern car. This braking system works only if the following conditions pertaining to the circuit are fulfilled.

The engine of the vehicle is in operation.

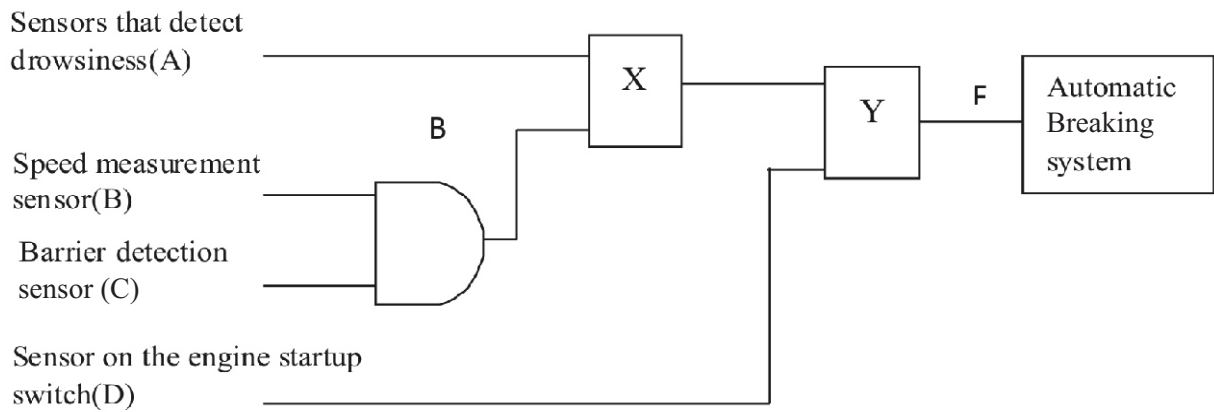
(Inputs functioning as – 1 and non-functioning as – 0)

The sensor detects that the driver is asleep.

(Inputs eyes opened as – 1 and eyes closed as – 0)

When the vehicle is driving at speeds of 30Km or more, there is a barrier of less than 5Km.

(Inputs more than 30Km per hour as – 1 and Less than 30Km per hour as – 0)



- (i) Name the logic gates corresponding to the locations indicated by X and Y in the above circuit.
- (ii) Draw the truth table corresponding to the circuit you have completed.
- (iii) Write the Boolean Expression for the output (F) of the logic circuit completed using the logic gate you entered.

(03) (A) (i) Fill in the table below.

| Code System | No. of Characters |
|-------------|-------------------|
| BCD | |
| ASCII | |
| EBCDIC | |
| Unicode | |

(ii) Copy the following table and fill in the columns of the software table, using the list in brackets.

| Operating System | | Application Software | | Utility Software |
|------------------|----------------------|----------------------|------------------------|------------------|
| With Proprietary | Free and Open source | Cloud Computing | Installed in computers | |
| | | | | |

[Windows 10, Apple Mac OS, Linux, google chrome, google Docs, LibreOffice writer, Task manager, Disk formatting]

(B) A student goes to his school computer lab and connects his personal computer to his school computer network. Then connect the internet, download the ICT text book from the Department of Education Publications web site.

- (i) In the list below, select the network type that will be used in the above scenario.
 - (a) School Computer Network
 - (b) Connecting to the internet

[Local Area Network(LAN), Metropolitan Area Network(MAN), Wide Area Network(WAN)]

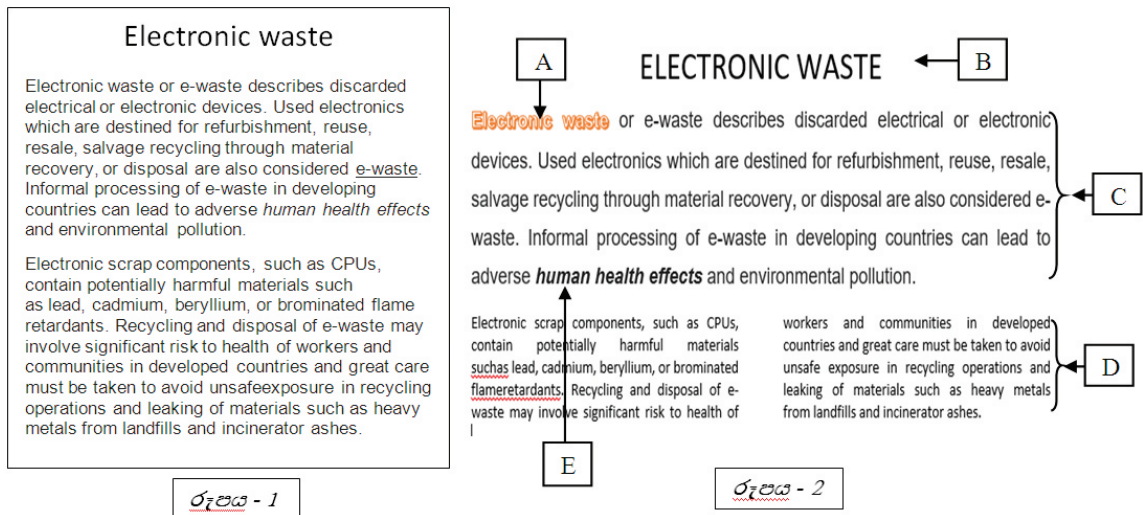
(ii) Specify two strategies to prevent or control unauthorized access by an operating system.

(04) (A) Use the words in brackets to complete the following statements about an electronic presentation.

- (i) can be used when switching from slide to slide.
- (ii) Open a presentation and use the key combination to create a new presentation.
- (iii) can be used to change the position of a slide easily.
- (iv) facility is used to change the format of the slide.
- (v) is used to for images and texts of a slide.

[animation , slide sorter view, slide layout , slide show , slide transition , slide master , new presentation , status bar, ctrl+ M , ctrl+ N , ctrl+ P]

(B) The document shown in figure 1 below is formatted to look like it is in figure 2 using a Word Processing Software. Select the tool from the toolbar below, and write the corresponding number and the label.



| | | | | | | | |
|------------|---|------------|---|------------|---|------------|---|
| 1. | 4 | 11. | 1 | 21. | 2 | 31. | 1 |
| 2. | 2 | 12. | 4 | 22. | 2 | 32. | 3 |
| 3. | 3 | 13. | 3 | 23. | 2 | 33. | 4 |
| 4. | 3 | 14. | 4 | 24. | 3 | 34. | 1 |
| 5. | 1 | 15. | 2 | 25. | 1 | 35. | 3 |
| 6. | 2 | 16. | 4 | 26. | 4 | 36. | 1 |
| 7. | 2 | 17. | 4 | 27. | 4 | 37. | 2 |
| 8. | 1 | 18. | 1 | 28. | 4 | 38. | 4 |
| 9. | 2 | 19. | 2 | 29. | 2 | 39. | 2 |
| 10. | 3 | 20. | 4 | 30. | 1 | 40. | 4 |

(01) (i) (a) Obtaining money from ATM machine using card.

Input – card , pin no, money needed

Output – Display on computer screen , money taken from the machine , receipt , card

(b) Finger print machine

Input – finger print of employees

Output – Employee attendance record such as departure time , Arrival time

(ii) **Students**

ability to use the learning units at anytime and anywhere at school , at home or any other convenient place.

ability to upload the assignments completed at home.

ability to submit queries , getting replies and submitting comments through forums.

ability to participate in the co-curricular activities via video.

Give marks to any one of the above.

Teachers

Supervision of activities and publishing of results.

ability to maintain updated information of the students , teachers and school.

Give marks to any one of the above.

(iii) home monitoring health condition of the patient. /supervision from home/seeking medical consultation of a specialist/Remote surgery /Medical Teletraining any services above

(iv) online shopping

one can select any global commercial organization which is on the internet.

open 24 hours.

ability to see things and order at one's convenient place.

ability to pay using the electronic payment methods such as credit cards.

home delivery of goods or services thus saving time , transport cost and avoid unnecessary travel related exhaustion.

any 2 services above

(v)

| A | B |
|-----------------|------------|
| input devices | Scanner |
| output devices | Monitor |
| volatile memory | RAM, Cache |
| optical media | Blu-Ray. |

| | <i>Impact</i> | <i>Non-Impact</i> |
|------|------------------------|-----------------------------|
| (vi) | It's function is noisy | It is not noisy |
| | ink ribbon is used | ink/toner cartridge is used |
| | low printing cost | high printing cost |
| | low speed | comparatively high speed |

(vii)

| <i>Port</i> | <i>Connected Device</i> |
|-------------|---|
| VGA | Monitor . Multimedia Projector. TV |
| HDMI | Multimedia Projector. TV |
| USB | Keyboard, Mouse, Printer, Scanner,etc.. |
| PS/2 | Keyboard. Mouse |

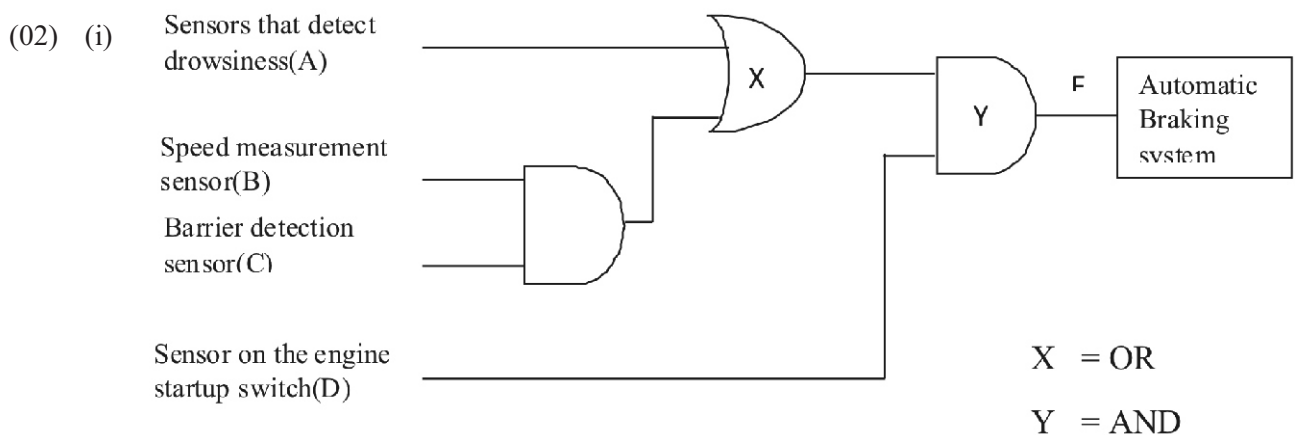
- (viii)(i) A - modem - convert analog signals to digital signals.
 B - firewall- protect the computer network from unauthorized access.
 C - switch- mediator to build a connection between two or more computers.
 D - Wi-Fi adapter –build a wireless computer network and internet connections for mobile phones and laptop computers.

(ix) characteristics of a good quality presentation

- number of lines
- font-size
- correct use of grammar and language
- inserting images , drawings , tables and graphs
- use of colors
- animation and videos
- pay attention on target group

- (x) A - parallel port
 B - PS/2 port
 C - USB port
 D - VGA port

(2 x 10=20 marks)



(ii) Truth Table

| A | B | C | D | B.C | A+B.C | A+(B.C) . D |
|---|---|---|---|-----|-------|-------------|
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 1 | 0 | 0 | 0 |
| 0 | 0 | 1 | 0 | 0 | 0 | 0 |
| 0 | 0 | 1 | 1 | 0 | 0 | 0 |
| 0 | 1 | 0 | 0 | 0 | 0 | 0 |
| 0 | 1 | 0 | 1 | 0 | 0 | 0 |
| 0 | 1 | 1 | 0 | 1 | 1 | 0 |
| 0 | 1 | 1 | 1 | 1 | 1 | 1 |
| 1 | 0 | 0 | 0 | 0 | 1 | 0 |
| 1 | 0 | 0 | 1 | 0 | 1 | 1 |
| 1 | 0 | 1 | 0 | 0 | 1 | 0 |
| 1 | 0 | 1 | 1 | 0 | 1 | 1 |
| 1 | 1 | 0 | 0 | 0 | 1 | 0 |
| 1 | 1 | 0 | 1 | 0 | 1 | 1 |
| 1 | 1 | 1 | 0 | 1 | 1 | 0 |
| 1 | 1 | 1 | 1 | 1 | 1 | 1 |

1 mark per column for correct input and 2 marks for last column of output.

(6 marks)

(iii) Boolean expression corresponding to the output F $A+(B.C) . D$

(2 marks)

(03) (A) (i) (i)

| code system | No. of characters |
|-------------|-------------------|
| BCD | 2^4 or 16 |
| ASCII | 2^7 or 128 |
| EBCDIC | 2^8 or 256 |
| Unicode | 2^{16} or 65536 |

(0.5 x 4 = 2 marks)

(ii)

| Operating System | | Application Software | | Utility Software |
|----------------------------|----------------------|----------------------|--|---------------------------------|
| With Proprietary | Free and Open source | Cloud Computing | Installed in computers | |
| Windows 10 Apple Mac OS | Linux | google Docs | google chrome firefox, word perfect Libro Office writer | Task manager Disk formatting |

(0.5 x 8 = 4 marks)

(B) (i) (a) school computer network- Local Area Network(LAN)

(b) Connect to the internet- Wide Area Network(WAN) (1x2 = 2 marks)

(ii) (i) Prevent unauthorized access

firewall

passwords

(1 x 2 = 2 marks)

(04) (A) electronic presentations

(i) slide transition

(ii) ctrl+ N

(iii) slide sorter view

(iv) slide layout

(v) animation

(1 x 5 = 5 marks)

(B)

| | |
|---|----|
| A | 4 |
| B | 6 |
| C | 8 |
| D | 12 |
| E | 1 |

(1 x 5 = 5 marks)

