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2nd Term Test -2024

Grade - 10	Subject - Information & Communication Technology	Paper - I	Hours - 01
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Note:

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

- 01) The Corona virus disease occurred in 2019 was discussed massively those days but now everybody has forgotten it. In which characteristic can be seen in the above incident.
1. Relevance 2. Timeliness 3. Completeness 4. Accuracy
- 02) The government used e-government facility for organize government activities. What are services that provides to government employees from the government?
- A- Cash payment services
 B- Providing loan facilities to the government employees
 C- Providing gazette and application forms.
1. Only A 2. Only A and B 3. Only A and C 4. all of the above
- 03) Crop cultivation, animal husbandry and fisheries can be introduced as the applications of information technology in agriculture. The machines that are only used for planting crops are ;
- A. Meteorological Devices
 B. Radio Frequency Identification Device (RFID)
 C. Automated Insect Control Device,
1. A and B 2. C only 3. B and C 4. A and C
- 04) machine can create digitalized images of internal organs of the body.
1. CAT 2. ECG 3. MRI 4. EEG
- 05) Consider the following statements related to computer evolution.
- A - Blaise Pascal invented the Adding machine
 B - Joseph Jacquard Invented weaving machine with punch card system.
 C - Howard Aiken Invented Analytical engine.
1. Only A 2. Only A and B 3. Only A and C 4. All of the above

06) In which generation of computers was the keyboard and mouse used to input data?

1. First Generation Computers
2. Second Generation Computers
3. Third Generation Computers
4. Fourth Generation Computers

07) What was the effect when vacuum tubes were replaced by transistors and later transistors were replaced by integrated circuits in the CPU?

1. Both processing power and Electricity consumption increased.
2. Processing power increased while electricity consumption decreased.
3. Processing power decreased while electricity consumption increased
4. Both processing power and electricity consumption decreased

08) The components of Central Processing Unit(c p u) are

1. Control Unit, ALU, Input unit.
2. Output Unit, ALU, memory unit
3. Control Unit, ALU, memory unit
4. Control Unit, memory unit, Output Unit.

09) Consider the following transmission media.

- | | |
|------------------|--------------------|
| (a) Infrared | (c) Coaxial cables |
| (b) Fiber optics | (d) Micro wave |

Which of the above is/are unguided media?

1. a only
2. d only
3. a and b only
4. a and d only

10) When the storage devices are arranged in descending order according to their access speed , it is.

1. magnetic tapes, disks ,cache, main memory
2. cache , main memory , registers, disks, magnetic tapes
3. registers, main memory, cache, magnetic tapes, disks
4. registers, cache, main memory, magnetic tapes

11) Staying in this country Sumudu is a who following a foreign degree in British university. He should deposit 30 pounds in ABC international Bank for the first term. He should do this in this country itself. Which computer network is used for this transaction?

1. LAN
2. WAN
3. MAN
4. CAN

12) What is the device which can be used as a Hardware and Software security barrier when connecting a computer network with the internet?

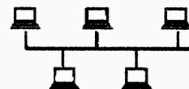
1. Modem
2. Router
3. Firewall
4. Switch

13) The application of ICT has made human tasks much easier and misuse of ICT can bring undesirable effects not only for you but for the entire society. One of the consequences is addition. The physical inconvenience of this is,

- | | | |
|--------------|--------------|----------------|
| A. Sore eyes | B. Back pain | C. Headache |
| 1. B and C | 2. A only | 3. A and B |
| | | 4. A , B and C |

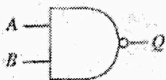
14) What is the network topology illustrated in this diagram

1. Bus
2. Ring
3. Star
4. All above



- 15) Which of the following is the smallest?
 1. 274_8 2. 11100101_2 3. AE_{16} 4. 147_{10}
- 16) Which of the following is the decimal equivalent of binary 11101101_2 ?
 1. 235 2. 236 3. 237 4. 238
- 17) How many bits are used to represent the hexadecimal number $4BF_{16}$ in binary formation?
 1. 16 2. 12 3. 8 4. 7
- 18) $110111_2 + 11011_2$ is equal to
 1. 1010000_2 2. 1011010_2 3. 1010010_2 4. 1010100_2
- 19) Which of the following is approximately equivalent to 4GB
 1. 4×10^{10} MB 2. 4×10^6 KB 3. 4×10^6 bytes 4. 4×10^6 Bits
- 20) Binary coded Decimal (BCD) uses four bits to represent each digit in the decimal number system. Which of the following is a valid bit pattern in BCD?
 1. 1010 2. 1100 3. 1101 4. 0111
- 21) If 1000100 represents "D" in ASCII, what are the ASCII codes for the characters "B" and "J", respectively?
 1. 1000001 and 1001011 3. 1000010 and 1001010
 2. 1000011 and 1001010 4. 0100010 and 0101010
- 22) The RGB value for light Green colour is **R-144, G- 238, B- 94**. Which of the following is light green?
 1. #90FE5E 2. #90EE5F 3. #99EE5E 4. #90EE5E

23) Consider the following logic gate:



When A=1, what would definitely be the output at Q?

1. 0 3. 1
 2. B 4. \overline{B}

24) Given below is the truth table for a logic gate with inputs A, B and output Q:

What is the logic gate indicated by the above truth table?

A	B	Q
0	0	1
0	1	0
1	0	0
1	1	0

1. AND
 2. NAND
 3. NOR
 4. OR

25) Which Boolean expression below gets verified by the truth table given in the table?

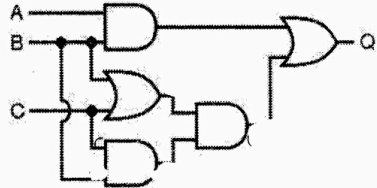
1. $A + \bar{A}$
2. $A \cdot \bar{A}$
3. A
4. \bar{A}

A	\bar{A}	Output
0	1	0
1	0	0

26) Consider the following Logic circuit.

Which of the following is an appropriate Boolean expression for above Logic circuit is,

1. $Q = (A.B) + ((B.C)+(B+C))$
2. $Q = (A+B) + ((B.C)+(B.C))$
3. $Q = (A.B) + ((B+C).(B.C))$
4. $Q = (A+B) \cdot ((B+C)+(B+C))$



27) Consider the following statements given regarding the selections of word processing software.

A – CTRL + A can be used to select a document at once.

B – A word can be selected by double clicking the mouse at once.

C – A document can be selected by clicking the mouse thrice at once.

- | | |
|------------------------------------|------------------------------------|
| 1. A and B are true and C is false | 3. A and C are true and B is false |
| 2. A is true and B and C are false | 4. All A, B, and C are true |

28) What is the correct order of shortcut keys for Paste, Copy, New Document?

1. Ctrl+C, Ctrl+V, Ctrl+N
2. Ctrl+C, Ctrl+N, Ctrl+V
3. Ctrl+V, Ctrl+N, Ctrl+C
4. Ctrl+V, Ctrl+C, Ctrl+N

29) Consider the following statements regarding features available in word processing software:

A - Find and replace a word

B - Increase space between line of paragraphs

C - Insert Chart

Which of the following statements are correct?

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

30) Select the false statement.

1. Mail merge facility in word processing software can create the same greeting card to different people.
2. The document of a few pages that was created using a word processing can be orientated only in one direction.
3. Word processing software can insert page number.
4. The file extension of new word processing software is .docx

- 31) In the dialog box that opens when printing a document, the choices you cannot make are
1. Selection of pages for printing.
 2. Determine page size.
 3. Choose the color to apply to the page.
 4. Choosing how many copies are needed.

Answer to the questions from 32 to 34 using following table.

Time frame		
May	June	

- 32) What is the components that is used to format the cell "Time frame"?
1. Merge cells
 2. Split cells
 3. Cell margins
 4. Grid lines
- 33) What is the most suitable component which was used to change the from of the texts May & June?
1. Align Left
 2. Text Directions
 3. Align Right
 4. Text Effect
- 34) The dark area is divided into 2 columns and two rows after inserting the table. What is component is used to format the dark area as above?
1. Auto fill
 2. Split table
 3. Split cells
 4. Grid lines
- 35) Consider the range of cells given as (A4:C5) in a spreadsheet. Which of the following cells are included in this range?
1. A4 and C5 only
 2. A4, B4 and C4 only
 3. A4, A5, C4 and C5only
 4. A4, B4, C4, A5, B5 and C5 only

- 36) Consider the following formulas.
- A = MAX (A1:A4)
- B = MAX (A1, A2, A3, A4)
- C = MAX (A1:A3, A4)

	A	B
1	41	58
2	65	25
3	58	54
4	23	52
5		

Which of the following answer correctly shows the formula/formulas to be written in cell A5 to display the largest number in cell range A1 to A4?

1. A Only
2. A and B Only
3. A and C Only
4. All A , B and C

37) Which formula should be written in cell B5 to display the number of entries in the cell range A1 to B4?

1. = COUNT(A1:B4)

3. = COUNT(A1:B3)

2. = COUNT(A1:B2)

4. = COUNT(A1:A4)

38) If the formula $= 2*6 / (15-3^2)*5$ is entered into a spreadsheet cell, what is the value displayed in the cell?

1. 7

2. 10

3. 13

4. 11

39) What is the value appearing in cell D1, if enters the formula $=A3 \wedge B2 * B3 + C2 / A2 * B2$

1. 56

3. 28

2. 67

4. 50

	A	B	C	D
1	6	1	6	
2	3	2	12	
3	4	3	18	
4	5	4	24	
5	6	5	30	
6		6	36	


40) When the formula =count(A4:B6) is entered in the cell D6, what is the value appears in Cell D6

(1) 5

(2) 6

(3) 10

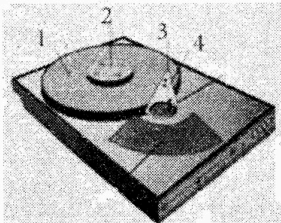
(4) 8

	<p>ඩී. ඉ. සේනානායක විද්‍යාලය - කොළඹ 07. D. S. Senanayake College - Colombo 07.</p> <p style="font-weight: bold; font-size: 1.2em;">2nd Term Test -2024</p>	<p><small>ඩී. ඉ. සේනානායක විද්‍යාලය - කොළඹ 07.</small> <small>ඩී. ඉ. සේනානායක විද්‍යාලය - කොළඹ 07.</small> <small>ඩී. ඉ. සේනානායක විද්‍යාලය - කොළඹ 07.</small></p>								
<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 25%;">Grade</td> <td style="width: 25%;">10</td> <td style="width: 25%;">Subject</td> <td style="width: 25%;">Information & Communication Technology</td> </tr> <tr> <td>Paper</td> <td>II</td> <td>Hours</td> <td>02</td> </tr> </table>	Grade	10	Subject	Information & Communication Technology	Paper	II	Hours	02		
Grade	10	Subject	Information & Communication Technology							
Paper	II	Hours	02							

- * Answer five(5) questions only, including the first question and four others.
- * First question carries 20 marks and each of the other question carries 10 marks.

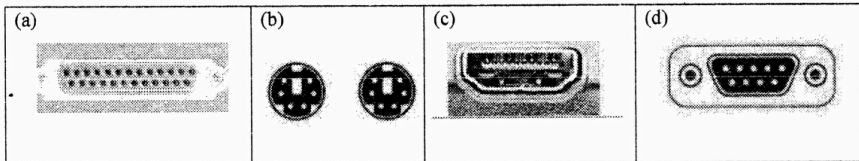
(01)

- (i) Information communication technology is used in various fields. Name two automatic control systems used to make transportation easy.
- (ii) Write down two software features which can be seen in the fifth-generation computers with the advent of modern technology.
- (iii) Chose the best example for the labeled items. Write only the label name and the best example.
 List — Blue Ray, Cache memory ,Multimedia projector, Bar Code Reader, Magnetic Tape, Digital Camera.
 A - Pointing Device
 B - Output Device
 C - Scanning Device
 D - Secondary Storage Device
- (iv) Write two types of printers and give two examples for each
- (v) Hard disk is made of several components.

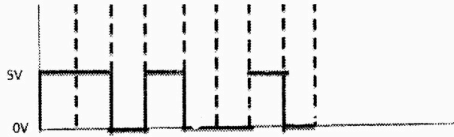


- a) The above figure shows the hard disk components and identify the labelled 1-4
- b) Give the function of label 3?

(vi) Name the following ports ,



(vii) a) What is the binary value represented by the given graph



b) Write down the following numbers in descending order (write down the steps)

163, B5₁₆, 10110111₂, 275₈

(viii) a) Complete the following calculation and provide the answer in base decimal.

5AF₁₆ + 1426₈

b Convert 536₈ into a Hexadecimal number. Write down the steps.

(ix) Write the logical expression that give the X output of the following logic circuit



(x) What are the facilities available in word processing packages for the following tasks.

- a) To send one letter to many recipients.
- b. Uniquely identify each page.

(02).

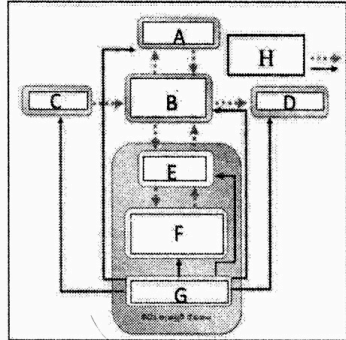
1. Write down two services offered by e-government to other governments
2. Information and Communication Technology has created some opportunities to get a little relief for the people who are living a very busy and restless life today. Name two such opportunities.
3. Complete the following table using your knowledge on computer generation. (Copy the table to the answer sheet and complete it.)

Generation	Technical device used for processing	Computer language used
First Generation		
Second Generation		
Third Generation		
Fourth Generation		High level languages
Fifth Generation		

4. Telemedicine is a method of providing medical care remotely
- Define Telemedicine
 - List one advantage of telemedicine in addition to the remote accessibility
 - Write 2 examples of the use of that service

(03) Study the following picture of functioning the computer System and answer the questions given below.

- Write the functions for the labels given as letters (A,B,C,D,E,F,G,H).
- Which label is used for nonvolatile memory and give 2 examples?
- Explain briefly the function of G and F.
- What do you mean by firewall?
- Give two examples for guided data transmission medium



(13)

a) Copy the following table and complete it with Most Significant Digit (MSD) and Least Significant Digit (LSD)

Number	Most Significant Digit (MSD)	Least Significant Digit (LSD)
0125.70		
011.1010 ₂		
0.05060		
0.00040		

b) Convert the following Binary Coded Decimal Values (BCD) to its Decimal Values

- (i) 0011010 0110_{BCD} (ii) 1010110111011101_{BCD}

c) State whether the following statements labeled from A - D are True (✓) or false (X). You are required to write down the label and your answer.

- 230 bytes is equal to 1 TB
- ASCII coding System uses 7 bits to represents a character.
- 10111₂ is equal to 17₁₆ in Hexadecimal
- A bus passenger who is in a two-door bus can get down from the Front or back door is an example to understand AND logic

d Autonomous Underwater Vehicle (AUV) is controlled by a set of binary instructions to navigate and perform tasks underwater. The operations and their corresponding binary instructions are listed below

Operation	Binary Instruction			
DIVE	1	0	1	1
SURFACE	1	1	0	1
MOVE FORWARD	1	1	1	0
MOVE BACKWARD	0	1	1	1
TURN LEFT	1	0	0	0
TURN RIGHT	0	1	0	0
CAPTURE SAMPLE	0	0	1	1
RELEASE SAMPLE	0	0	0	1

- The operator enters the following hexadecimal values: **B 3 E 1 7 4 D**
- Convert these values and determine which operation the AUV will perform. (**Example:** 1 - RELEASE SAMPLE)

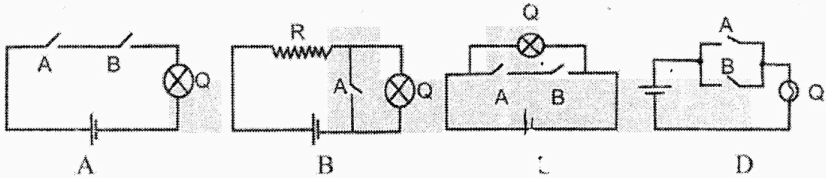
- B
- 3
- E
- 1 -- RELEASE SAMPLE

- 7
- 4
- D

(14)

a) Following are the simple electric circuits drawn by a teacher to explain each of the logic gates.

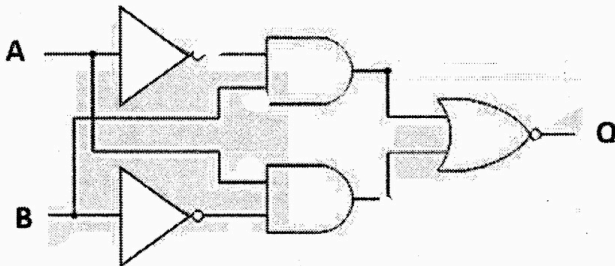
Answer the following questions accordingly.



(i) Write down the label of the diagram and the relevant logic gate which is used to describe above electric circuits.

ii Which of the above circuit is used to describe a combinational logic gate?

b) Write down the Boolean expression for Q



c) Draw the truth table for the above gate.

(05).

- a) Write 2 Free and Open-Source Word Processing software?
- b) Write 2 example for cloud computing?
- c) Following is a Hand out designed by MS Word. Write the Relevant label according to the numbered formatting

B → A →

Microsoft Word

Microsoft Word logo history

1983	1987	1991	1993	1995
1999	2003	2007	2010	2013
2015	2017			

D → To make your document look professionally produced, Word provides

- E →
 - header,
 - footer,
 - cover page,
 - 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.

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.

Save time in Word with **new** buttons that show up where you need them. To change the way a picture fits in your document, click it and a button for layout options appears next to it. When you work on a table, click where you want to add a row or a column, and then click the plus sign.

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.

H

G

2

Calibri (Body) | 11 | A* A* | Aa |

| | | | |

1

3

4

5

6

| | |

Quick Parts | Signature Line | Date & Time | Margins | Orientation | Size | Columns

7

8

9

15

10

11

12

For Educational⁵Purpose Only

(06)

a) Write 2 examples for Spreadsheet software?

b) The sample spreadsheet in figure shows the marks obtained by four students Nethum , Akash , Udula and Malindu for four subjects Commerce , English , Mathematics and science.

	A	B	C	D	E	F	G
2							
3			Nethum	Akash	Udula	Malindu	Avarage mars per subject
4	Subjects	Commerce	56	85	83	88	
5		English	76	94	45	54	
6		Mathematics	42	57	21	79	
7		Science	80	61	45	73	
8		Total Marks per students					
9							

- (i) Write the required formula in cell C8 **without** using functions to calculate the total marks obtain by Nethum.
- (ii) If the formula entered in C8 to calculate Nethum's total marks is copied to calculate Akash's total marks in D8, how would the formula appear in D8?
- (iii) Write the formula to calculate the total marks received by Malindu using the function "SUM" in cell F8?
- (iv) Using the functions available in spreadsheet software to calculate average, write the formula to calculate the average marks of students for commerce in cell G4?