மாகாண கல்வித்திணைக்களம்
வடக்கு மாகாணம்
Provincial Department of Education, Northern Province

Third Term Examination - 2025

Grade-10	Information Communication Technology - I, II	Time: 3 Hours

Name / IndexNo .....

Additional Reading Time: 10 minutes

Instructions:

* Answer all questions.
* In each of the questions 1 to 40 pick one of the alternatives (1), (2), (3), (4) which you consider is correct or most appropriate.
* Mark a cross (X) on the number corresponding to your choice in the answer sheet provided.

Part - I

01) Which of the following is not an element of a System?

1. Input
2. Process
3. Hardware
4. Output

02) Which of the following is a contribution of information and communication technology (ICT) in the field of education?

1. MICR
2. MRI
3. LMS
4. RFID

03) Vimal has to listen to a song and type it into the computer. What are the main Output and Input devices used here respectively?

1. Microphone, Mouse
2. Keyboard, Microphone
3. Speaker, Keyboard
4. Keyboard, Mouse

04) Which of the following is not Word processing Software?

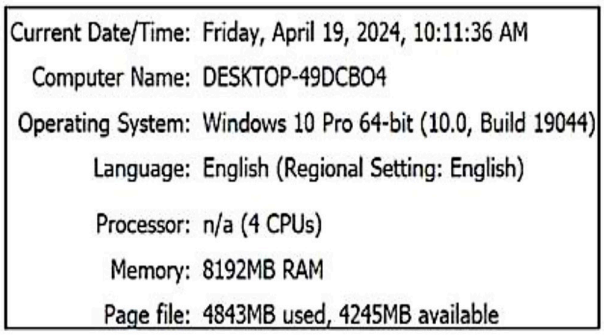
1. Ms Word
2. Abi Word
3. LYX
4. HTML

05) Which of the following cannot be considered both an input and an output device?

1. Touch Screen
2. Head Set
3. Modem
4. Touchpad

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06) Consider the specification given below that includes some details of a computer. What is the capacity of the main memory installed in this computer?



1. 4843 MB
2. 2^{13}MB
3. $8X2^{10}$ KB
4. 8X1024GB

07) Which of the following is the primary memory?

1. Hard Disk
2. Cache Memory
3. Compact Disc
4. Virtual Memory

08) Consider the statements related to shortcut keys commonly used in word processing software.

A- CTRL + N is used to open a document.

B- CTRL + S is used to save a document.

C- CTRL + V is used to paste the text or objects that have already been copied.

Which of the above statements are correct?

1. A,B Only
2. B,C Only
3. B Only
4. A, B, and C are all correct

09) In word processing software, the symbol "$\mathbf{X^2}$" is used for?

1. Reduce font size
2. Indentation
3. Superscript
4. Subscript

10) Which is used in word processing software to save a document under a new name?

1. Save as
2. Save
3. Open
4. Print

11) What is the used Thesaurus in word processing software?

1. To delete uncheck words
2. To provide alternative words with the same meaning.
3. To Close a document
4. To change page orientations

12) Consider the following Devices.

A – Compact Disc B – Hard Disk C – Floppy disk

which of these are magnetic storage devices?

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

13) Which shortcut key is used in spreadsheet software to insert a new slide?

1. Ctrl + P
2. Ctrl + N
3. Ctrl + M
4. Ctrl + S

14) What is the used for slide show view in electronic presentation software

1. To print the slide
2. To present the slide
3. To insert a new slide
4. To organize the slide

15) What is the binary number equivalent to the decimal number 173?

1. 10101111_2
2. 10101101_2
3. 10101010_2
4. 11011010_2

16) What is equivalent number of 514_8?

1. 91_{10}
2. 1000000110_2
3. $14C_{16}$
4. $E10_{16}$

17) Based on the **EBCDIC** code, the decimal values and binary values of some English letters are given below.

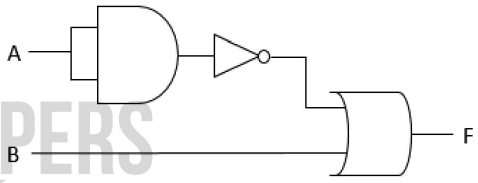
C – 195	I - 11001001	T – 227	i - 137	c – 10000011	t - 163

Based on the above decimal and binary values, which of the following represents the **EBCDIC** code for the word **"Ict"**?

1. 110010011100001111100011
2. 11001001100000111010010
3. 110010011000001110100011
4. 1100100110000011

* **Answer the questions 18, 19 and 20 based on the logic diagram given bellow**

The inputs of the logic circuit are **A** and **B**, and the output is **F**.



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18) Which of the following represents the **Boolean expression** for the output **F**?

1. $F = A + B$
2. $F = A.B$
3. $F = \bar{A} + B$
4. $F = \bar{\bar{A}} + B$

19) If the output F to be 0, what is the input value of A and B respectively?

1. 1, 1
2. 1, 0
3. 0, 1
4. 0, 0

20) Consider the following statements

Statement I → When B=1, the output always 1.

Statement II → When A=0, the output always 1.

Statement III → When A=1, B=0, the output always 1.

Which of the above statements is correct?

1. Statement I and II
2. Statement II and III
3. Statement I and III
4. All of the above

21) Which of the following is an example of electronic database software**?**

1. Ms Word
2. Power point
3. Numbers
4. MySQL

*** Answer the question 22, 23 and 24 using the lecture's table given below**

Lecture Table

L_Index	L_Name	L_Subjects
001	Amal	Maths
002	Nimali	ICT
003	Saran	English
004	Raji	Tamil

22) Which field(s) in the Lecture table is considered the primary key?

1. L_Index
2. L_Name
3. L_Subjects + L_Index
4. L_Name + L_Index

23) The number of field and record in the Lecture table respectively?

1. 3,3
2. 4,3
3. 2,3
4. 3,4

24) What is the data type used for the L_Name field in the Lecturer table

1. Text
2. Number
3. Date & Time
4. Currency

25) Which of the following is a guided media?

1. Radio wave
2. Micro wave
3. Infrared
4. Twisted pair cable

26) What is the decimal equivalent of the octal number 173_8?

1. 124
2. 123
3. 125
4. 120

27) What is the equivalent number of 100101001_2?

1. 129_{10}
2. 129_{16}
3. 295_{10}
4. 107_8

28) The descending order of the numbers 10011001_2, 115_8, 160_{10}, and $1C_{16}$ is:

1. $1C_{16}$, 115_8, 10011001_2, 160_{10}
2. 160_{10}, 10011001_2, 115_8, $1C_{16}$
3. 10011001_2, 115_8, $1C_{16}$, 160_{10}
4. $1C_{16}$, 10011001_2, 115_8, 16010

29) What is the equivalent number of $673_8 + 10011000_2$?

1. 103_8
2. 253_{16}
3. 663_{10}
4. 11011101_2

30) Saraniya received Rs. 50 from her brother and Rs. 35 from her mother to buy a pen. What is the total amount of money Saraniya received?

1. 10101010_2
2. 56_{16}
3. 225_8
4. 125_8

31) In ASCII code, the binary value of 'B' is 1000010_2. What are the binary values of 'A' and 'D' in ASCII code, respectively?

1. 1000100_2 and 1000001_2
2. 1000001_2 and1001000_2
3. 1000001_2 and 1000100_2
4. 1001001_2 and 1100001_2

32) How many bits are there when the octal number 657_8 is represented in binary?

1. 12
2. 16
3. 8
4. 9

33) Which of the following statements is correct?

A) Data and instructions are stored in binary form in the computer.

B) The BCD code is represented using 6 bits.

C) $3AC_{16}$ is equivalent to 001110101100_2.

1. A Only
2. B,C Only
3. A,C Only
4. A, B, and C are all correct.

34) Which of the following is considered a file extension of spreadsheet software?

1. .docx
2. .xlsx
3. .txt
4. .pptx

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35) Which of the following is an invalid cell address?

1. A100
2. A$50
3. H200
4. $A50$

36) Which of the following cannot be considered a valid formula?

1. =SUM(A1,B1,C6)
2. =AVG (A1:B6)
3. =MAX(A1:B6,C8)
4. =MIN(A1,B6:D12)

37) What will be the result of the formula =2^3/(5-1 ^3)*5?

1. 160
2. 150
3. 10
4. 15

38) Which type of chart is suitable for showing monthly income as a percentage?

1. Bar chart
2. Pie chart
3. XY scatter chart
4. Line chart

39) If the formula =A3/B2*(D2-B1) is typed in cell D3, what will be thr result?

1. 30
2. 20.2
3. 20
4. 24

	A	B	C	D
1	5	6	8	15
2	9	7	11	20
3	10	8	14	

40) Consider the following statements related to foreign keys in a relational database.

A. A foreign key in one table cannot appear as a primary key in another table.
B. Creating a relationship between two tables.
C. The related data of the primary key field exist in the other table

Which of the above statements is/are correct?

1. A and B
2. A and C
3. B and C
4. A, B, and C are all correct

Part - II

Note:

* **Answer five questions only, including first one and four other questions.**
* **The first question carries 20 marks and I0 marks each for other questions**

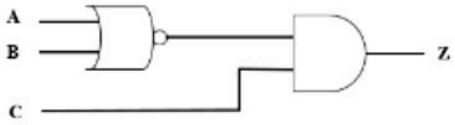
01)

i. A student accessed the website **www.edupub.lk** to download the Grade 10 ICT textbook. What type of data transmission method is this?

ii. Give two example of solid state storage devices?

iii. What is the purpose of give symbol in word processing software?

a)  ..... b)  .....



iv. If the input A = 0 and the output Z = 1 for the above logic circuit, what are the values of inputs B and C?

v. What is the BCD code for the decimal number 305?

vi. In the given spreadsheet, cells A1 and B1 have values 30 and 20, respectively. After entering the formula =A$1+B$1 in cell C1, it displays the value 50. What values will appear in cells C2 and D1 if the same formula is copied there?

	A	B	C	D
1	30	20	50	
2				
3				

vii. Give two tasks performed by the operating system related to computer hardware management?

viii. a) In electronic presentations, which view is used to present the presentation to the audience?

b) In the display view mentioned in part (a), which keyboard key can be used to hide the presentation from the audience?

ix. Give two special features of a primary key?

x. Give two examples included under system software.

02) The salary details for the employees working at ABC Company for the month of January are shown below.

	A	B	C	D	E	F	G	H
1	**PayRoll**							
2	January							
3	Normal working hours per week					**30**		
4	Employee Number	Name	Hours worked	Ordinary work allowance (Per hour)	Overtime allowance (Per hour)	Overtime hours	Total Pay	
5	A001	Vimal	40	250	500	10	12500.00	
6	B001	Raja	30	250	500	0	7500.00	
7	C001	Kumar	35	350	700	5	14000.00	
8	D001	Ravi	38	200	400	8	9200.00	
9	E001	Kajan	37	250	500	7	11000.00	
10	F001	Rathi	40	450	900	10	22500.00	
11	G001	Mala	43	250	500	13	14000.00	
12			**Total amount paid**				**90700.00**	
13								

Using the above electronic spreadsheet, answer the following questions.

i. Which tools were used to format the title "PayRoll"

ii. What is the formula that should be entered in cell G5 to calculate the overtime hours worked by Vimal? ***(This formula should be copied to the other cells as well.)***

iii. What is the formula that should be entered in cell E5 to find the overtime pay per hour?

(The overtime pay for one hour is twice the normal hourly pay)

iv. What is the formula that should be entered in cell G5 to find Vimal's total payment?

(The total payment includes both regular pay and overtime pay)

v. What is the function that should be entered in cell G12 to find the total amount paid?

03)

(a) The following table contains application software and their functions**.** From Table B, select and write the appropriate functions corresponding to the application software listed in Table A. (Indicating the letter symbols alone is sufficient.)

Table A	Table B
A – Disk Defragmentation	P – Protecting the computer from malware
B – System diagnosis tool	Q – Dividing a hard disk into multiple logical drives
C - Anti-virus software	R – Merging the small empty spaces on a hard disk
D – Disk Partitioning	S – Identifying hardware faults in a computer or computer network

(b)

i. Give two types of file systems used in computers.

ii. List the components of a graphical user interface (GUI).

iii. State two reasons for the necessity of disk partitioning.

iv. How can operating systems be classified according to their functions?

04)

i. Convert the following numbers into decimal form and show the main steps of your calculation.

a) 111010101_2

b) $A07_{16}$

ii. Find the MSD and LSD of the following numbers.

a) 7850

b) 0.00340

iii. Draw the logic circuit for the given Boolean expression using only basic logic gates.

a) $Z = \bar{X}Y + X\bar{Y}$

b) $F = ABC + A\bar{B}C + \overline{AC}$

iv. Give two disadvantages of networking**.**

v. Give two differences between Switch and Hub

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05) The following is a part of a database used by a school to manage student details and their results.

Student Table

Stu_ID	Name	DOB	Grade
S001	Ramanan	2010/03/20	10
S002	Kumaran	2009/11/14	11
S003	Rajkumar	2010/05/25	10
S004	Sunil	2009/04/23	11

Result Table

Stu_ID	L_Code	Result
S001	L01	A
S002	L02	B
S004	L01	B
S003	L04	A
S002	L03	C

Language Table

L_Code	Language
L01	Tamil
L02	English
L03	Franch
L04	Sinhala

i. List the two primary keys in the tables along with their table names.

ii. List the two foreign keys in the tables along with their table names

iii. Ravi (Stu_ID:S006), who was born on May 10, 2011, joined this school as a Grade 9.

a) In which table or tables should this data be updated?

b) Provide the data to be updated in the format: Table name (Field 1, Field 2, …)

iv. A student named Kumaran studied the newly introduced Chinese language and obtained an A grade in it.

a) In which table or tables should this data be updated?

b) Provide the data to be updated in the format: Table name (Field 1, Field 2, …)

v. What is the relationship between the Student table and the Language table?

06) A word processing software shows the numbered interface of the software (Fig. – 1) and a document created using it (Fig. – 2) in the images below.

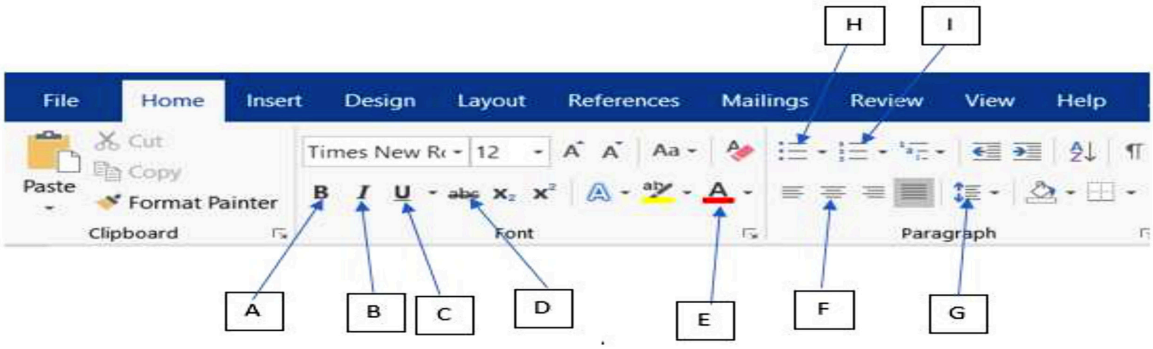


Fig - 1

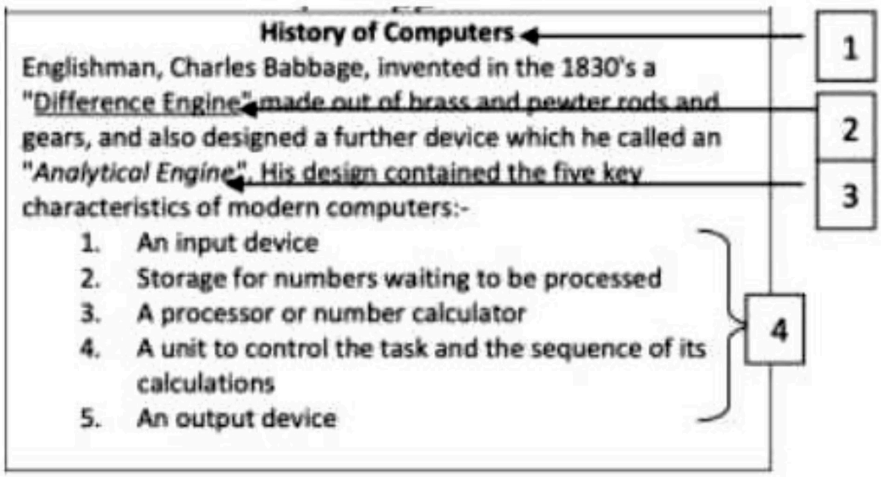


Fig - 2

i. Write the icons of the tools used for each formatting task from 1 to 4 against the corresponding numbers**.**

ii. For each of the following, which is more appropriate in terms of portrait (vertical) or landscape (horizontal) orientation?

a) For an official letter

b) For a page containing a wide table

iii. What is the advantage of the "Mail Merge" feature in a word processing software?

iv. In presentation software, explain the difference between an **Animations** and a **Transitions**.

v. What is the purpose of the Slide Sorter view in presentation software?

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