



Negombo Education Zone

Second Term Evaluation - 2024

Information And Communication Technology

Name: _____

Grade 10

Paper I & II

Time: 03 hours

Note

- Answer all the questions.
- Choose the correct or most appropriate answer from answers given in (1), (2), (3), (4) in questions No. 1 to 40.

- Which statement that correctly explains the term "information"?
 1. Today's Weather report
 2. A student's ICT marks
 3. The average of ICT marks
 4. A student's height
- Which statement correctly explains the evolution of computer technology?
 1. Integrated circuit, transistor, vacuum tubes
 2. Integrated circuit, Large Scale Integrated circuit, Very Large-Scale Integrated circuit
 3. Transistor, vacuum tubes, integrated circuit
 4. Integrated circuit, Large Scale Integrated circuit, vacuum tubes
- What is not a demerit of information communication technology?
 1. Addiction
 2. Invasion personal privacy
 3. Exchange of information
 4. Isolation
- Which generation used keyboards for input?
 1. First generation
 2. Second generation
 3. Third generation
 4. Fourth generation
- Which device used to diagnose activities of brain?
 1. Electroencephalography Machine (EEG)
 2. Electrocardiogram Machine (ECG)
 3. Computerized Axial Tomography Machine (CAT)
 4. Magnetic Resonance Imaging Machine (MRI)
- Which types of devices are used in agriculture?
 - A. Meteorological Devices
 - B. Radio Frequency Identification Device (RFID)
 - C. Automated Insect Control Devices
 1. A and B
 2. C only
 3. A and C
 4. B and C
- What is an example of a G to G (Government to Government)?
 1. paying utility bills
 2. Business registration
 3. Sri Lanka custom information
 4. Gazette notifications
- What is an example of half-duplex communication?
 - A. Newspaper
 - B. Telephone conversation
 - C. SMS
 - D. Television broadcasting
- What type of computer does a mobile phone belong to?
 1. Super computer
 2. Micro computer
 3. Mini computer
 4. Mainframe computer



10. which is not an example of guided media?

- 1. Fiber Optics
- 2. Infrared
- 3. Coaxial cable
- 4. Twisted pair

11. What type of cable is used for CCTV?

- 1. UTP
- 2. STP
- 3. Coaxial cable
- 4. Fiber Optics

12. What is used to read and write on a hard disk platter?

- 1. Actuator
- 2. Spindle
- 3. Head
- 4. Actuator arm

13. which port is used to connect a printer to a system?

- 1. Serial port
- 2. VGA port
- 3. Parallel port
- 4. HDMI port

14. A touch screen is an example of which device?

- 1. Input devices
- 2. Output devices
- 3. Both input and output devices
- 4. Both input devices and scanner

15. Which statement is correct about cache memory?

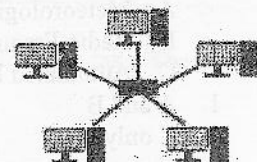
- 1. Cache memory is a non-volatile memory.
- 2. Cache memory is large in size but slower.
- 3. Cache memory is located between the primary and secondary memory.
- 4. Cache memory is small in size but faster.

16. What is an example of a printing device used in an organization?

- A. Dot Matrix printer
- B. Thermal printer
- C. Laser printer
- D. Line printer
- 1. A and B
- 2. B and C
- 3. C only
- 4. C and D

17. The physical structure of the following computer network is:

- 1. Ring
- 2. Star
- 3. Tree
- 4. Bus



18. Which is not an advantage of computer networking?

- 1. Efficient resource management
- 2. Centralized software control
- 3. Requires specialized training and skilled personnel for network management
- 4. Ability to access and share files at any time

19. Which storage devices use optical technology?

- 1. Magnetic tape
- 2. Floppy Disk
- 3. Flash Drive
- 4. Compact Disk

20. What is the most suitable port for connecting a computer to a network?

- 1. RJ-45
- 2. USB
- 3. Serial
- 4. HDMI

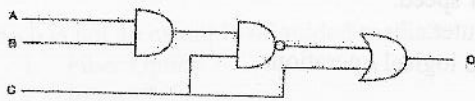
21. Which statements are correct regarding the Central Processing Unit (CPU)?
- It is measured in GHz (Gigahertz) for speed.
 - It controls all operations of the computer.
 - It performs all types of arithmetic and logical operations.
- A only
 - A and B only
 - B and C only
 - All of the above
22. Which of the following is an example of a pointing device?
- Keyboard
 - Scanner
 - Monitor
 - Mouse
23. What is the hexadecimal equivalent of the octal number 432?
- $11A_{16}$
 - $10A_{16}$
 - $12A_{16}$
 - $A11_{16}$
24. What is the binary equivalent of the hexadecimal number $A3_{16}$?
- 111010_2
 - 10110011_2
 - 1010001_2
 - 10100011_2
25. What are the LSD (Least Significant Digit) and MSD (Most Significant Digit) values for the number 0.0001250?
- 0 and 0
 - 1 and 5
 - 1 and 0
 - 5 and 1
26. What is the smallest number among the following?
- 56_8
 - 89_{10}
 - $3B_{16}$
 - 1011101_2
27. What are the three main components of the Central Processing Unit (CPU)?
- System unit, Arithmetic unit, Logical Unit
 - Control Unit, Arithmetic Logical Unit, Register memory
 - Control Unit, Register memory, Cache memory
 - Power supply unit, Motherboard, RAM
28. What type of network is installed in a building?
- Metropolitan Area Network
 - Wide Area Network
 - Local Area Network
 - Personal Area Network

Answer the 29, 30 questions by using following list

- Magnetic tape
 - Hard Disk Drive (HDD)
 - Flash Drive
 - RAM
 - ROM
 - Register
29. Arrange the storage devices in order of increasing data access speed:
- A, B, F, E, D, C
 - A, F, B, E, D, C
 - A, B, F, D, E, C
 - A, D, E, C, B, F
30. Arrange the storage devices in order of increasing data storage capacity:
- C, D, E, F, B, A
 - C, E, D, F, A, B
 - C, E, D, F, B, A
 - C, E, D, B, F, A

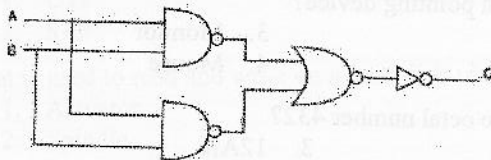


31. To find the Boolean expression for a given circuit,



- I. $(A \cdot B + C) \cdot C$
- II. $\frac{(A \cdot B) + C}{(A + B) \cdot C + C}$
- III. $\frac{(A + B) \cdot C}{(A \cdot B) \cdot C + C}$
- IV. $(A \cdot B) \cdot C + C$

32. Final Boolean expression for a given circuit,

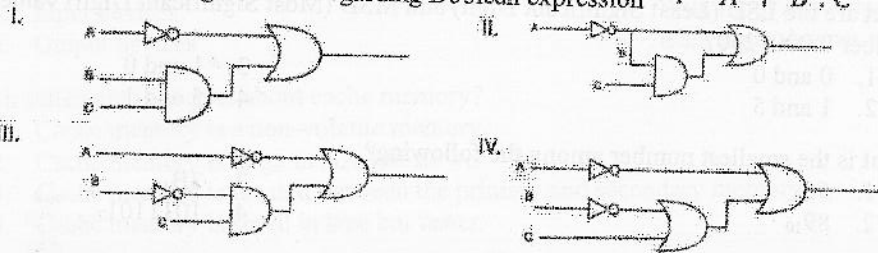


- I. $\frac{(A \cdot B) + (A \cdot B)}{(A + B) + (A \cdot B)}$
- II. $\frac{(A + B) + (A \cdot B)}{(A \cdot B) + (A + B)}$
- III. $\frac{(A \cdot B) + (A + B)}{(A + B) + (A + B)}$
- IV. $(A + B) + (A + B)$

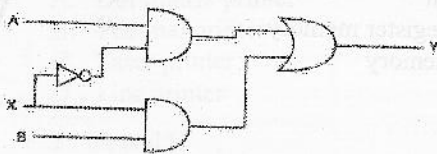
33. Which is not a main component of Graphical User Interface (GUI) environment;

1. Windows
2. icons
3. main frame
4. pointers

34. which is the correct logic circuit regarding Boolean expression $F = \bar{A} + \bar{B} \cdot C$



35. Boolean algebra, if X and Y are Boolean variables, and you are given a Boolean expression for X with values 0 and 1, you can determine the output Y based on the logic gate or expression used.



1. $A, \bar{B}$
2. A, B
3. $B, \bar{A}$
4. B, A

36. Which is not a system software,

1. Compiler
2. Operating system
3. Utility software
4. Spread sheet software

37. Microsoft Windows XP is an example for,

1. Application Software
2. System Software
3. System Utility
4. Graphic User Interface

38. What are the keyboard short cut keys for Cut and Paste?

1. Ctrl + X and Ctrl + V
2. Ctrl + C and Ctrl + P
3. Ctrl + S and Ctrl + V
4. Ctrl + A and Ctrl + V

39. In Microsoft Word and LibreOffice Writer, if you are looking for the keyboard shortcuts keys for Find and Replace,

1. Ctrl + A
2. Ctrl + C
3. Ctrl + H
4. Ctrl + X

40. which is not a spread sheet function

1. SUM
2. MAX
3. MINIMUM
4. COUNT

Part II

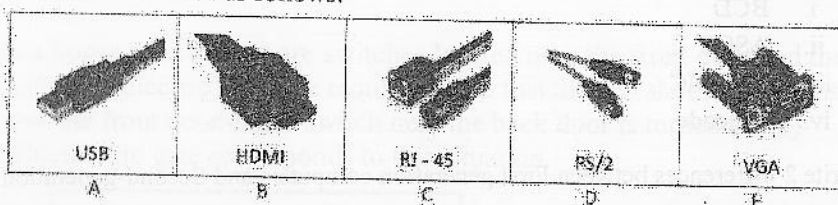
Note:

- Answer 5 questions only selecting, first question and 4 others
- First question carries 20 marks and each of the other questions carries 10 marks.

- In the 2023 academic year, the scholarship results have been released, and students who passed the scholarship exam are required to register on the Grade 5 Bursary Online System. The Principal in Kadawatha Maha Vidyalaya has instructed that the full name of the student, bank account number, bank name, and bank branch must be included. When registering on the system, it is necessary to verify the total number of students receiving the scholarship, the number of students who were disqualified in the last month, and the total amount of the scholarship disbursed.

Write 2 inputs and 2 outputs above scenario?

- Ports A to E are illustrated as follows:



- Write down the label of the cable which can be used to connect a projector with an VGA cable,
 - write down the label of the cable that can be used to connect router.
- The binary representation of the Hexadecimal number $70D_{16}$
 - To draw the logic circuit for the Boolean expression $Z = \overline{AB} + B\overline{C}$ using only AND, OR, and NOT gates,
 - Some formatting options available in a word processing software are shown below.

P	Q	R	S	T	U	V	W

Write down the labels of the any two options that have been used to do the following sentences formatting.

Before: A computer is an electronic device. It has the ability to store, retrieve and process data.	After A computer is an electronic device. It has the ability to <u>store</u> , <u>retrieve</u> and <u>process</u> data.
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- For each of the blanks labelled A to D of the following paragraph, pick and write down the suitable replacement form the two terms given near it within parentheses.

The devices used to input the data to the computer system (storage, input) devices are used. (magnetic tape, optical character reader) is one of the examples. The device performs (identification of marks, supervision of information contained in a large number of pages within a very short period of time). This device belongs to the category of (scanner, primary memory).

7. Write two advantages of Learning Management System to school management?
8. Consider the following spreadsheet segment.

	A	B	C	D
1	5	4	2	1
2	3	2	9	3
3	6	4	8	7

simplify.

1. $A2 * B3 + C2$
 2. $A2 \wedge B2 - D1 * (C2 - B3)$
9. Write the number of bits for the following each code system.
- i. BCD
 - ii. ASCII
 - iii. EBCDIC
 - iv. Unicode
10. write 2 differences between First generation computers and Second-generation computers.
2. The principal of Dutugemunu College has decided to establish a computer network in the principal's office. There are 4 computers (A1, A2, A3, A4) and a printer (P) in the principal's office.
1. Draw a diagram to connect four computers based on the star topology.
 2. which device is use to connect requires an internet connection?
 3. "If the mentioned printer is a laser printer, write down two features of that printer."
 4. "After connecting the computer network to the internet, which device can be used for network security? Considering the Principal's Office and the nearest building's network, to which type of network does it belong based on its geographical location?"
3. i. "Complete the table by copying the answers into your answer sheet."

Number	Most Significant Digit (MSD)	Least Significant Digit (LSD)
586		
27.020		
0.012		
0.7		

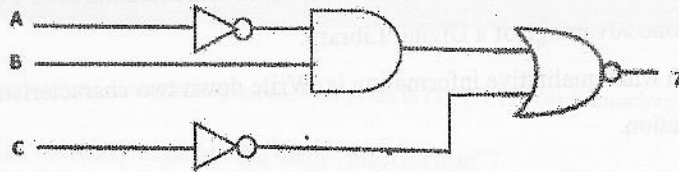
- ii. Nipuna wants to save 3 files in to USB pen drive.

- Letter.doc (12 KB)
- Annual_awards_ceremony.mp4 (410 MB)
- Sinharaja.jpg (32 KB)

Given 2 USB drives with a capacity of 1GB and 512 MB each, which of these drives should be used to copy the given data in a more organized manner? (Consider the required space for managing the drives.)

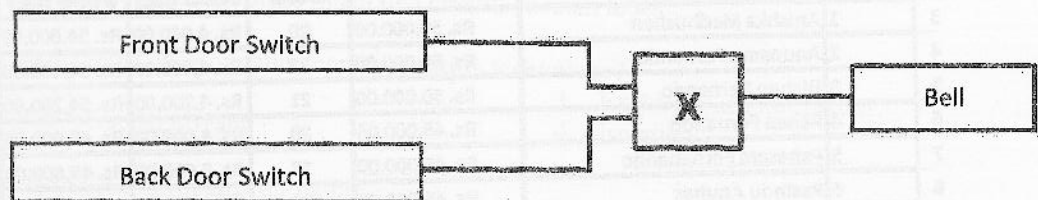
- iii. Sama brought two books and blue pen. She paid total amount as Rs18B₁₆. If Price of a pen Rs11001₂, find price of a book in decimal. show the simplification.

4. i. Name and draw two combinational logic gates.
 ii. Consider the below logic circuit.

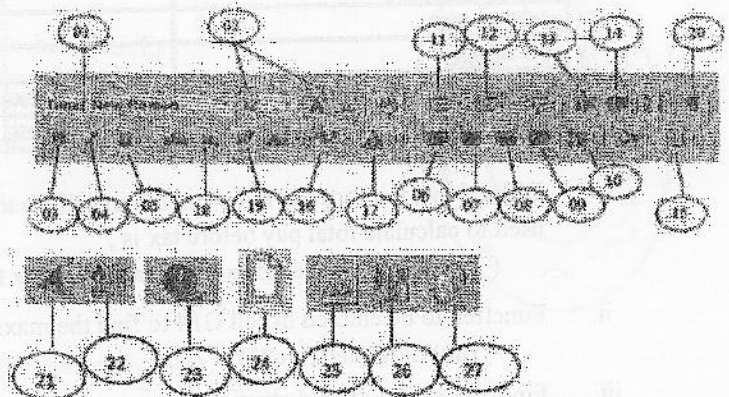
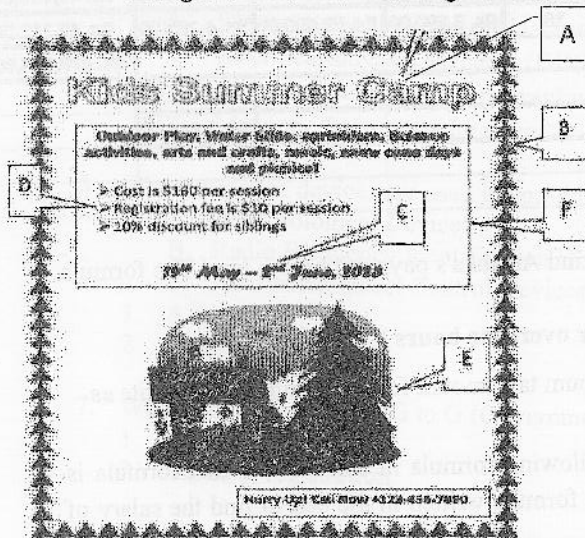


Write the Boolean expression and construct the truth table.

- iii. In a house where there are switches located near the front door and the back door to control an electric bell. The requirement is that the bell should ring if either the switch near the front door or the switch near the back door is turned on.(1)
 Which logic gate corresponds to this situation.



5. Below is a part of a document using word processing software. Several ribbon tools are numbered 1 through 27 for each formatting labeled from A to F in the document.



- i. Identify the tool required to configure A to F and write only the corresponding number in front of the label letters. Applying unnecessary tool numbers will result in your answers not being accepted.
- ii. Write the shortcut keys.
- 1) Ctrl + H -
 - 2) Ctrl + A -
 - 3) Ctrl + C -
 - 4) Ctrl + X -
- iii. If word processing software is not installed on Cinelli's computer, you can access internet to create the document. write an advantage create a document when using Internet.

6. Students using the library in a school are issued a library membership card, through which they can borrow up to three books at a time. The borrowed books can be kept for a period of three weeks.
- Write down two types of data related to books that are maintained by the library.
 - Write down two types of data that the library should maintain after a student borrows books.
 - Write one advantage of a Digital Library.
 - Explain what qualitative information is. Write down two characteristics of qualitative information.

7. Here is the part of the spreadsheet in Excel for calculating salaries at ABC organization for the month of July.

	A	B	C	D	E	F	G	H
1	ABC Company (PVT) Ltd. - මාස මට්ටම (July)							
2	අංකය	නම	මුළු ම:ම: (Rs.)	දිනකට වැඩ කරන වැටුප (Rs.)	වැඩකර ගත් ආයුධ වැටුප (Rs.)	මුළු මුදල (Rs.)	ම: මුදල (Rs.)	මුළු මුදල (Rs.)
3	1	Anishka Madhusan	Rs. 50,000.00	20	Rs. 4,000.00	Rs. 54,000.00	Rs. 4,352.00	Rs. 49,648.00
4	2	Anupama Fernando	Rs. 50,000.00	22	Rs. 4,400.00	Rs. 54,400.00	Rs. 4,352.00	Rs. 50,048.00
5	3	Dishen Fernando	Rs. 50,000.00	21	Rs. 4,200.00	Rs. 54,200.00	Rs. 4,336.00	Rs. 49,864.00
6	4	Paban Fernando	Rs. 45,000.00	20	Rs. 4,000.00	Rs. 49,000.00	Rs. 3,920.00	Rs. 45,080.00
7	5	Pahasara Fernando	Rs. 45,000.00	18	Rs. 3,600.00	Rs. 48,600.00	Rs. 3,888.00	Rs. 44,712.00
8	6	Pasindu Anuhas	Rs. 45,000.00	20	Rs. 4,000.00	Rs. 49,000.00	Rs. 3,920.00	Rs. 45,080.00
9	7	Sineth Perera	Rs. 50,000.00	22	Rs. 4,400.00	Rs. 54,400.00	Rs. 4,352.00	Rs. 50,048.00
10	8	Anjana Fernando	Rs. 45,000.00	21	Rs. 4,200.00	Rs. 49,200.00	Rs. 3,936.00	Rs. 45,264.00
11	9	Dineth Fernando	Rs. 50,000.00	19	Rs. 3,800.00	Rs. 53,800.00	Rs. 4,304.00	Rs. 49,496.00
12	10	Sandamith Perera	Rs. 50,000.00	18	Rs. 3,600.00	Rs. 53,600.00	Rs. 4,288.00	Rs. 49,312.00
13	මුළු මුදල (මුළු මුදල)							
14	මුළු මුදල						Rs. 4,352.00	
15	මුළු මුදල						Rs. 3,888.00	
16	මුළු මුදල (මුළු මුදල මුදල (Rs.))		Rs. 200.00					
17	මුළු මුදල		8%					

- Write down the formula to be entered in cell F3 to find Anishka's payment before tax. (The formula used to calculate total pay before tax is,
(Total pay before tax = basic salary + pay for overtime hours)
- Function to be entered in cell G14 to find the maximum tax amount for the month of July write as
= function1(cell1:cell2)
- Find the salary after deduction of tax, enter the following formula in cell H3 and that formula is copied to the rest of the employees, write down the formula written in the cell to find the salary of Pasindu after deduction of tax.
(Salary after deduction of tax = Total payment before tax - Tax amount)
- Write down the function to be entered in the cell H13 to find the total payment after deduction of tax for the month of July using = function2(cell3:cell4)
- Which one from the column and pie graphs would be most appropriate to compare the total payments for each employee for the month of July?