

மாகாணக் கல்வித் திணைக்களம், வடக்கு மாகாணம்  
**Provincial Department of Education, Northern Province.**

கல்விப் பொதுத் தராதரப் பத்திர (சாதாரண தர) இரண்டாம் தவணைப் பரீட்சை - 2019 ஜூலை  
**General Certificate of Education (Ord.Level) Second Term Examination - 2019 July**

தகவல் மற்றும் தொடர்பாடல் தொழிநுட்பவியல்  
**Information & Communication Technology**

80

E

II

02 மணித்தியாலம்  
02 Hours

**Information & Communication Technology Part II**

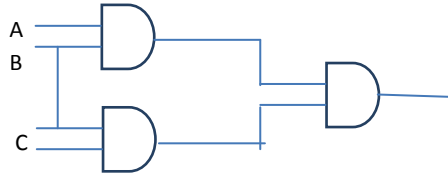
\* Answer five (05) questions only, including the first question and four others.

\* First question carries 20 marks and each of the other questions carries 10 marks

1)

i) Convert the octal number 731 to the equivalent hexadecimal number. Show the relevant steps.

ii) Consider the following logic circuit diagram:



a) Write down the Boolean expression for the above logic circuit?

b) What are the respective outputs of the above logic circuit when the inputs (A,B,C) given in the table are applied?

A	B	C	output
0	0	0	
1	1	1	

iii) The first column in the following table shows tasks related to different devices indicated by numbers 1 to 4. The second column shows the Ports required to connect these devices to a computer. However, tasks and ports are not in the correct order.

Task	Port
1-Connect the CRT display to the multimedia projector	A- Audio
2- Connect laser printer to the system unit	B - VGA
3- Connect network cable	C - USB
4- connect microphone	D – RJ45

Identify the correct port from the port column to connect each of the tasks indicated in the task column and write down the task number and the relevant port label in your answer book.

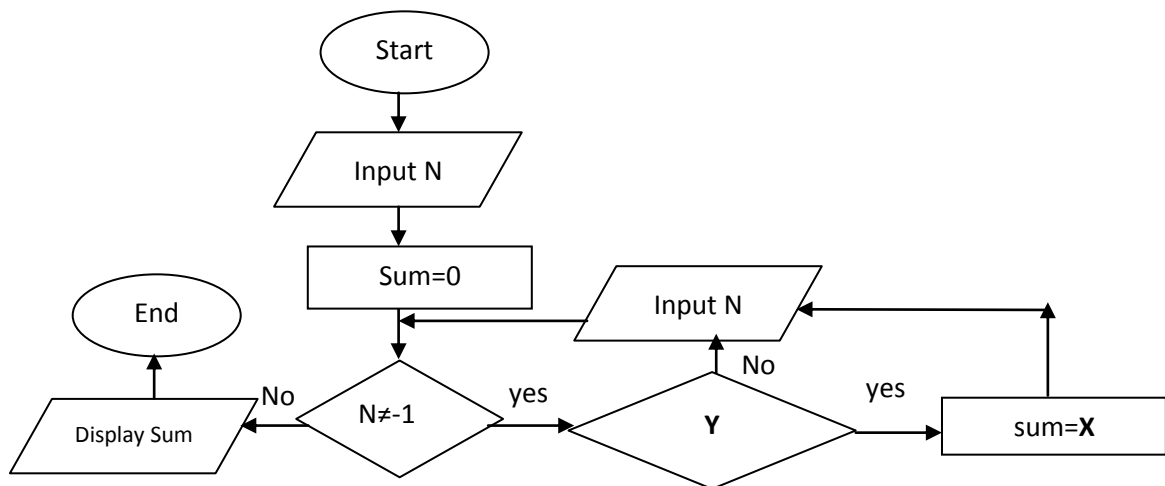
- iv) a) Write down the one advantage of waterfall model?  
 c) Write down the first step of waterfall model?
- v) Consider the following phrase before and after formatting using word processing software.(Assume that font size of the phrase has not been changed )  
 before formatting – Welcome to 19th Century  
 after formatting - **Welcome to 19<sup>th</sup> Century**

Write down the word processing software tools required for the above formatting.

- vi) Match the column A and column B.

Column A	Column B
x- This server is used to convert the domain name into IP address	ISP
y – To access the internet from a home and this is needed	DNS
z – This service is used to transfer the file	HTTP
p- To transfer the HTML documents	FTP

- vii) Write down the Pascal statement to assign the values 70, 150.35 to the variable a and b respectively.
- viii) Consider the following flow chart that read some integer numbers and find that sum of even numbers.



- a) Write down the correct expressions for X and Y respectively.  
 b) If you give the values of N are 3, 8, 10 and -1 respectively, what is the output of the above flowchart?
- ix) Write down the three services of cloud computing?

x) Consider the following tables named Students, Student\_Subject and Subject.

Students	
Stu_No	Name
1011	Kala
1234	Kampan
1452	Kavi
1011	Kani

Subject	
Sub_No	Name
23	ICT
12	Maths
45	Tamil

Student_Subject	
Stu_No	Sub_No
1011	23
1234	23
1452	12
1011	45

State whether the following statements are True or False regarding above the table

- Stu\_No and Sub\_No in Student\_Subject table is a composite key.
- Stu\_No in Students table is a Primary key.
- Sub\_No in Subject table is a foreign key
- There is a one to many relationship between Students and Subject table

2) a) Fill in the blanks using the following list.

List :- home page, uploading, downloading, mail server, web server

- The activity of receiving information from the server computers to client computers is called .....
- The activity of providing information from client computers to server computer is called .....
- ..... is storing electronic mail and providing them to the client computers.
- The page which contains the basic information about web site is called the .....

b) Write down the two tasks can be performed through remote access?

c) State whether the following statements are True or False.

- Instant messaging is exchanging short messages very fast over the internet using chat facility.
- Web pages are consists of many web sites.
- Internet is a service of WWW.
- IP address is used to uniquely identified computer on Internet.

3) The HTML source of the web page shown in figure 2 is given figure 1 with certain missing tags and parameters labelled ❶ to ❿

```

<html>
<head>
<❶>Internal Computer Hardware</❶>
</head>
<body>
<h1❷=center>Internal Computer Hardware</h1>
<❸>Introduction</❸>
<p ❷=justify>Computer Hardware is the physical part of a
computer,
as distinguished from the
<a ❹ ="http://en.wikipedia.org/wiki/Computer
software"> computer software</a>
that executes or runs on the hardware. The hardware of a
computer is infrequently changed, while software and
data are modified
frequently. The term soft refers to readily created,
modified, or erased. These
are unlike the physical components within the computer
which are hard.</p>
<img ❺="Inside Computer" ❻="inside_computer.jpg" />
<❼ size=10 color=green>
<❸><font color=red ❽=arial>Some
examples</font></❸>
<❿type=circle>
<li> Mother Board </li>
<li>Central Processing Unit</li>
<li>RAM</li>
<li>firmware</li>
</❿>
</body>
</html>

```

Figure 1

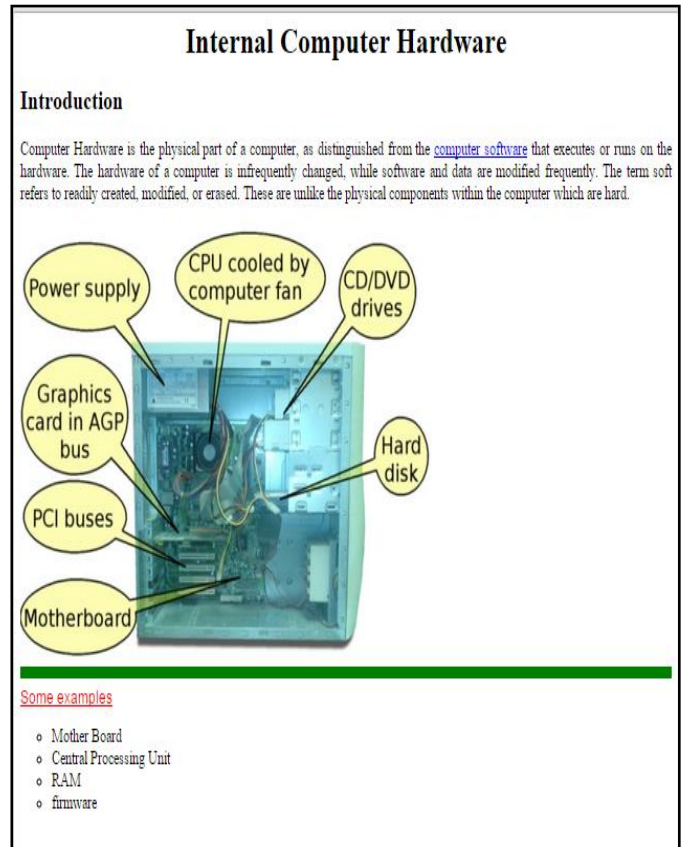


Figure 2

Select the matching correct tag or parameter from the following list for each of the labels ❶ to ❿ given in figure 1 and write down against each label number.

List :- (ol, ul, alt, h1, h2, href, src, br, hr, u, face, align, title)

- 4) a) The following table shows the number of functioning schools grade span and province in 2002. (Source: - <http://www.statistics.gov.lk/>)

	A	B	C	D	E	F	G	H	I
1	<b>Number of functioning Schools by grade span - 2002</b>								
2	<b>Province</b>	<b>Primary only</b>	<b>Primary and Secondary</b>			<b>Secondary Only</b>		<b>Total</b>	
3		<b>Grade 1- 5</b>	<b>Grade 1- 8</b>	<b>Grade 1- 11</b>	<b>Grade 1- 13</b>	<b>Grade 6- 11</b>	<b>Grade 6- 13</b>		
4	Western	260	46	675	325	14	73		
5	Central	506	90	531	303	2	51		
6	Southern	219	47	555	256	8	66		
7	Northern	333	89	278	134	5	29		
8	Eastern	330	80	321	196	1	9		
9	North Western	227	63	636	297	-	27		
10	North Central	21	59	347	152	-	11		
11	Uva	195	73	373	183	1	4		
12	Sabaragamuwa	306	96	502	192	-	39		
13	<b>Sri Lanka</b>								
14	<b>Percentage</b>								
15									

- i) Write down the function necessary for cell H4 to find total functioning schools in Western province?
- ii) Write down the function to find the total functioning primary schools only grade 1- 5 in cell B13 of Sri Lanka?
- iii) Write down the function to find the total functioning schools of Sri Lanka in cell H13?
- iv) Write down the formula to find the percentage of Primary schools only in cell B14 of Sri Lanka?

Hint:-

percentage=(total primary schools only/total functioning schools in srilanka)\*100

Assume that this formula should be dragged other cells to display their percentage.

- b) Answer the questions below by using presentation software
  - i. Which type of view you see your presentation in full screen?
  - ii. Which type of view is used to rearrange or delete slides is easy to do?
  - iii. What is extension of presentation software?
  - iv. What is the term used to apply visual effects to individual items of a slide?

5) Consider the following database tables and answer the question below.

Customer	
Cus_ID	Name
1001	Ragesh
1002	Akadh
1003	Mugesh

Bank	
Bank_ID	B_Name
8921	ABC
8929	CXY
8928	LED

Customer_Bank		
Cus_ID	Bank_ID	Acc_No
1001	8921	74931
1001	8928	28741
1002	8929	43289
1003	8921	73141
1002	8928	28493

- a) Write down **two** primary keys and their corresponding tables?
  - b) Write down **two** foreign keys and their corresponding tables?
  - c) What would be the most suitable table in the database to add field **Cus\_NIC** ?
  - d) The new customer **Mugan** joined the bank **LED** and bank gave the Acc\_No as **28413**
    - i) What table(s) need(s) to be updated in the database?
    - ii) Write down the updated row(s) of the table(s) in the database?
  - e) The new bank "**LMN**" is opened. Its Bank\_ID **8923**
    - i) What table(s) need(s) to be updated?
    - ii) Write down the updated row(s) of the table(s) in the database? A query is written to display the Cus\_ID, Name and Acc\_No, who has the account of ABC bank. What is the output of the above query?
- 6) a) Consider the following activities and write down suitable phase of system development life cycle (SDLC) for these activities.

P – Phase of the SDLC is known as the “ongoing phase” where the system is periodically evaluated and updated as needed.

Q – During which phase is users trained to use the new system.

S - Preparing the documentation for each one of the program.

T –Meeting the librarian for discussions.

U – User interface sees on the screen and preparation for data storage

V – To resolve errors.

- b) A company developed a computer based new system to replace the existing manual information system. The company has decided to work for a short period of time with both systems.
  - i) What is the deployment approach method used here?
  - ii) Write down one advantage and one disadvantage of the above deployment approach?

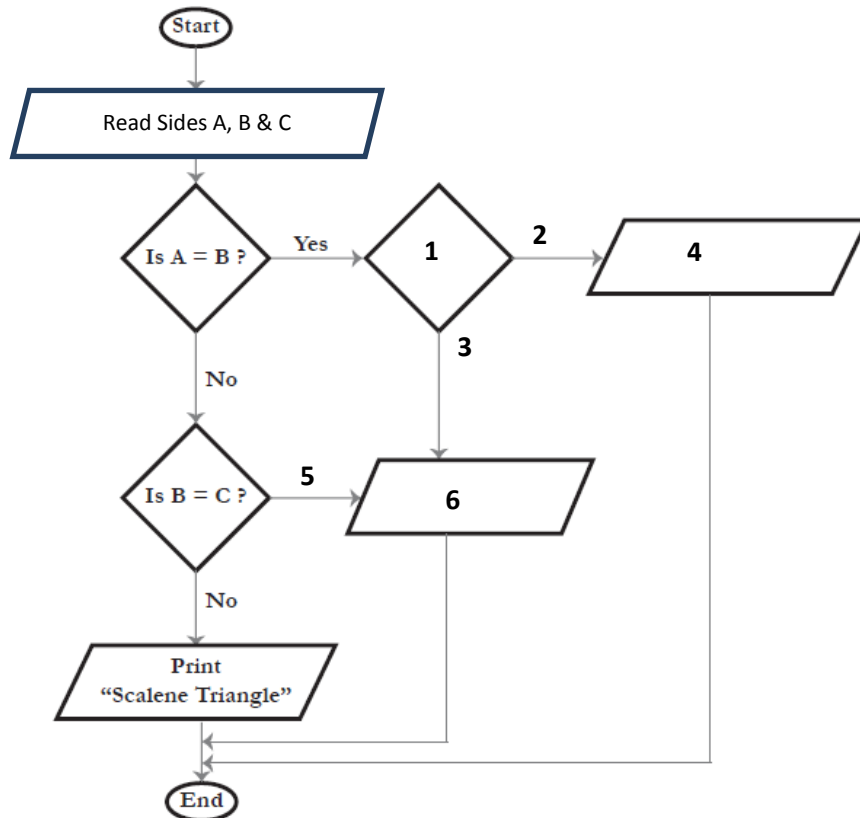
- 7) a) Lengths of three sides of a triangle A, B, C are given as input. The following flowchart finds if the triangle is isosceles, equilateral, or scalene. Fill in the boxes 1 to 6.

Hint:

In an equilateral triangle if three sides are equal.

In an isosceles triangle if two sides are equal.

In a scalene triangle if three sides are not equal.



- b) Write down the pseudo code for the above flowchart?
- c) Use the above flowchart and write down the execution steps when the given triangle sides 5 cm, 5 cm and 3cm