

සබරගමුව පළාත් අධ්‍යාපන දෙපාර්තමේන්තුව
சபரகமுவ மாகாண கல்வித் திணைக்களம்
Sabaragamuwa Provincial Department of Education

තෙවන වාර පරීක්ෂණය 2020
மூன்றாம் தவணைப் பரீட்சை 2020
Third Term Test 2020

11 ශ්‍රේණිය
தரம் 11
Grade 11

තොරතුරු හා සන්නිවේදන තාක්ෂණය II
தகவல் தொடர்பாடல் தொழினுட்பவியல் II
Information and Communication Technology II

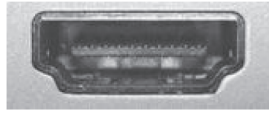
පැය දෙකයි
இரண்டு மணித்தியாலம்
Two hours

- 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.

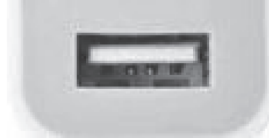
- 01 (i) Name two characteristics of quality information.
- (ii) Below are the images of few computer ports. Write down name of each port with its matching English letter.



A



B

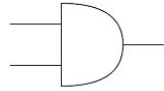


C

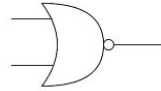


D

- (iii) Kamal says that the octal number 243_8 is equal to the hexadecimal number $F3_{16}$. Do you agree with Kamal? Justify your answer.
- (iv) a) Name the below logic gates.



(i)



(ii)

- b) Draw the logic circuit that matches with the Boolean expression $F = (A+B) \cdot \bar{C}$ and build the truth table.
- (v) Some steps of the computer Booting Process are listed below. Arrange them in the correct order.
- Access the Operating System by the Random Access Memory (RAM).
 - User powers on the computer.
 - Run the POST (Power-On Self-Test) program.
 - Read the MBR (Master Boot Record).
- (vi) Some tools used by the word processing software are displayed below. Write down the keyboard short cut keys that can do the same function as these tools with its matching English letter.



(P)



(Q)



(R)



(S)

- (vii) The number of colors in a digital graphic is determined by the number of bits in a pixel. How many colors can be represented by a pixel with 5 bits?

- (viii) Find the matching words from the second column and write down the words with its matching English letter from the first column.

First Column	Second Column
A. Installing the new system only on a selected section of an institute.	Direct deployment
B. Running the both old system and new system for a selected time period.	Parallel deployment
C. Install the new system step by step.	Pilot deployment
D. Install the new system and discard the old system.	Phased deployment

- (ix) Select the suitable words for the blanks from the given list.

List-: download, upload, computing

Transferring data from server computers to client computers is known as _____(A)_____ and transferring data from client computers to server computers is known as _____(B)_____.

- (x) The under mentioned flow chart is designed to get the lowest mark for ICT out of 40 students in a classroom. Select the suitable labels for the symbols named from A to D from the given list.

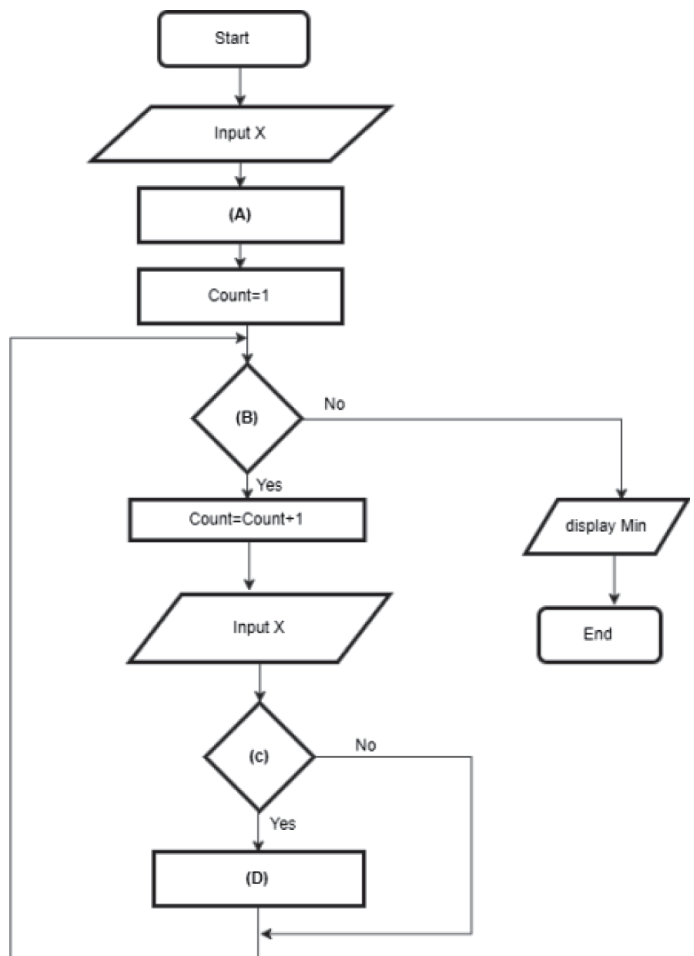
List of words:

Count=<40

$X < \text{Min}$

$X = \text{Min}$

$\text{Min} = X$



(Marks 2x10 =20)

- 02 a). State whether the following statements are true or false with its matching English letter.

- P. The capacity of a compact disk (CD) is 4700MB and the capacity of a Digital Versatile Disk (DVD) is 700MB.
- Q. The Hub uses full duplex mode as its data transmission mode and the switch uses half duplex mode as its data transmission mode.
- R. Compilers need to translate high level and low level computer languages.
- S. Slide transition adds animations to the objects like texts, images on a slide.
- T. Media use to transmit data from source to target receiver in data transmission.

- b). Below are healthy habits that can help to avoid health issues that occur when using computers for a long period of time. Select the health issue that can be avoided directly by practicing each habit from the given list and write down with its matching health habit label.

- J. Adjusting computer screen brightness to be less tiring to the eye.
- K. Placing mouse and keyboard in correct way.
- L. Avoid using computers at home when doing the job with computers for 7-8 hours at work and keep the mind relaxed.
- M. Sit straight by leaning on to the back of the chair and relax the shoulders, Place the keyboard at the elbow level or below the elbow level.

Health issues

- Headache
- Stress
- Stomachache
- Computer Vision Syndrome
- Carpel Tunnel Syndrome
- Repetitive Stress Injury
- Anorexia

(Marks2)

- c). Write down three advantages of a computerized system compared to a manual system.

(Marks 3)

- 03 a). The HTML source for the web page in **figure 1** is given in the **figure 2**. Select the correct label for each missing tag/ attribute from the given list and write down with its matching number.

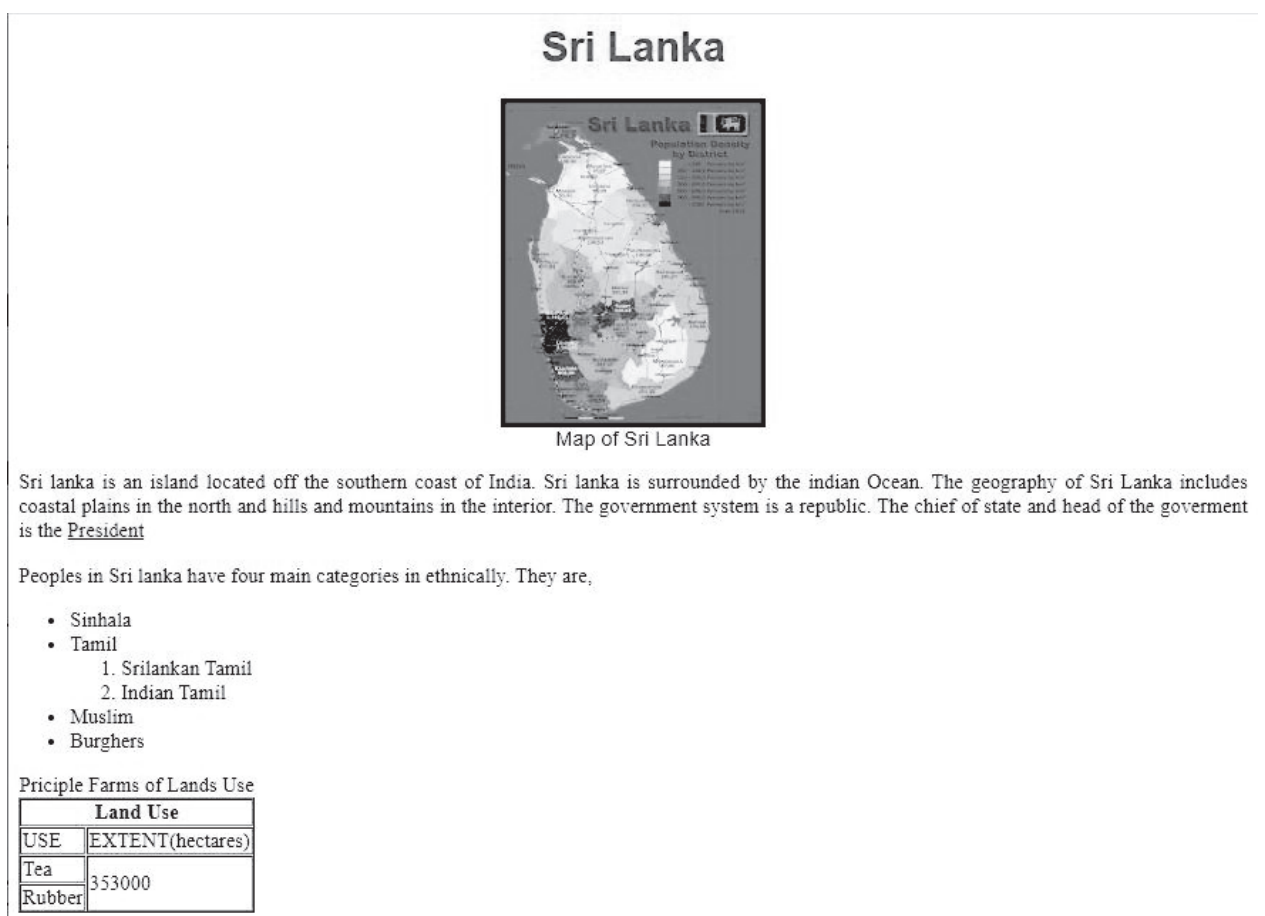


Figure 01

HTML Source code

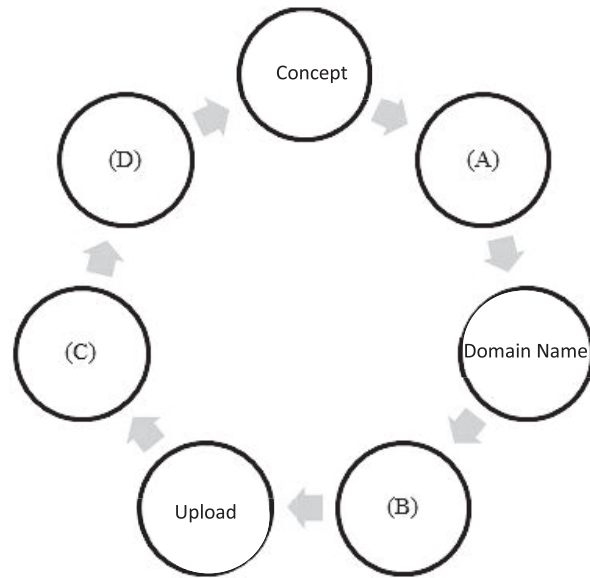
```
<html>
<❶><title>Sri Lanka</title></❶>
<body>
<h1><center><font ❷="Arial" color="blue">
Sri Lanka</font></center></h1>
<center><img ❸="./srilanka.jpg" ❹="Map" width="200" height="250" border="3"></center>
<center><font ❷="Arial" size="3"> Map of Sri Lanka</font></center>
<p ❺="justify"> Sri Lanka is an island located off the southern coast of India. Sri Lanka is
surrounded by the Indian Ocean. The geography of Sri Lanka includes coastal plains in the north
and hills and mountains in the interior. The government system is a republic. The chief of state
and head of the government is the <a ❻="http://president.gov.lk">President</a>
</P>
Peoples in Sri Lanka have four main categories in ethnically. They are, <br/>
<❷ type="disc">
    <li>Sinhala</li>
    <li>Tamil
        <❽ type="1">
            <li>Sri Lankan Tamil</li>
            <li>Indian Tamil</li>
        </❽></li>
    <li>Muslim</li>
    <li>Burghers</li>
</❷>
<table border="1">
<caption>Principle Farms of Lands Use</caption>
<tr><th ❹="2"><center>Land Use</center></th></tr>
<tr><td>USE </td>
<td>EXTENT(hectares)</td></tr>
<tr><td> Tea </td>
<td ❻="2">353000</td></tr>
<tr><td>Rubber</td></tr>
</table>
</body>
</html>
```

Figure 02

Word list -: a, align, alt, br, colspan, face, head, height, href, ol ,rowspan, src, sub, table, th, ul, width

- b). The figure shows the process of designing and developing a web site. Select the suitable words for the blanks from the given choices.

(deployment, testing, hosting, designing and development, update and maintain)



04. a). Below spreadsheet shows the data of the usage of social networks by grade 10 and 11 students in a particular school.

	A	B	C	D	E	F	G
1	How social networks are used by students in grade 10 and 11						
2							
3	Total number of students in grade 10 and 11			78			
4							
5		Grade 10		Grade 11			
6	Social Network	Female	Male	Female	Male	Total	Number of students who do not have social network accounts
7	Facebook	21	17	15	19	72	6
8	Whatsapp	25	18	13	18	74	4
9	Viber	12	14	10	16	52	26
10	Messenger	16	17	12	17	62	16
11							
12	Least number of connections	12	14	10	16		
13	Highest number of connections	25	18	15	19		
14							
15	Number of social network connections in grade 10					140	
16	Number of social network connections in grade 11					120	

- I. Write down the function that should be entered in cell F7 to get the number of Facebook accounts maintained by students in grade 10 and 11.
- II. (A) Write down the function that should be entered in cell D12 to get the least used social network by grade 11 female students.
 (B) Write down the function that should be entered in cell C13 to get the most used social network by grade 10 male students.

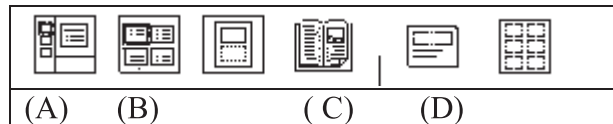
- III. Write down the function that should be entered in cell F16 to get the number of social network accounts maintained by all grade 11 students.
- IV. Name two suitable graph types to represent the use of social networks by students in grade 10 and 11.
- V. Write down the formula to calculate the number of students who do not have Facebook accounts. (The same formula should be able to be used to calculate the value for other networks as well.)

(Marks 1x5=5)

- b). i. Name one open source electronic presentation software.

(Marks 01)

- ii. Below is a part of the view tab of presentation software. Name the icons labeled as A, B, C and D.



(Marks ½ x4 =02)

- iii. Briefly explain what is meant by Green Computing.

(Marks 02)

- c). Following are the partly shown tables of a database maintained by a school library.

BookID	BookName	UnitPrice
B001	Gamperaliya	375
B002	Madolduwa	620
B003	Hathpana	450
B004	Yuganthaya	280

Books

BookID	PubID
B001	P001
B002	P003
B003	P001
B004	P002

Book_Supplier

PubID	PubName	PubTel	PubAddress
P001	Tharaka	0452287521	Rathnapura
P002	Samudura	0778598230	Pelmadulla
P003	Rasangi	0752685420	Balangoda
P004	Ishara	0712508556	Dehiowita
P005	Indika	0762584644	Embilipitiya

Suppliers

- Write down an example for a primary key with respective table name.
- Sandamali says that **PubID** in Suppliers table is a foreign key. Do you agree with her, or not? Justify your answer
- Write down the suitable data type for each field in books table with the field name.
- Write two advantages of an electronic data base.
- Explain the difference between data redundancy and duplication of data.

(Marks 2x5=10)

06. i. Select the suitable words for the blanks of the following paragraph from the given list and write down with the matching number.

IP address is used to identify the computers connected to the internet separately and ____ (1) ____ is used to identify websites in world wide web separately. Internet provides few main services and one of them are, ____ (2) ____ . ____ (3) ____ are used by users to get the hyperlinks for the required websites by typing keywords. The identification of a person in the internet is done by ____ (4) ____.

List of words: World Wide Web, e-mail address, web browser, search engines, domain name, uniform resource locator

- ii. Briefly explain the difference between blogs (web logs) and Forums.
- iii. Name two situations where you should be careful when using social networks as well as the internet.
- iv. Briefly explain how you should react if you get cyber bullied when using social networks.
- v. Briefly explain the function of the Domain Name Server.

(Marks 2x5=10)

- 07
- i. Name two control structures used when developing algorithms.
 - ii. Explain the difference between variables and constants.
 - iii. The following Pascal code is used to get the science marks of 40 students to an array. Select the suitable words for the blanks from the given list and rewrite the complete code.

List of words:-writeln, read, mark, 0..39, i

```

program sciencemarks;

var marks:array[.....] of integer;
i,mark:integer;
begin
  for ..... :=0 to 39 do
    begin
      ..... ('Enter science mark');
      .....(mark);
    smarks[i]:=mark;
    end;
  end

```

- iv. Below pseudo code is used to display the largest value from any given two numbers. Draw the respective flow chart.

```

Begin
  Input X,Y
  If X>Y THEN
    Output X
  else
    Output Y
Endif
End.

```

- v. A student has developed a pseudo code to get the number of days in a month when the relevant number for the month is given as below. Draw a suitable flow chart to represent the pseudo code.

```
Begin
input month number into mn
if mn=2 then
    write "the month has 28 days"
else if mn=1 or 3 or 5 or 7 or 8 or 10 or 12 then
    write "the month has 31 days"
else if mn=4 or 6 or 9 or 11 then
    write "the month has 30 days"
else write "wrong month number"
end if
End.
```

(Marks 2x5=10)