



# LYCEUM INTERNATIONAL SCHOOL

## Second Semester Examination – July 2019

Subject : Information Communication Technology - II

80

E

II

Class : 10 (National) ...B....

Duration : 2 hours

Date : 20/07/2019

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Admission no : 501795

Answer five questions only, selecting the first question and four others.

First question carries 20 marks and each of other questions carries 10 marks.

1. (i) a) Write the octal value of  $2F_{16}$ .
- b) Table 1 contains generations of programming languages and Table 2 contains the details related to the contents of Table 1. Match pairs by drawing lines.

Table 1	Table 2
Commercial software	Excel
System software	GIMP
Open source software	Disk defragmentation
Application software	Ubuntu

- (ii) In order to provide security for the computer laboratory in a school, students who have permission to use the laboratory are required to enter their school admission number(X) and a password (Y) to a device installed at the door. If both the admission number and password are correct, the door (Z) will be opened. If either one of them or both are incorrect, the door will not be opened.

X	Y	Z

- a) Copy the above table to your answer book and fill in the column for state of Z.
- b) Draw the logic gate represented by the above table. Indicate the input and output clearly.

## Grade 10 (National) Information Communication Technology - I contd. from page 1

(iii) Match column A with column B and write matching letters with the correct number.

	Column A		Column B
A	URL	1	Yahoo
B	Search engine	2	www.e-thaksalawa.moe.gov.lk
C	Stage of web development process	3	Bluegriffon
D	Web authoring tool	4	Update and manage

(iv) ICT is used for various fields in different ways. Select the correct terminology from the given words to fill in the blanks given below.

(Sensors / 3D Image / Meteorological Devices/ Robots / RFID )

- Health field uses \_\_\_\_\_ to see parts of the body in different dimensions.
- \_\_\_\_\_ are used to get data to decide on the crop cultivation and harvesting times.
- In car production, \_\_\_\_\_ can be used to get an efficient and accurate output.
- \_\_\_\_\_ which are located in the sea can be used by sea travelers to get information they need

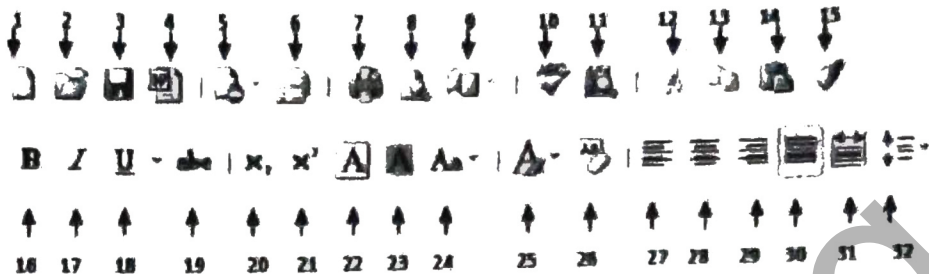
- Name two categories of computer according to the size .
  - Write down two pointing devices.

(vi) Read and mark (✓) or (×) sign in front of the statement.

- Bar code reader can recognize characters. ( )
- Line printer is slower than dot matrix and it produces quality printouts. ( )
- Blue ray → DVD → CD represents the descending order of storage devices according to the capacity. ( )
- Serial/ USB port can be used to connect the external modem to the computer. ( )

## Grade 10 (National) Information Communication Technology - I contd....from page 2

- (vii) Set of tools in a word processing software is given below. Write the number(s) of the appropriate tool(s) in front of the relevant task.



- To open a new word document
- To correct errors in spellings
- To copy existing formatting styles to another text
- To capitalize all simple letters in a document

- (viii) Write two special attributes of a primary key.

- (ix) Write the output of the following pseudo code.

Begin

X = 25

A = 1

Repeat

A = A + 1

X = X - 1

Until A > 5

Print X

End.

- (x) Declare an array called average marks and store 40 elements in this array.

[Total = 20 marks]

contd....to page 4

**Grade 10 (National) Information Communication Technology - I contd.....from page 3**

2. (a) The "PC house " is a shop that sells computer parts which are supplied to the shop by several suppliers. The shop maintains a database with three tables to store the items currently in stock, their suppliers and computer parts purchased from the suppliers, as shown below.

**Item Table**

Item_ID	Name	Stock
C001	Motherboard	15
C002	Hard disk	20
C003	RAM	10
C004	Speaker	5

**Purchase Table**

Date	Supp_ID	Item_ID	Count
10/09/18	S001	C003	30
15/19/2018	S003	C003	10
20/09/2018	S002	C001	20
25/10/2018	S004	C002	15
28/10/2018	S003	C004	10

**Supplier Table**

Supp_ID	S name
S001	Amal
S002	Kamal
S003	Nimal
S004	Saman

- i. List primary key fields and their table names in the above database system  
(1 mark)
- ii. The shop decides to add a new item "Scanner" and purchases 10 items from the supplier Nimal on the date 30/09/2018.
  - a) What tables needs to be updated?
  - b) Write the updated record(s)in the relevant table(s).  
(2 marks)
- iii. A customer buys 2 hard disk and 1 speaker.
  - a) What table needs to be updated?
  - b) Write the updated record(s) in the relevant table.  
(2 marks)
- iv. As earlier people used to have a flat table instead of having relational databases, data duplication was high. Write **two** disadvantages of having data duplication.  
(1 mark)
- v. What is DBMS ? **list four** objects of DBMS.  
(2 marks)

**Grade 10 (National) Information Communication Technology - 1 contd.....from page 4**

- (a) The "New Designs" business is going to reconstruct their network connection with other branches which are located in other cities. They need to improve their communication among all branches. Fill in the blanks using given terms according to the above situation.

**( Router , Hub , FTP , WAN , LAN , cloud computing )**

- i. "New Designs" is going to configure the network with all other branches in the country. That is called -----.
- ii. One branch needs to connect all the computers together and they need to connect that network to the internet. For this requirement they need -----.
- iii. ----- is used to transfer large files through internet.
- iv. When a branch uses ----- they can reduce the cost on software and they can reduce cost for maintenance also. (2 marks)

[Total = 10 marks]

3. (a) The number of farmers who cultivated big onions in 2011- 2016 is shown in the spreadsheet segment given below.

	A	B	C	D	E	F	G	H
1	<b>Number of farmers Cultivated Big Onion 2011-2016</b>							
2	<b>District</b>	<b>2011</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>Average</b>
3	Anurahapura	4798	3239	4076	4432	5557	4590	
4	Mahaweli	2418	1391	1831	1444	3636	2249	
5	Matale	3653	3426	5612	4155	5452	4834	
6	Pionnarawa	223	153	322	305	633	707	
7	<b>Total</b>							
8	<b>Average</b>							
9	<b>Maximum</b>							
10	<b>Minimum</b>							
11								
12								

- (i) A formula of the form = function (cell1 : cell2) is to be used to calculate and display the total number of farmers cultivated big onions in 2011 in cell B7.

Write down the correct terms for function, cell1 and cell2 in the above formula.

- (ii) It is necessary to copy the formula entered in cell B7 to the range of cells from C7 to G7. The following steps 1 - 3 show the required steps to achieve this. However, these steps are not in the correct order

1. Click on the file handle
2. Drag the fill handle to G7
3. Click on the cell B7

Re - arrange and write down the steps 1 - 3 in the correct order.

**Grade 10 (National) Information Communication Technology - I contd.....from page 5**

- (iii) What formula would be displayed in cell C7 after copying the formula in cell B7 to cell C7 ?
- (iv) It is necessary to write a formula in the form of = function2(cell3:cell4) in cell H3, to get the average number of farmers in the Anuradhapura district.  
Write down the correct terms for function 2, cells and cell 4 i u the above formula.
- (v) What is the most suitable graph type to show the variation of the number of big onion farmers from 2011 to 2016 in each district seperately ?

**(6 marks)**

- (b) Consider the following pascal program and answer the following.
- What is the name of the program ?
  - Write two names of declared variables.
  - Write two Reserved words used in this program.
  - The output of the programme is not given when it is executed. Correct the appropriate line to get the correct answer in your answer sheet.

```

program FindArea(input, output);
USE crt ;
var length, width, area: interger ;
Begin
  clrscr
  write('Enter Width: ');
  Readln(length);
  write('Enter Width: ');
  Readln(width);
  area = length * width;
  writeln('The area is: ,area);
  Readln
End.
  
```

**(4 marks)**

**[Total = 10 marks]**

4. i. Using Information and communication technology brings us a smooth life. But currently we can see many issues associated with the use of ICT in the society.
- Plagiarism is a major issue which is related to values of the society. But there are some accepted ways to prevent this issue. Write two ways that you can use to prevent from the above mentioned social issue.  
**(1 mark)**
  - Write two security mechanisms which can be applied for logical security of computer data.  
**(1 mark)**
- ii. Ergonomics is a very important concept nowadays which is beneficial for an organization.
- Briefly explain two benefits of having ergonomics in an organization.  
**(2 marks)**
  - Write two problems that will occur due to an incorrect posture of a computer user?  
**(1 mark)**
- iii. Write an advantage and a disadvantage of digital games and cartoon films for school children with respect to using ICT for entertainment.  
**(2 marks)**

**contd.....to page 7**

**Grade 10 (National) Information Communication Technology - I contd.....from page 6**

iv. There are many issues which occur with the use of computers. Health issues and e-waste are main issues among them.

a) Briefly mention **two** things that we can do as an organization, to reduce the e-waste.

(1 mark)

b) Write a solution for each of the following health problems. Vision problem, mental stress.

(2 marks)

[Total = 10 marks]

5. (a) Following HTML code segment has spaces given and required terms are given in the box. Select the correct term and write it with relevant number.

(Justify , head, title, center, h1 , ul, ol, h3 , p , href, img, hr , br )

```

<html>
< ① >
    < ② >music app/< ③ >
</ ④ >
<body>
    < ⑤ >< ④ >Our Music App/< ④ > < ③ >
    <center>< ⑥ > src="images/enada_ol2.png"
    width="200px" border="3px"></center>
    < ⑦ > align=" ⑦ " size="7px"> This is a music app for G.C.E. O/L
    students. Students can use this app to study eastern music for
    their examination. And any user can use this app. This
    contains numerous songs under selected categories.</ ⑧ >
    < ⑨ >Songs</ ⑩ >
    < ⑪ >
        <li>Thaala</li>
        <li>Bhajan</li>
        <li>Gramophone</li>
    </ ⑪ >
    <p>We wish you will use this product & learn</p>
    <a ⑫ >http://e-lhaksalawa.moe.gov.lk/web/sl/e-naada-
    ol.html">Visit us</a>
</body>
</html>
        
```

(5 marks)

(b) Write HTML code to insert a table with 4 rows and 2 columns with a border present as shown below.

Book Title	Price
Mahawansa	Rs.1400
Famous Five	Rs.750
Madolduwa	Rs. 890

(3 marks)

(c) Write the difference between static and dynamic web sites with an example.

(2marks)

[Total = 10 marks]

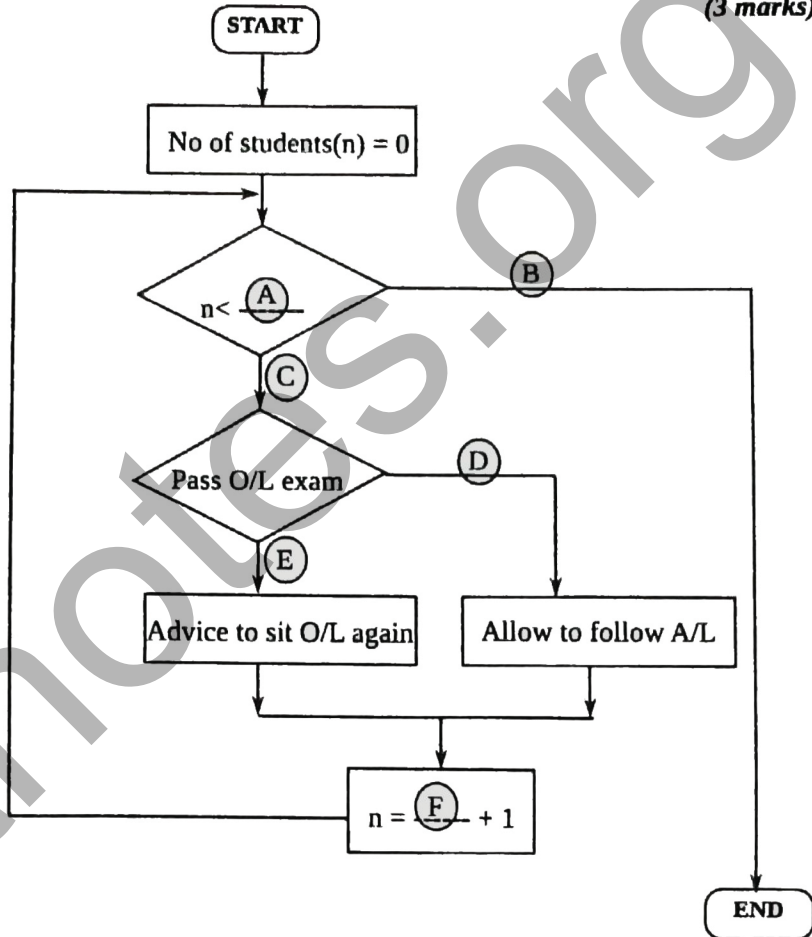
6. (i) Construct a pseudo code for the following scenario.

*If it is raining, tell your friend to get an umbrella. Otherwise, say it is sunny.*

(2 marks)

- (ii) In a school, the Pricipal checks the application forms of 100 students who applied to follow G.C.E. (A / L) in that school. Each student's application is checked one by one for qualification. If a student has passed the G.C.E (A/ L). Otherwise he / she is advised to sit for G.C.E (O /L) examination again.

(3 marks)



- (iii) Write a pseudo code for the logic in the flowchart given above in (ii).

(3 marks)

- (iv) What is a translator ? And briefly explain two types of translators.

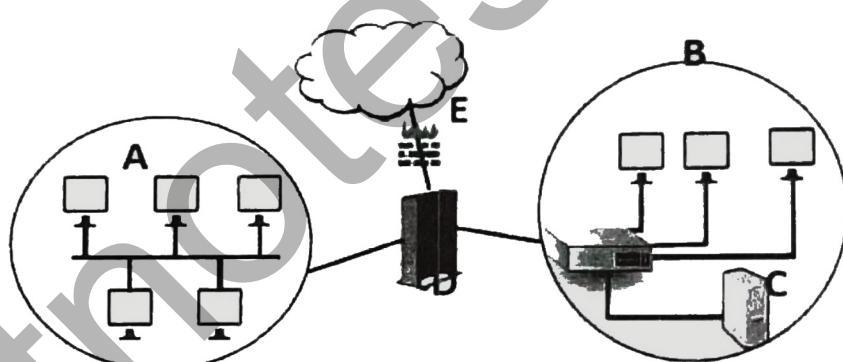
(2 marks)

[Total = 10 marks]



**Grade 10 (National) Information Communication Technology - I contd.....from page 8**

7. i. "ANG traders" is a successful business. But they have problems in their current information system that they used. Head of the organization needs to have a new computerized system for their business. Though they need to get this new system quickly, it is difficult to clarify all the requirements clearly as this main staff do not have a proper understanding of it.
- What can be the reasons which are caused to occur this requirement for a new system? (2 marks)
  - Mention two benefits that the head of the organization may expect from the new system. (2 marks)
  - They are going to use incremental model to develop the new system. Do you agree with this idea?  
Give reasons for your answer. (2 marks)
  - Study the diagram and answer the following questions.



- A and B are two LANs in the above organization. Mention the topologies used in those two LANs and write a disadvantage of using that topology. (1 mark)
- Name suitable devices for C, D, E and mention one usage of each device. (2 marks)
- Write an example for a suitable transmission media for the above network A. (1 mark)

[Total = 10 marks]

**END**