



ict

INFORMATION AND  
COMMUNICATION  
TECHNOLOGY

Grade

11

*General Certificate of Examination ( Ordinary Level )*  
*Information & Communication Technology*  
**Student Activity Book**



***Information & Communication Technology Unit***  
**Provincial Department of Education**  
**North Central Province**

*General Certificate of Examination ( Ordinary Level )*

**Information & Communication Technology**

# **Student Activity Book**

Education NCP - [www.edncp.lk](http://www.edncp.lk)

**Information & Communication Technology Unit**

**Provincial Department of Education**

**North Central Province**

## **First Edition 2020**

- Sinhala Medium
- Tamil Medium

Education NCP - [www.edncp.lk](http://www.edncp.lk)

## Message from the Provincial Director of Education



Information and Communication Technology is another milestone in the educational process that paves the way for the universe to be seen as chaotic. It has become the accepted scholarly opinion that living in isolation as a nation is not a civilized human behavior. Therefore, it is the aspiration of the superior human being that the human race around the world should come together, join hands and overcome future challenges and conquer the world. In order to overcome these future challenges, the backing of Information and Communication Technology is immense. It is in this context that the basic foundations of Cyrillic children are laid to move forward with the rest of the world in the face of globalization.

I appreciate the hard work and dedication of teachers as well as other educators in adapting children's knowledge, skills and attitudes to the new world through the Information and Communication Technology curriculum that was added to the school curriculum in 2007, as it is a three-pronged process.

I always commend those in the field of education who strive to enhance the knowledge and skills of the subject, especially among the children of the North Central Province. To prove these points, I would like to extend my congratulations to all those who have pledged their allegiance to the GCE (O / L) Examination Activities Handbook on Information and Communication Technology. At the same time, I hope that this task will be implemented effectively and that there will be a very good and excellent change in the GCE (O / L) examination in the year 2020.

Mrs.E.M.N.W. Ekanayake,  
Provincial Director of Education,  
Provincial Department of Education,  
North Central Province.

## Message from the Subject Director of Information and Communication Technology



With the rapid advancement and development of other fields with collaboration of Information Communication Technology, which are making a number of significant technological changes in today's world, many future challenges have been created for the student generation to face. In such an environment, in a society centered on new technological knowledge & intelligence, it is the responsibility of all us involved in ICT to empower students to face the challenges that arise.

The first step in providing the child with the opportunity to adopt to the higher education and work world is to provide the subject matter in a short period of time in which the objective of the syllabus, even in the face of an emergency in a country, to maintain the learning process by organizing the learning experience to some needs of the students. The main purpose of making this Activity Book is to provide a guide to successfully face the forest exam.

Therefore, I hope that the students studying the ICT subject will make good use of this book, which has been designed with Ordinary Level target questions, under the guidance of the teacher in charge of the subject and will take the NCP subjects results to the highest level.

Through the Official Website of the NCP, we have been able to facilitate the online study of students as well as teachers from all over the Island, not limited to our province, through the series of past Term papers, Question papers, Answer sheets and "Nena Sayura" hosting lessons conducted by the Provincial Department of Education. I am pleased to recall that we have already been able to enhance the result of the all subjects in the province by successfully obtaining accurate analysis of the provincial, Zonal, Divisional and school levels through our website.

Mr.J.M.P.M. Jayasundera,  
Assistant Director of Education,  
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# Preface

In today's society, the teaching and learning process is being modernized with new indicators of human experience, technological change, psychological research and education to achieve the educational goals that have taken on a complex form with economic, social, cultural and technological development. The Information and Communication Technology Curriculum aims to develop a person who can overcome future challenges by imparting practical skills in the learning-teaching process.

- To provide basic foundation for basic computer literacy and extensive study of the subject of Communication Technology;
- Provide an understanding of the various applications of ICT and its implications.
- Providing knowledge on concepts and principles related to information and communication technology
- Provide skills to provide information and communication technology based solutions to real world problems
- Awareness of the benefits of using ICT and the problems that arise from it;

The purpose of this book is to implement the ICT curriculum in the school and to help the child to successfully face the GCE (O / L) examination which is a barrier to giving him the opportunity to adapt to higher education and the work world.

The Marking scheme of This Activity book which is expected to be given to each student appearing for the GCE (O / L) examination in North Central Province can be downloaded from the website of the Provincial Department of Education ([www.edncp.lk](http://www.edncp.lk)).

Take advantage of this and We wish to be able to obtain an excellent pass in Information and Communication Technology from the GCE (O / L) Examination!!!

Information and Communication Technology Unit-  
Provincial Department of Education,  
North Central Province.

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# **Unit One**

## **Programing**

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1. Write down the three main steps of identifying a situation when analyzing a problem.



2. Analyze and present the following problem related to creating a kite.

Problem - Making a kite.

Input - Glue

.....  
.....  
.....

Process –

1. Line up and tie the structure with string

2.....

3.....

Output - .....

3. "Measuring the weight of two people on a scale and telling who is the heaviest person". Identify the problem contained in this statement and analyze and present the problem.

Problem - Telling who is overweight

Input - .....First person's weight.....

Process - 1. Measuring the recording the weight of the first person

2.....

3. ....

Output - .....

4. "Grinding grain with a blender". Analyze and present this problem using the answers given.

Problem - Grinding grains in a blender

Input - .....

Process -

1.....

2.....

3.....

4. If the grain is not short enough, going back to the third step.

5.....

Output - .....

Answers - (grain, blender), (closing the lid of the jar), (turning off the blender switch shortly), (adding the grain to the blender jar), (activating the blender switch), (grinding flour)

5. What are alternative solutions?

.....  
.....  
.....

6. What is the solution space?

.....  
.....  
.....

7. Write down the solution opportunity to find the perimeter of a square.

First solution -

.....  
.....  
.....

Second solution -

.....  
.....  
.....

8. If a person is 18 years of age or older, he is a voter. Or he is not a voter. Fill in the blanks below for this problem analysis.

Input -

.....

Process - Comparison of age obtained with 18.

Solution 01 –

.....  
.....

Solution 02 –


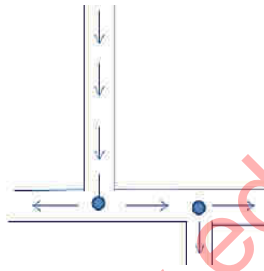
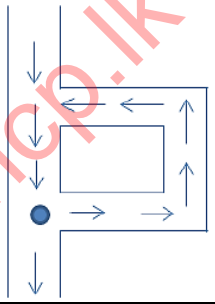
.....  
.....  
.....

Output - Whether or not a voter

9. What does an algorithm mean?

.....  
.....  
.....

10. Fill in the table below with the control structures that can be identified when studying the functionality of an algorithm

Control structures	.....	.....	.....
Representation of the idea			
Introduction			

11. Identify the control structure associated with the following situation and write the corresponding letter of the control structure in given space.



**A . Sequence**



**B . Selection**



**C . Repetition**

- |  |           |
|--|-----------|
| 1. Add sugar to a tea while the taste is not good enough   | - (.....) |
| 2. Find the area by taking the radius of a circle          | - (.....) |
| 3. The mother feeds the baby until the baby is full        | - (.....) |
| 4. Choosing the tallest person out of two                  | - (.....) |
| 5. Selecting or rejecting an applicant during an interview | - (.....) |



12. Write down 2 tools used to present an algorithm

.....  
 .....

13. What kind of algorithm does a flow chart present?

.....

14. Write down the meaning of the symbols used in a flow chart



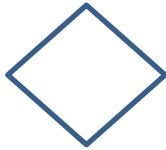
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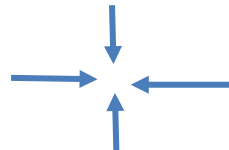
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.....



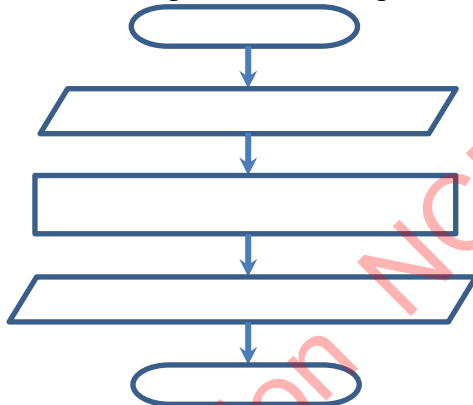
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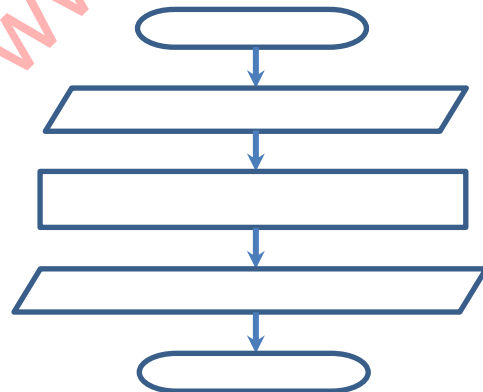
.....

15. Draw a flow chart for each of the following events.

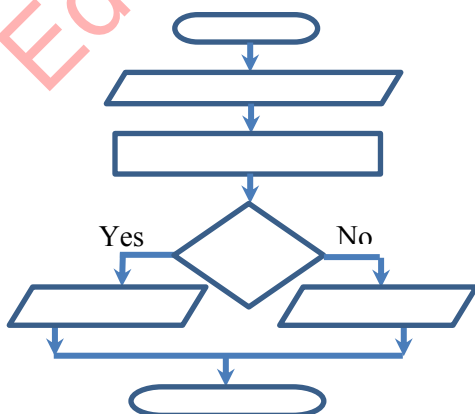
1. Find the perimeter of a square



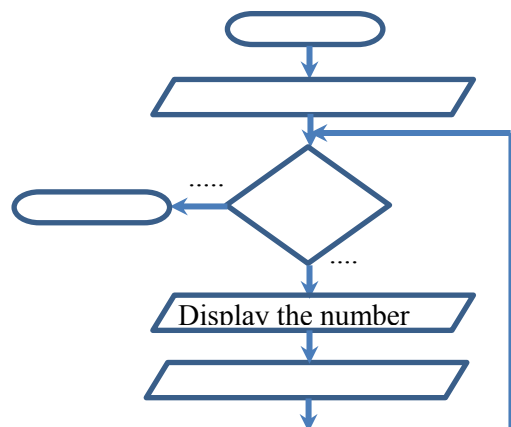
2. Showing the multiplication of two numbers



3. Indicates "pass" if the sum of the two numbers is more than 50 and "Fail" if not.



4. Display all the numbers entered until a user enters 0.



16. What sort of a representation is a pseudo code of Algorithm.

.....

17. Fill in the table below with the words used in the pseudo code

Idea	Words use
Input	
Process	
Start	
End	
Output	
Repetition	
Selection	

18. Build pseudo-codes for the following events

1. Find the perimeter of a square

2. Showing the multiplication of two numbers

3. Indicates "pass" if the sum of the two numbers is more than 50 and "Fail" if not.

4. Display all the numbers entered until a user enters 0.

## Pascal Programming Language

19. What is an identifier in the Pascal programming language?

.....

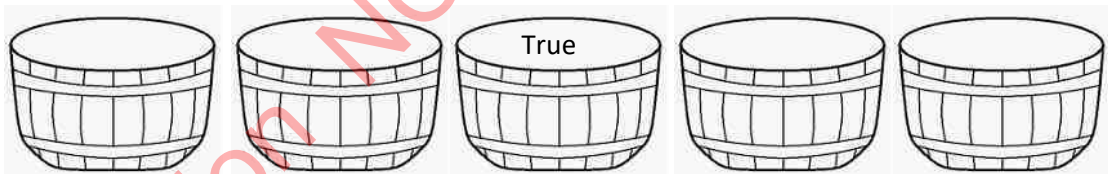
20. Mention 6 rules to follow when using an identifier.

.....  
 .....  
 .....  
 .....  
 .....

21. Cut out names that do not comply with the rules of identifiers.

Marks	2Marks	Stu name	Marks_02	Your#name
Begin	My_1st_No	My-no	TPNO	HeLIO

22. Write five standard data types in Pascal language on the dashes below. Select the appropriate data from the list of examples and write it down in the directory that contains the data image



Integer .....      .....      .....      .....

List of examples					
45.678	'A'	'Information'	True	564	0.34
False	67	'8'	'&'	'My country'	

23. What is a variable?

.....  
 .....

24. Var count: integer; Count means to create a variable that can store positive or negative integers / integers. Fill in the table below.

How to introduce a variable	Idea
Var x:integer;	..... .....
Var y:Real	..... .....
. .....	Create a variable called st_name that can store a student's name
.....	Create a variable named R which stores True False conditions

25. Write down three types of operators used in the Pascal language.

1..... 2. .... 3. ....

26. Write down the types of pascal operators contained in the following statements.

5+ 9 /3 ☐

.....

(5<4) OR (4>1) ☐

.....

18 MOD 5 ☐

.....

6>=4 ☐

.....

27. Perform the following calculations, taking into account the order of priority of the operators.

i)  $7 + 24/3$

ii  $30 \text{ DIV } 7 + 2 > 7$

iii)  $(4<6) \text{ AND } (6>8)$

iv  $5 < 30 \text{ MOD } 8$

**Program building**

28. Correctly match the command in column A and the meaning in column B in relation to the construction of Pascal programs.

Column A	Column B
Begin	Output the message "Enter Width" and input the value entered by the user to the variable B
Program Area;	End of the main program
WriteLn('Area is ', C);	Create 3 variables named A, B, C that store integers.
WriteLn('Enter Length '); ReadLn(A);	Beginning of the main program
End.	Output the message "Enter Length" and input the value entered by the user into the variable A.
C:=A * B;	Start a program called Area
WriteLn('Enter Width '); ReadLn(B);	Output the value of variable C with the message "Area is"
Var A,B,C:integer;	Multiply the value of variable A and the value of variable B and store it in variable C.

29. Write the Pascal statement which suits the given situation.

I. Start a program called "Hello"

.....

II. Start a program called "My\_self"

.....

III. Start a program called "My\_School"

.....

IV. Create a variable named "x" that stores integers.

.....

V. Create variables named a and b to store decimal numbers.

.....

VI. Create variables named "Name" and "Village" to store name and village.

.....

VII. Output "Hello, how are you?"

.....

VIII. Get the output as, "The value of the variable X".

.....

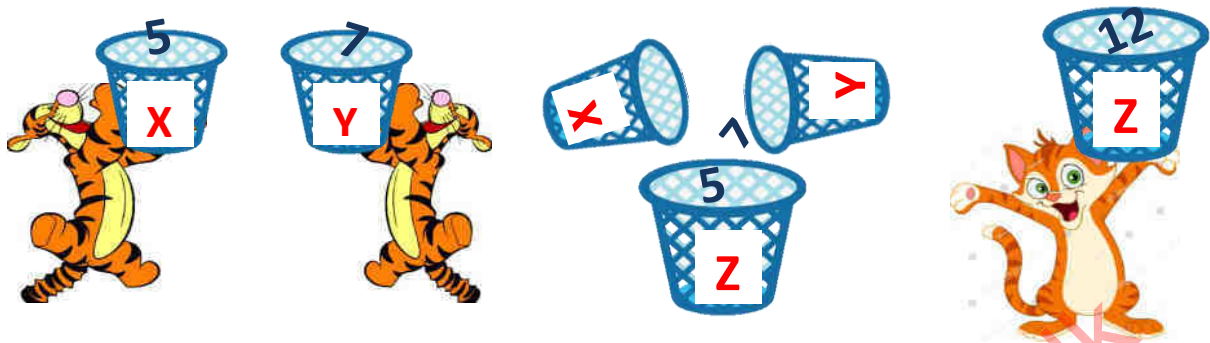
IX. Output the value of the X variable with "Answer is" text.

.....

X. Add the value of variable "a" and the value of variable "b" and store it in variable "y"

.....

30. The following case shows how to add 2 integers and return the sum.



Analyze and present the above issue

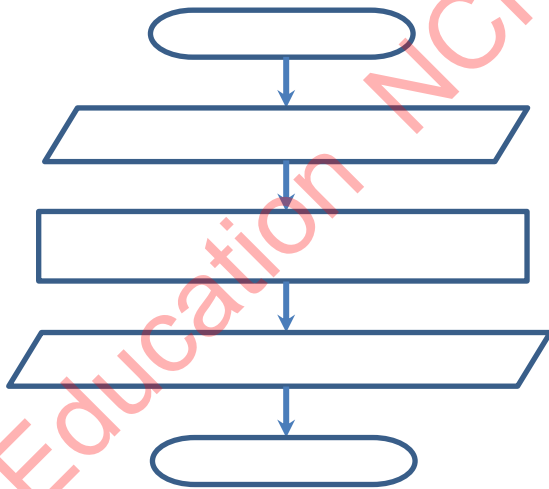
Problem - Adding 2 numbers

Input - .....

Process 1.....  
2.....  
3.....

Output - .....

Present the solution for the above problem in a flowchart and pseudo-code.



BEGIN

.....  
.....  
.....

END.

Read the definitions given in front of the blank in relation to this case and write Pascal statements.

.....Start a program called Add  
..... Create 3 variables that store integers  
named X, Y, Z.  
.....Start the main program

..... } Output the message "Enter No1" and  
input the value entered by the user into  
the X variable

..... } Output the message "Enter No2" and  
input the value entered by the user to the  
variable Y

..... Add the value of the X variable and the value  
of the Y variable and store it in the Z  
variable

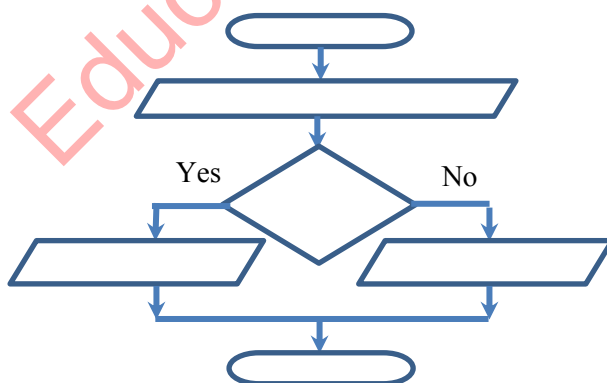
..... Return the value of the Z variable

..... End of the main program

31. In the following situation if the entered age is 18 or more , he is considered a voter and if it is less than 18 he is not.



**Present a solution to the above problem in a flowchart and pseudo-code**



BEGIN

.....  
.....  
.....  
.....  
.....

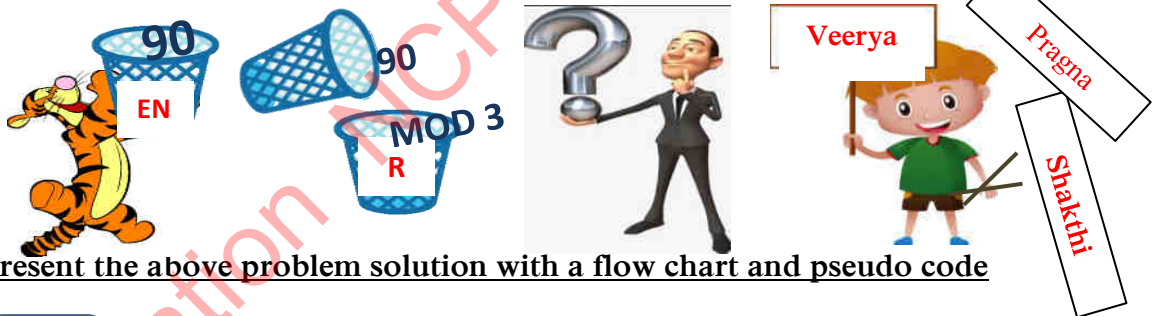
END.



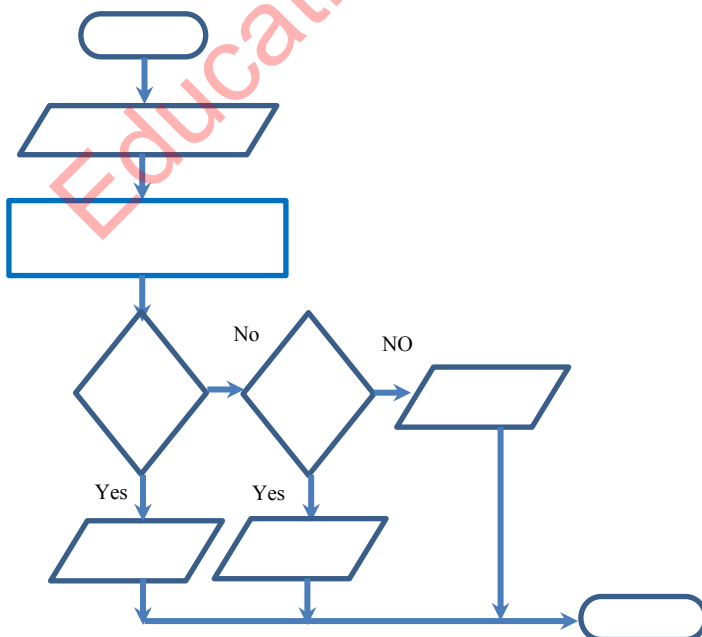
**Read the definitions given in front of the blank in relation to this case and write Pascal statements.**

.....Start a program called Voter.  
 .....Create a variable that stores an integer named Age.  
 ..... Start the main program  
 .....Output "Enter Your Age" message and input the value entered by the user into the Age variable.  
 if Age >= 18 Then } Testing whether the age variable is 18 or higher  
 ..... Output the message "You are vote If the above test is true, Else  
 ..... Output the message "You are Not a voter"  
 ..... End of the main program

32. The following incident shows how students are distributed to homes for an inter-school sports event at a school. After entering the entry number, it is divide by 3 and if the balance is 0, the student will assign to "Veerya" House, if the balance is 1, the student will assign to "Shakti" House and if the balance is 2 , he will be assigned to "Pragna" House.



**Present the above problem solution with a flow chart and pseudo code**



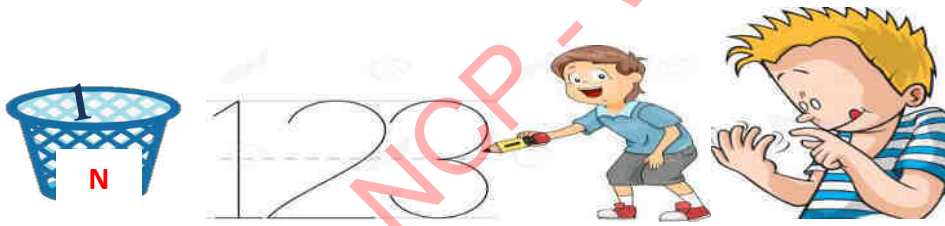
BEGIN

.....  
 .....  
 .....  
 .....  
 .....  
 .....  
 .....  
 .....  
 .....  
 End.

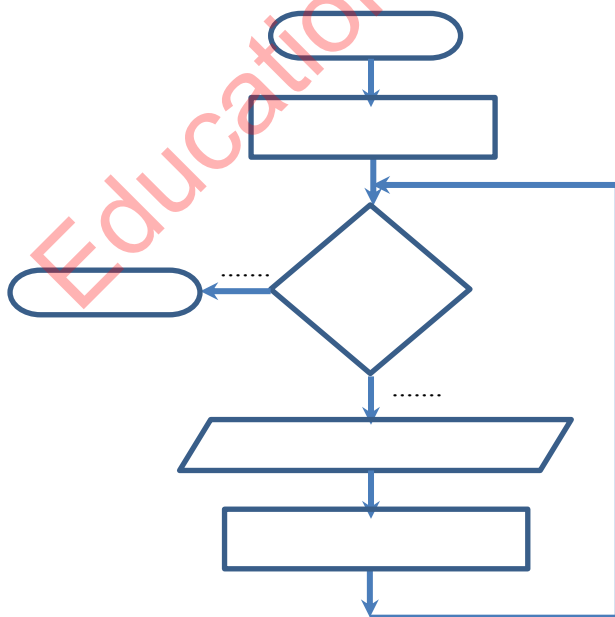
**Read the definitions given in relation to this case and write Pascal's sentences.**

..... Start a program called House  
 ..... Create variables that store integers named EN, R  
 ..... Start the main program  
 ..... Output the message "Enter Entrance  
 Number" and input the value entered by  
 the user to the EN variable  
 ..... Divide the value in EN variable by 3, and  
 store the result in R variable.  
 If R=0 Then  
 ..... Check if the R variable is equal to 0  
 ..... Output the message "Weerya House".  
 Else  
 ..... If the above test is false, go  
 ..... Check if variable R is equal to 1  
 ..... Display the message "Shanthi House"  
 ..... If the above test is false, go  
 ..... Output the message "Praghna House"  
 ..... End of the main program

33. Below shows the out put of whole numbers from 1 to 10..



**Present a solution to the above problem in a flowchart and pseudo-code**



BEGIN

.....  
 .....  
 .....  
 .....  
 .....  
 .....  
 .....  
 .....

End.

**Read the definitions given in relation to this case and write Pascal's sentences**

.....	Start a program called Number
.....	Create a variable named N that stores an integer.
.....	Start the main program
N:=1;	Setting the value of the variable N to 1
While N<=10 do	Check whether the value of the variable N is less than or equal to 10.
Begin	Starting a set of code
.....	Output the value of the variable N
N:=N+1;	Increasing the value of the N variable by one
End;	Ending the code set
.....	End of the main program

34. Fill in the blanks below with Translator Software



35. Write down the difference between a compiler and an interpreter

.....

.....

### **Multiple Choice Questions**

1. What is the expected outcome of the pseudo code below?

```

N=0
While N=<12
  N=N+2
  Print (N)
End while
Print ("Program end")
  
```

- |             |             |             |      |
|-------------|-------------|-------------|------|
| 1) 2        | 2) 0        | 3) 0        | 4) 0 |
| 4           | 2           | 2           | 2    |
| 6           | 4           | 4           | 4    |
| 8           | 6           | 6           | 6    |
| 10          | 8           | 8           | 8    |
| 12          | 10          | 10          | 10   |
| Program end | Program end | 12          | 12   |
|             |             | Program end |      |

2. When the pseudo-code above is executed, the value of N is,  
 (1) 0 (2) 10 (3) 12 (4) Program end
3. The control structures in the pseudo code above are,  
 (1) Sequence only (2) Decision and a repetition only  
 (3) Sequence and a decision only (4) Sequence and repetition only
4. What is the result of evaluating the following expression considering the operator precedence of programming languages?

**6\*3+2\*4-1**

- (1) 79 (2) 25 (3) 24 (4) 78
5. What is not a Data Type Pascal?  
 (1) Boolean (2) Byte (3) Text (4) Integer
6. The errors in computer programs are Identified as,  
 (1) Syntax (2) Error (3) Debug (4) Virus
7. The following symbols depict,

- (1) A - Input, B - Output, C – Decision  
 (2) A - Process, B - Input/Output, C – Control  
 (3) A - Input/output, B – Process, C – Decision  
 (4) A - Input, B - Output, C – Process



8. Consider the following pseudo code.

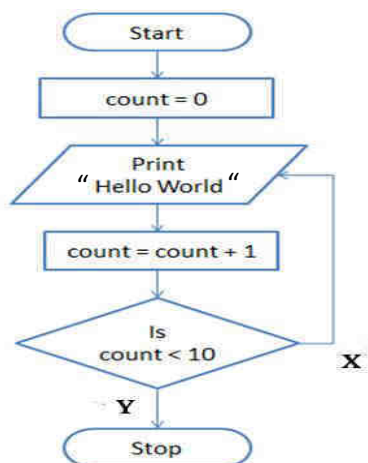
```
a = 10
b = 3
do while b <= 5
    a = a - 1
    b = b + 1
    z = a + b
    Display z
End while
```

9. If z is an integer variable, then what is the output of the pseudo-code mentioned above?  
 (1) 13 (2) 13" 13 (3) 13" 13" 13 (4) 13" 13" 13" 13
10. How many times does the pseudo code below work?

```
Begin
X = 1
Y = 1
Repeat
    Y = Y + 1
Until X = Y
End
```

(1) Once  
 (2) Two times  
 (3) Not even once  
 (4) Never ending

- Answer questions 11, 12, 13 using the flowchart below.



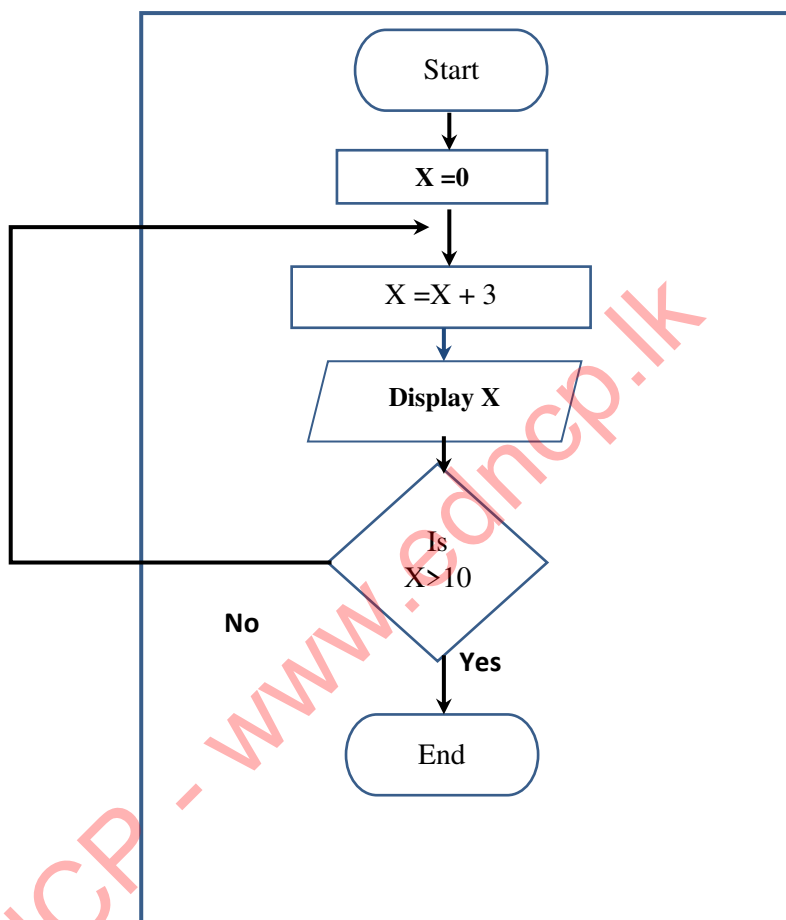
11. How many times does "Hello World" appear in the flow chart above?
  - (1) 10
  - (2) 9
  - (3) 11
  - (4) No output.
12. Suitable terms for X and Y in the flow chart above, respectively are,
  - (1) Yes, No
  - (2) Yes, Yes
  - (3) No, yes
  - (4) No, No
13. What is the statement that incorrectly indicates the places that need to be changed in the above flow chart to return "Hello world" 20 times?
  - (1) count = 0, count < 20
  - (2) count = 1, count < 20
  - (3) count = 1, count < 21
  - (4) count = 1, count = < 20
14. What category contains program paradigm only?
  - (1) Procedural, semantic, structured, object-oriented
  - (2) Compiler, Procedure, Object Orientation, Statements
  - (3) Programs, procedural, object orienting, compiler
  - (4) Procedural, statements, object-oriented
15. What is the output of the pseudo code below?
  - 1) 5
  - 2) 9
  - 3) 12
  - 4) 4

```

Begin
  A = 5
  C = 3
  Repeat
    C=C+1
    A=A+C
  Until (C>3)
  Print A
End
    
```

16. What is the pseudo-code portion equivalent to the logic of the algorithm in the flowchart below?

- 1) X= 0  
X=X+3  
Display X  
While X>10  
End while
- 2) X= 0  
While X<10  
Display X  
X=X+3  
End while
- 3) X= 0  
repeat  
X=X+3  
Display X  
until X>10
- 4) For X= 0 to 10 do  
Display X



### Essay type Questions

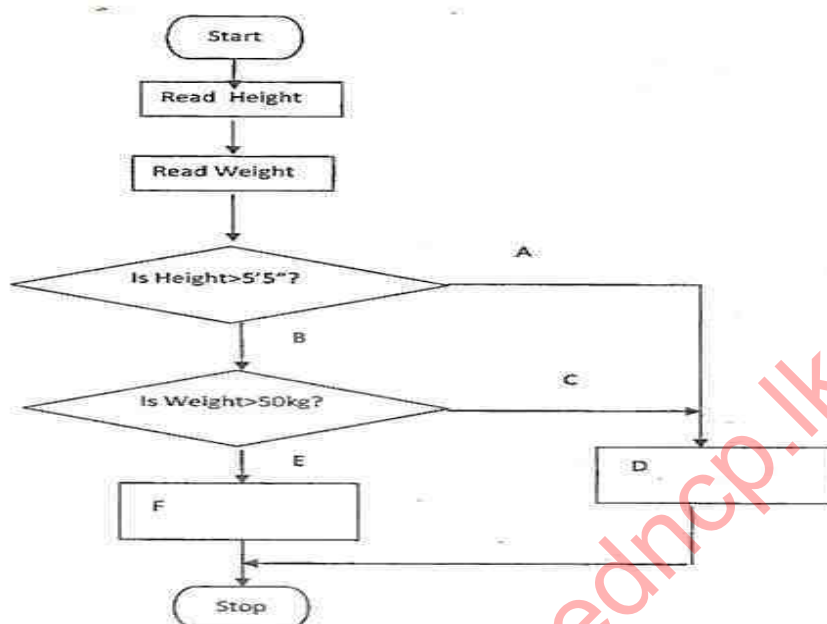
1.

(i) Draw the relevant flow chart section to show the following phenomenon.

If Account\_Balance > withdrawal Amount Then  
 Give Money  
 Account\_Balance=Account\_Balance – withdrawal Amount  
 Else  
 Message : “Sorry Your Account balance is not enough”

(ii) In order to pass an interview conducted by an institution a person has to complete the required height and proper weight expected by the institution. This phenomenon is illustrated by the flowchart below. Select and write the suitable words for the blanks A, B, C, D, E, F from the list of words given.

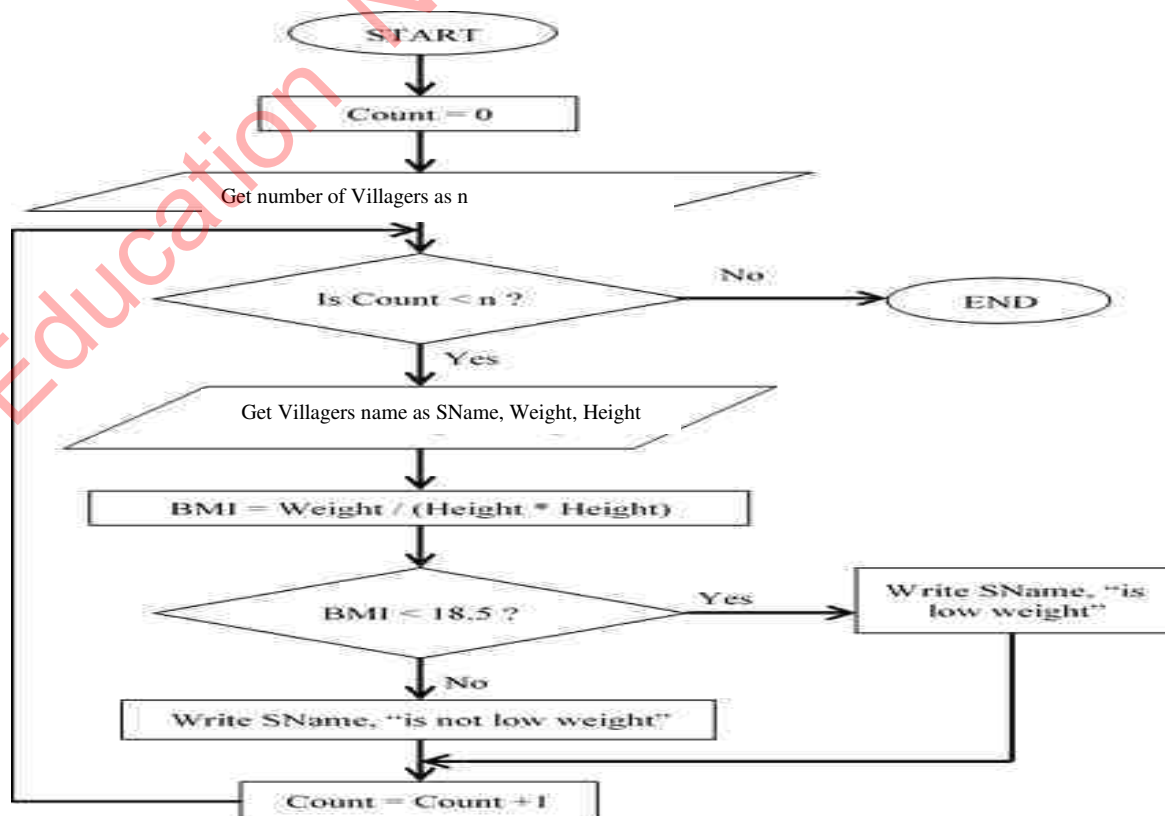
(List of words : Yes / Yes / No / No / Qualified / Not Qualified)



2. At a village health clinic, Body Mass Index was used to detect underweight persons of the village. BMI is calculated by dividing the weight obtained in kilograms by the square of the height measured in meters.

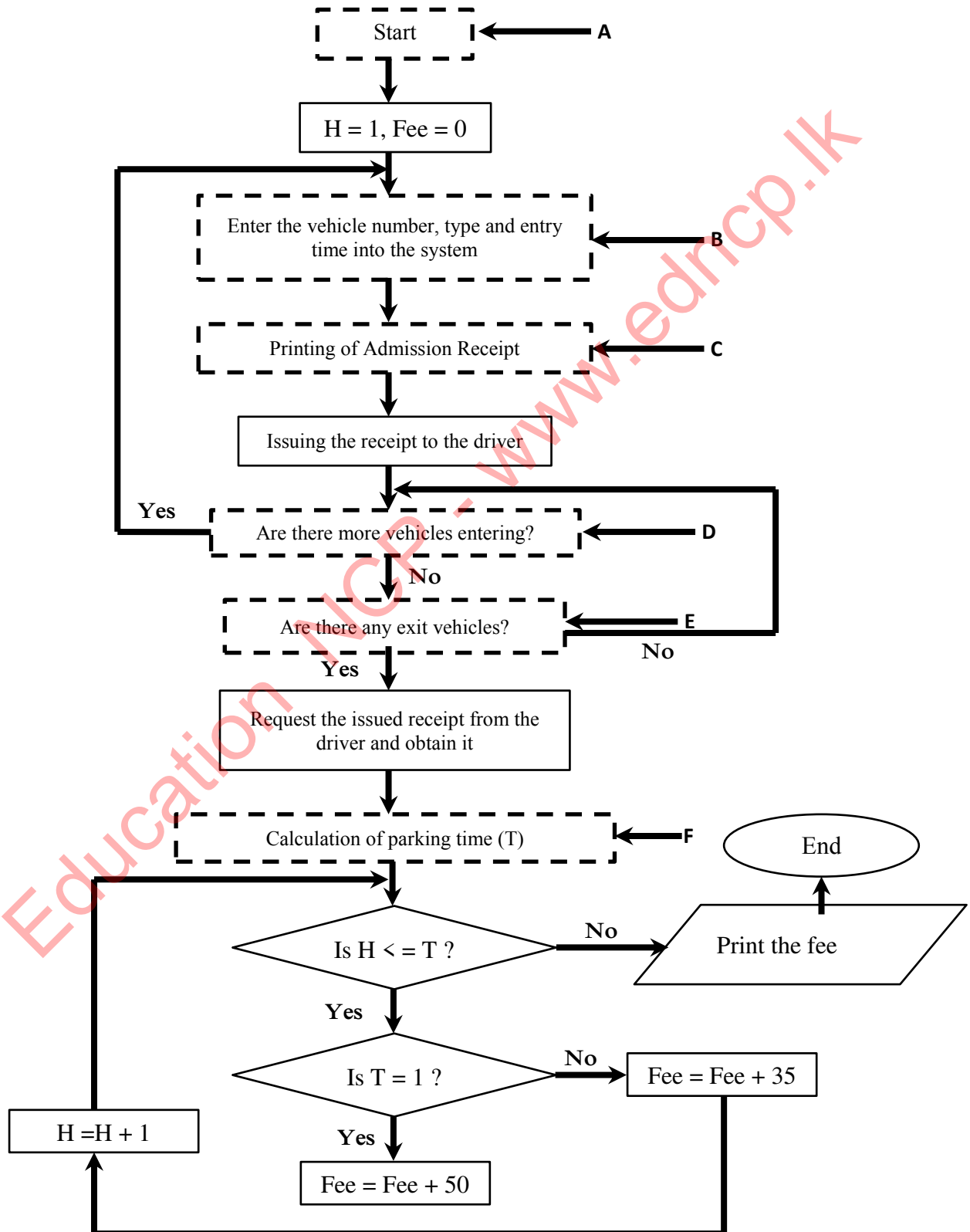
The flow chart below illustrates an algorithm to write the name of the villager on the clinic card with the message "underweight" in front of the name if the BMI is less than 18.05 and also to write the message "Not underweight" if BMI is over 18.05. Write the pseudo code corresponding to the logic of the flow chart given for this event.

You can use the following Keywords 'BEGIN', 'END', 'DO-WHILE', 'INPUT', 'DISPLAY', 'IF-THEN'

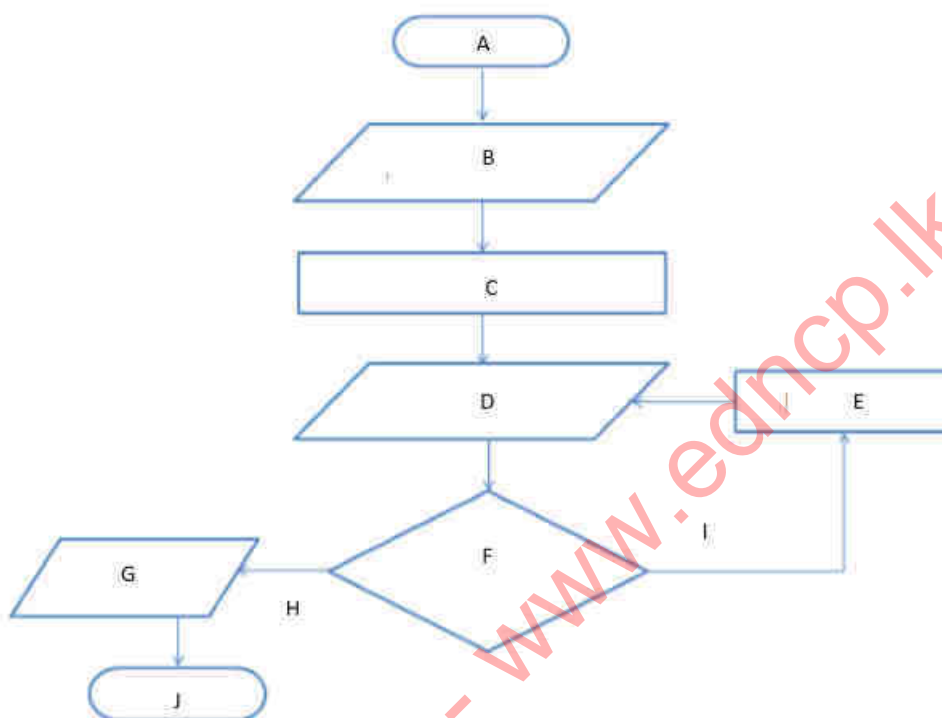




3. The following is an overview of the flowchart of charging fee after entering and exiting a parking lot. Its six locations (labels A - F) do not show the relevant flow codes. Draw symbols on those labels. It is sufficient to write labels and draw symbols on them.



4. Consider the following flow chart to log in to your Facebook account using your username and password correctly.
- (i) Select the appropriate words for the labels A - J and write them in front of the relevant letters.



List : - { Yes, Start, Log in error, Enter [www.facebook.com](http://www.facebook.com), Is Email ID and password Correct, Enter Email ID and Password, No, Stop, Display Account, Face book Home page}

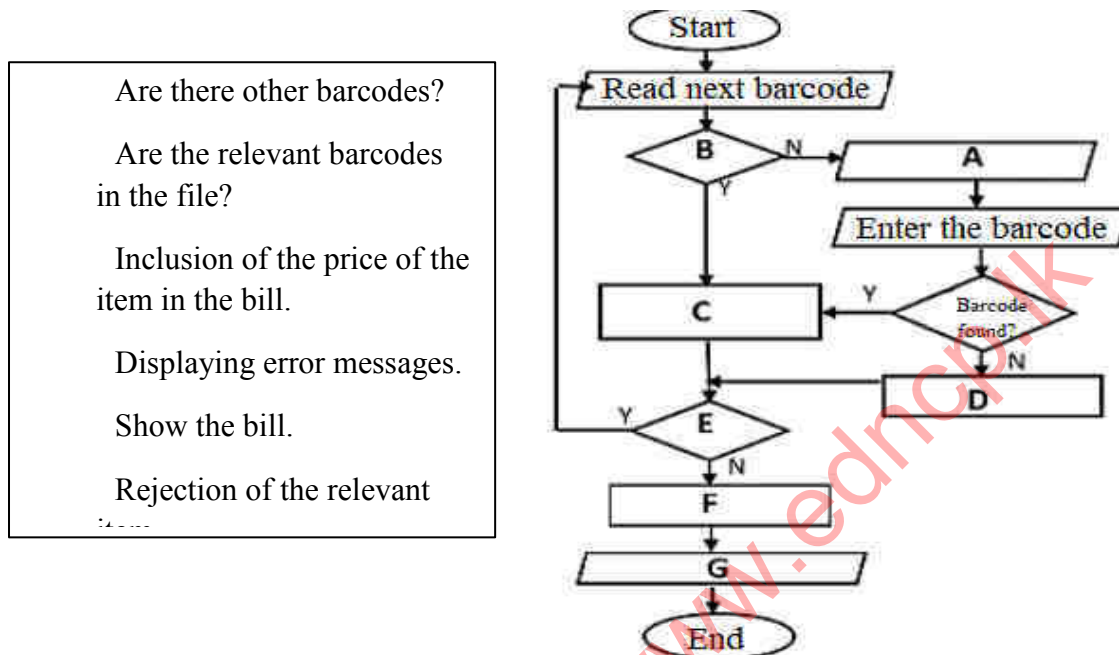
- (ii) What is the output of the above flow chart?
- (iii) The following is a pseudo code for a computer program.

```

X= 100
C= 10
REPEAT
    C =C-2
    X= X+C
UNTIL (C < 7)
PRINT X
    
```

- a) Write down the output in the pseudo code above.
- b) If changed to C = 12, write the output of the above flow chart.

5. Below is a flowchart to be used by a market cashier. The flow chart shows the item being read the barcode and the price being used to process the bill and updating the inventory file when the customer sends the purchased item to the cashier



Select the appropriate statement for the letters A to G in the above flowchart selecting from from the given list.

- Name the control structures used in the flow chart above.
- The average of the marks obtained in the selection examination for taking a course should be 50 or more. Below is an incomplete Pascal program written for this purpose and write suitable texts for P, Q, R, S spaces.  
(End. , String , Readln , Average)

```

Program Check_Select (input, output) ;
Var Average : real ;
Result : .....P.....
Begin
    Writeln ('Enter Average marks ');
    .....Q..... (Average);
    If .....R..... >=50 then
        Result := 'You are selected';
    Writeln (Result);
    Readln;
    .....S.....
    
```

\*\*\*

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**Unit 02**

**System Development Life cycle**

Education NCP - [www.edncp.lk](http://www.edncp.lk)

1.

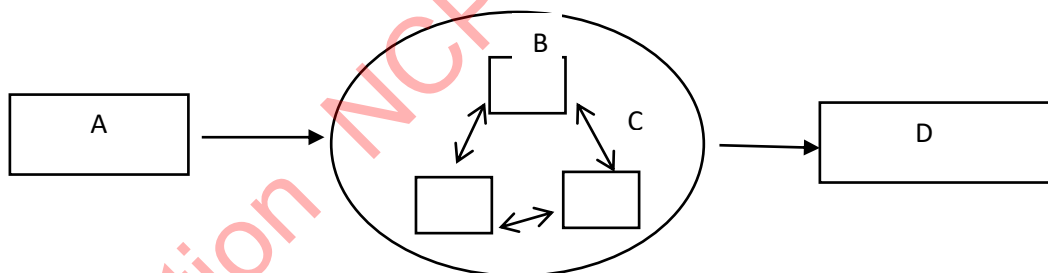
i) What is a system? .....

ii) From the statements below, put a ☒ mark for correct statements and a ☐ mark for incorrect statements.

- A. A system is made up of interacting components. ☐
- B. A system consists of a single unit with a purpose. ☐
- C. Any system contains several components that perform the same function ☐
- D. The purpose of a system changes. ☐
- E. A system interacts with the environment. ☐

iii) Name the following diagram using the knowledge of systems. Use only the given words.

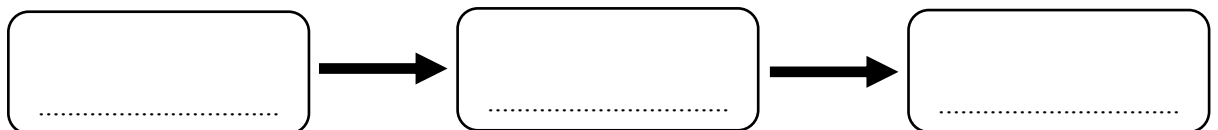
(System, input, output, interaction)



A - ..... B - .....

C - ..... D - .....

2. Specify 03 basic components of a system.



3. Consider a post office as a system and give one example for each of the 03 components you mentioned above.

↪

↪

4. Identify the basic components of the following systems.

i) ATM machine

- .....
- .....
- .....
- .....



ii) Digital camera

- .....
- .....
- .....



iii) Payroll System

- .....
- .....
- .....



iv) Bar code Reader

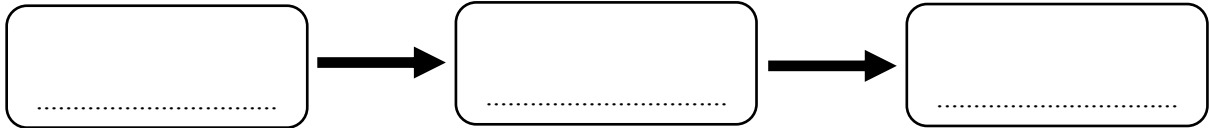
- .....
- .....
- .....



5. What is an information system? .....

.....

i) Mention 03 basic components of an information system.

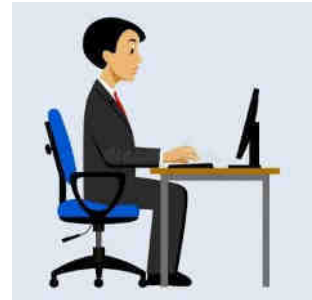


ii) Information systems can be classified into two types. Mention them.



1. ....

2. ....



6. Develop Manual information systems based on various reasons into computer based information systems (automated information systems).

i) Mention 3 factors that lead to the development of manual information systems into computer based information systems.

1. ....

2. ....

3. ....

ii) When enrolling students for two schools A and B, A school uses a computer system for registration and B school students are registered by entering the data in a document. Which school is more efficient? A school or B school? Write 3 comparative reasons for your answer.

1. ....

2. ....

3. ....



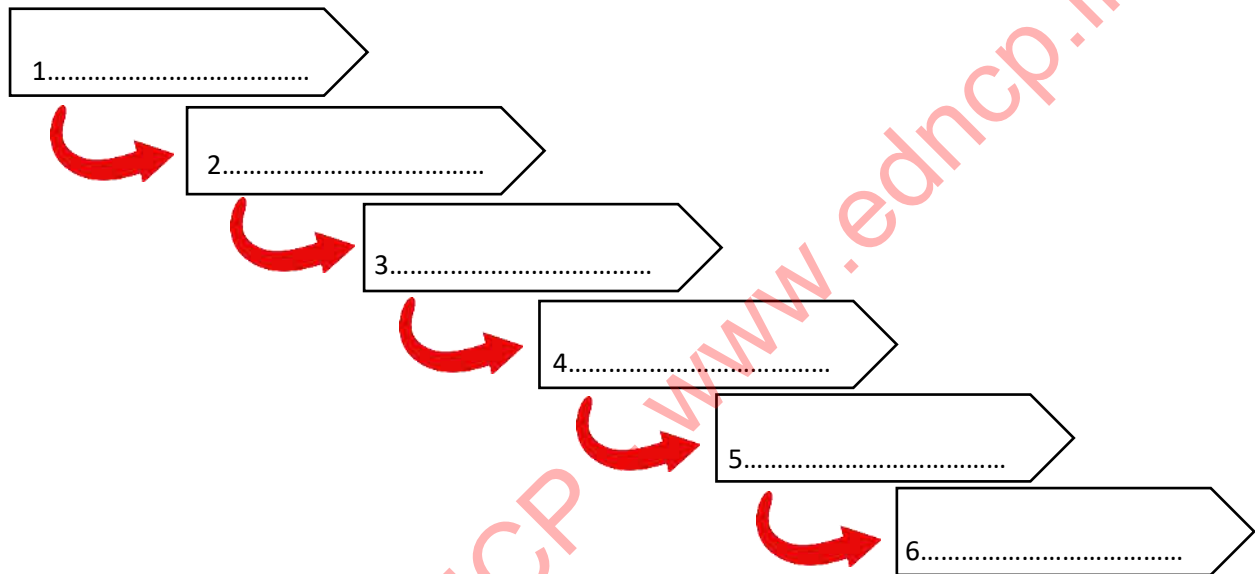
iii) “LMS ( Learning Management System) is an information system. Give 2 reasons to prove this.

1. ....

2. ....

7. Various methods are used to modernize an existing information system. The System Development Lifecycle (SDLC) is very important.

i) Name the 6 essential steps in the System Development Life Cycle, respectively.



ii) Use the 6 essential steps of the System Development Life Cycle mentioned in 7. (i) above and write the names of phases in the blanks below.

	Task	steps
1.	Interface, Database and Design of Software Architecture	
2.	Creating a Database and Computer Programs.	
3.	Gather information, identify feasibility.	
4.	Checking accuracy and safety	
5.	Direct implementation Parallel implementation Pilot implementation Phase implementation	
6.	Make changes as requested by the users after launching the system	

- iii) Gathering information about an existing system is very important when analyzing an existing system. Mention 4 standard methods that can be used to gather information.



1.....



2.....



3.....



4.....

- iv) Computer language is very important in creating a new information system. Write down 3 things to consider when choosing a computer language for the task at hand.

1. ....
2. ....
3. ....

- v) After creating a system, the functionality of the system should be checked before handing it over to the owner / client. Write down the 4 main ways to test an information system.



1.....



2.....



3.....



4.....

- vi) The table below shows how to test a system. Write the test methodology related to the description.

Way of Testing	The name of the test
1. Software used in a bookstore to check if the revenue increases after selling a book and the current number of books decreases by one.	
2. Examine the following sub-programs of the software used in a bookstore such as sales, purchases, inventory (inventory control) and employee salaries separately.	
3. Checking whether the following components of the software used in a bookstore include the following sub-programs such as sales, purchases, inventory (inventory control) and employee salaries, etc., and working properly with the operating system	
4. Provide the software to the client (bookstore owner) to check for problems	

- vii) Different models are used in the implementation of the system development life cycle. Complete the table below using knowledge of templates.

	Method of Activation	Name of the model
a.	Prepares a prototype of the system you wish to develop, shows it to the user, obtains the necessary approval, and then prepares the new system.	
b.	After completing one step, the other steps begin. The results of the system can be seen in the final stages, so there may be unexpected results as well.	
c.	Renovation and development of the system until complete. Each part of the overall solution is redeveloped separately and new designs are presented as and when required.	
d.	A combination of two models	

8. The School Management Committee intends to fully computerize the existing school library.

i) Identify the requirements for setting up a computerized library system. Write down 2 methods that can be used to identify these needs.

1. ....

2. ....

ii) Write down the two requirements that you have identified by the 02 methods mentioned above.

1. ....

2. ....

iii) Write down the 4 essential input and output devices that should be included in the new computerized library system design?

1. ....

3. ....

2. ....

4. ....

iv) It is essential to maintain the new library system after its preparation. Write down two reasons why you may need system maintenance.

1. ....

2. ....

v) A computer language should be selected in the design of the computerized library system. Which computer language would you choose for this? Give one reason for choosing.

1. Computer Language – ....

.....

2. Reason for choosing – ....

.....

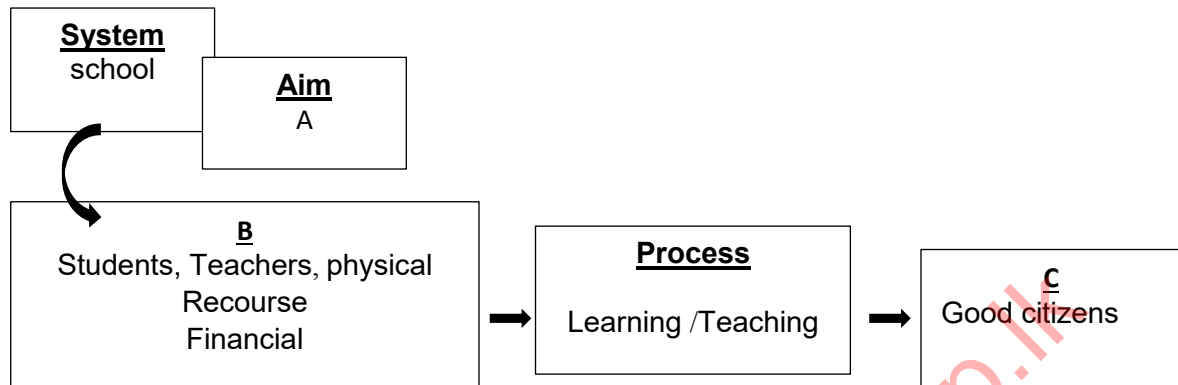
## Multiple Choice Questions

1. Select the correct statement / statements regarding an information system
  - A. There are some limitations
  - B. Always computerized
  - C. There is an input output as well as a process
  - D. has a purpose or objectives

1) A and B                      2) A, C and D                      3) B and C                      4) B, C and D
2. Interviewing ; What stage of the system development life cycle (SDLC) does it belong to?
  - (1) System maintenance.
  - (2) Testing solutions.
  - (3) Identify needs.
  - (4) Designating the solution.
3. Choose the correct answer, which includes considerations when using a computer-assisted information system simultaneously in practice
  - 1) Whether the units in the system can adapt the computer support system
  - 2) Whether there are any errors in the new system
  - 3) Whether the correct output is obtained after entering the data information system
  - 4) Whether weaknesses in the manual system can be avoided
4. Contains the most accurate statement regarding a subsystem
  - 1) A subsystem is a part of a master system that is made up of several components to perform a single function
  - 2) A subsystem is a social unit that is internally and externally connected
  - 3) A solution to a problem that is naturally and man-made
  - 4) Each of the problems that exist in the society as a group and the parties involved in one of the problems are subsystems.
5. Which of the following instances / instances are relevant in the matters to be filed by an organization in identifying a system?
  - A. Identify objectives relevant to the system
  - B. Identify the components of a system
  - C. Identify the limit of the system

1) A                      2) A and B                      3) B and C                      4) All

6.. Consider the following note



Using the knowledge of systems, select the correct answer for A, B, C above

- 1) Educated students, donations, inputs
  - 2) Good citizens, inputs, donations
  - 3) Knowledgeable teachers, creativity, output
  - 4) Good citizens, preparation, socialization
7. It is not a method that can be used to collect data in system analysis
- 1) Interviews, documents
  - 2) Observations, questionnaires
  - 3) Discussions, tabulation
  - 4) Online lectures
8. The functionality of the proposed system will be explored in relation to the needs of the users in relation to the effective use of resources and effective cost.
- 1) implementation of the system
  - 2) Solving the design
  - 3) Solution coding
  - 4) In identifying needs
9. Wimala Kumara, who intends to run his business through a computer system, decided to design the structure for a database and obtain computer hardware as well as networking devices. What stage of the system development life cycle is this considered?
- 1) Solution planning
  - 2) System setup
  - 3) Solution coding
  - 4) Implementation
10. The mobile phone is also a system. What is the answer to the non-functional need for a mobile phone to function as a system?
- 1) The amount paid to purchase a mobile phone
  - 2) The screen size of the mobile phone
  - 3) The ringtone of the mobile phone
  - 4) Ability to make a call from a mobile phone

11. The test that is performed after the unit test during the system test is called this

- 1) Requirement Testing
- 2) Integrated Testing of the entire system as a single unit
- 3) User Acceptance Testing
- 4) Implementation for System Restore

12. When designing a system for a freight forwarding company, the return on investment is taken into account at what stage of the system development lifecycle?

- 1) System setup
- 2) Solution planning
- 3) Identifying needs
- 4) Coding solutions

13. Choose the false statement from the following

- 1) Identifying the dependency of each subsystem is a function of solution design
- 2) Simplification of the code in solution encoding increases its efficiency
- 3) Allows the user to use the system during the acceptance test
- 4) The system can be set up after designing the solution

14. Troubleshooting a system that allows users to use it is called ..... The most suitable for the space here is,

- (1) Unit testing
- (2) System testing
- (3) Overall test
- (4) Reception test

15. In cases where the user does not have a definite idea about the system he wants

The ..... system development model is not suitable.

Applies to space

- 1) Waterfalls
- 2) Reconstruction
- 3) Prototypes
- 4) Spirals

16. It is not a matter to be considered while maintaining a system

- 1) It is about filing problems to make the system work efficiently
- 2) Ensuring system security
- 3) Whether it suits the needs of the users
- 4) Is about direct installation

## Essay Questions

1. An organization intends to prepare an electronic identity card for its employees to use at the time of entry into the company and to record the time of arrival. In issuing IDs for this digital technology, the management of the institution has focused on creating a system that can read it.
  - i) What are the inputs, process and outputs of the system thus prepared?
  - ii) Suggest 2 most suitable methods that can be used to gather information in setting up this system
  - iii) Write 2 advantages that can be gained by correct coding in developing a system.
  - iv) The system designer intends to use the waterfall model to design this system. Give 2 reasons why this system is suitable for design.
  - v) What is the difference between the system test and the reception test during the solution testing phase?
2. “It is better for the business to use a computerized accounting information system than for their employees to use a manual accounting information system,” says Ratnapriya, an entrepreneur.
  - i) Mr. Ratnapriya should mention two points that need to be taken into consideration while creating a new system to replace the existing manual system.
  - ii) Mr. Ratnapriya, who is aware that the use of a computerized information system will increase the accuracy and efficiency of his organization's activities, if you are asked about other advantages, please state two points that you would give.
  - iii) Propose an appropriate method for setting up the prepared accounting information system. Why would you suggest it?
  - iv) Write 02 features of the regenerative enhancement model as a system development model.
3. Mr. Anuruddha, a Grama Niladhari, computerizes the details of all the residents in his domain and creates and maintains an information system where their details can be traced through the National Identity Card number of the persons.
  - i) Mention 04 advantages that Mr. Anuruddha gets through this information system
  - ii) “One day Kamal Rathnasuriya, a resident of that village comes and asks for a residence certificate.” What are the inputs that Mr. Anuruddha uses in the system to issue it?
  - iii) Write down two actions that Mr. Anuruddha can take for the security of his information system
  - iv) Write down two factors that lead to the need for maintenance while maintaining an information system

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## **Unit 03**

# **The Internet And The Electronic Mail**

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1. What is the Internet?

.....

.....

.....

2. What was the world's first computer Network?

.....

.....

3. Mention 04 devices and services which you need to get an Internet connection

- i) .....
- ii) .....
- iii) .....
- iv) .....

4. State whether the following statements are correct or wrong. If correct use (✓) mark while use (✗) mark if wrong.

- i) The fastest way to communicate information worldwide is the Internet ( )  
(Information super highway)
- ii) There is a single owner for the Internet. ( )
- iii) The ethics and principals related to the use of the Internet and the Protocols which maintain Internet operations are done by a Non profitable Internet organization ( )
- iv) It is possible for you to obtain any information related to any subject You need through the Internet ( )

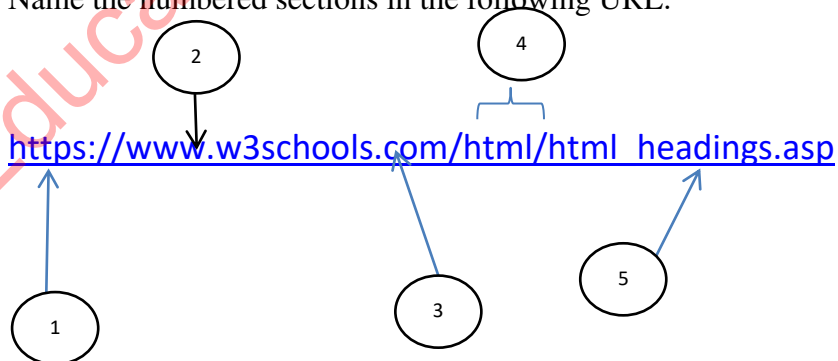
5. What do you mean by Uniform Resource Locator (URL)?

.....

.....

.....

i) Name the numbered sections in the following URL.



- 1 .....
- 2 .....
- 3 .....
- 4 .....

5 .....

ii) Find and write the web addresses (URLs) of the following institutions.

A. The official website of Government of Sri Lanka: .....

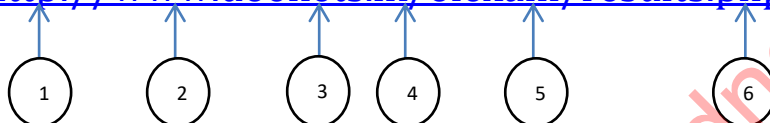
B. National Institute of Education: .....

C. Department of Examinations: .....

D. Sri Lanka Institute of Information Technology: .....

iii) Consider the following numbered URL

<http://www.doenets.lk/olexam/results.php>



The correct answer which indicates the above sections numbered from 1 to 6 respectively is,

A. Protocol, Service, Domain Name, Top Level Domain, Path where the resource is located, Resource file.

B. Protocol, Service, Domain Name, Top Level Domain, Resource file, Path where the resource is located.

C. Protocol, Service, Top Level Domain, Domain Name, Resource file, Path where the resource is located.

D. Service, Protocol, Domain Name, Top Level Domain, Path where the resource is located, Resource file.

6. What is meant by ISP? Write 02 examples for ISP.

.....  
 .....

i) .....

ii) .....

7.

i) What is an IP address? Write an example for an IP address.

.....  
 .....  
 .....

ii) Who provided IP addresses?

.....

iii) What is meant by “Dotted Decimal Notation” regarding IP addresses?

.....  
 .....

- iv) Which of the following IP addresses contain an incorrect IP address?
- A. 10.202.5.1 C. 100.250.30.40  
B. 10.0.0.2 D. 100.300.30.3

8.

- i) What is a Domain Name and a Top Level Domain Name?

.....  
.....  
.....

- ii) Write the following Domain Names separately according to field and country.

.com, .in, .cn, .net, .jp, .org, .edu, .gov, .au, .us, .lk, .uk

According to field	
Domain	Field

According to country	
Domain	Country

- iii) Write the Domain Name and Top Level Domain Name separately of the following URLs.

	Domain Name	Top Level Domain
i.) http://www.ICTPanthiya.com/OL/Paper/Lesson.PDF	.....	.....
ii.) http://www.unicode.org/consortium/consort.html	.....	.....

9

- i) The following indicates how the Internet operations are executed. Number them according to the correct order in the brackets given there.

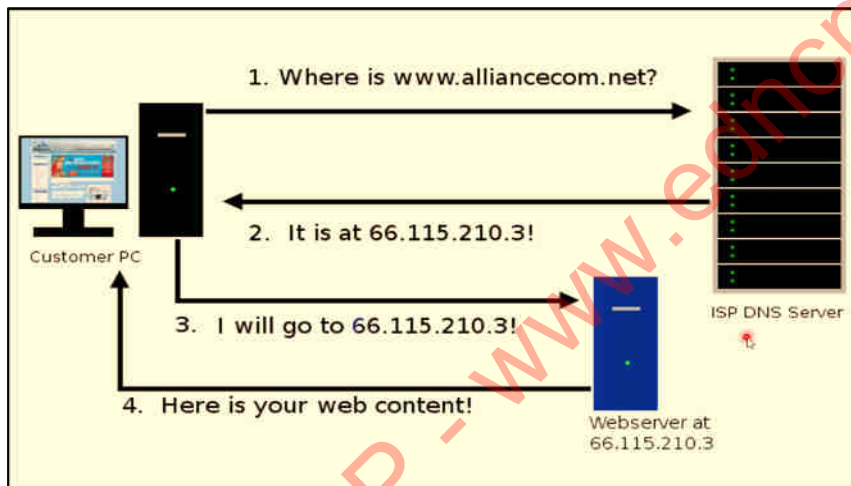
- The web browser redirects the URL to the DNS server. ( )
- The user opens the web browser and enters the URL. ( )
- Web browser renders HTML web pages. ( )
- Web server returns HTML data stream. ( )
- The DNS server converts the URL to its corresponding IP address. ( )
- The request is directed to a web server with an IP address. ( )

- ii) Read the following paragraph and fill the blanks using the answers given below

When a ..... is entered to the browser to view a website, the request must be translated from the readable written address into an ..... This translation is done by the ..... . If a request is made to connect to certain website, E.g.: [www.yahoo.com](http://www.yahoo.com), the request is first sent to the DNS Server to translate into the correct ..... of 209.191.122.70.

(DNS Server, Domain Name Server, Uniform Resource Locator, IP address, Browser)

- iii) The process described in the above paragraph is illustrated by the following diagram. Answer the following questions according to it.



A. What is the web address (URL) you are requesting according to the above diagram?

B. What is the IP address of that converted URL?

10.

- i) What do you mean by 'Protocols' using in the Internet?

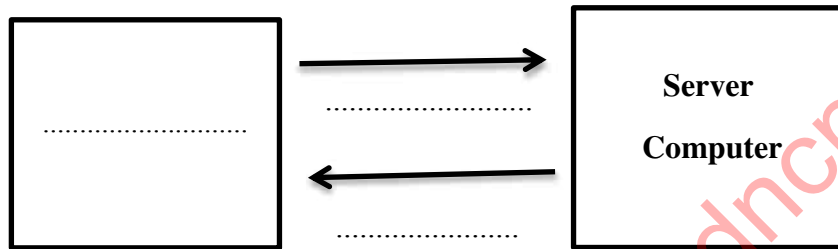
- ii) Write the function of the following protocols.

- A. HTTP .....
- B. TCP/IP .....
- C. FTP .....
- D. SMPT .....
- E. ICMP .....

- iii) Mention the long terms of the abbreviations given above

- A. ....
- B. ....
- C. ....
- D. ....
- E. ....

- iv) Which of the following combination contains only internet – related protocols?
1. FTP, HTML, HTTP, SMTP
  2. FTP, HTML, HTTP, TCP/IP
  3. FTP, HTTP, SMTP, TCP/IP
  4. HTML, SMTP, TCP/IP, URL
11. The Internet is a Wide Area Network (WAN) which is based on a Client Server Model. Accordingly, complete the diagram given below.



- i) Explain the following terms briefly

Server Computer

.....  
 .....  
 .....

Downloading

.....  
 .....  
 .....

Web Server

.....  
 .....  
 .....

DNS Server

.....  
 .....

Client Computer

.....  
 .....  
 .....

Uploading

.....  
 .....  
 .....

Mail Server

.....  
 .....  
 .....

DHCP Server

.....  
 .....

- Mention the services that you can obtained from the Internet.

- .....
- .....
- .....
- .....
- .....
- .....
- .....

12.

- i) Who is the father of World Wide Web (WWW)?

.....

- ii) Define what World Wide Web is,

.....

.....

.....

- iii) What is the name we use to call the page which contains the basic information about a website?

.....

- iv) There are several services contained in the World Wide Web. Studying them match the functionalities given in part 'A' with their relevant services given in part 'B'.

**Part - A**

**Part - B**

- Used to transfer large files of one Computer in the Internet to Another computer.
- Sometimes hackers steal important data and information stored in computers without owner's knowledge.
- Thousands of users can be connected to a website at the same time

File Sharing

Remote Access

File Transfer Protocol

- v) Write two examples for the functions that can be done by Remote Access.

A. ....

B. ....

- vi) The unique identifier for each web page in the World Wide Web (WWW) is called as,

I. E-mail address

III. IP address

II. hyperlink

IV. Uniform Resource Locator (URL)

13.

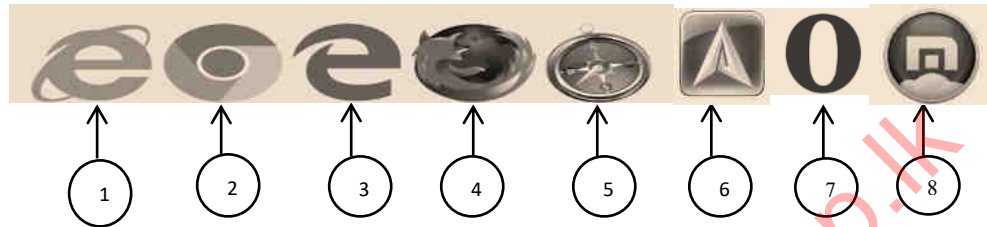
- i) What is meant by a web browser?

.....

.....

- ii) The images below show the icons of some of the most popular web browsers. Identify and name them.

(Avant Browser, Google Chrome, Mozilla Firefox, Opera, Sea Monkey, Safari, Maxthon, Internet Explorer, Edge Browser)



- |         |         |
|---------|---------|
| 1. .... | 5. .... |
| 2. .... | 6. .... |
| 3. .... | 7. .... |
| 4. .... | 8. .... |

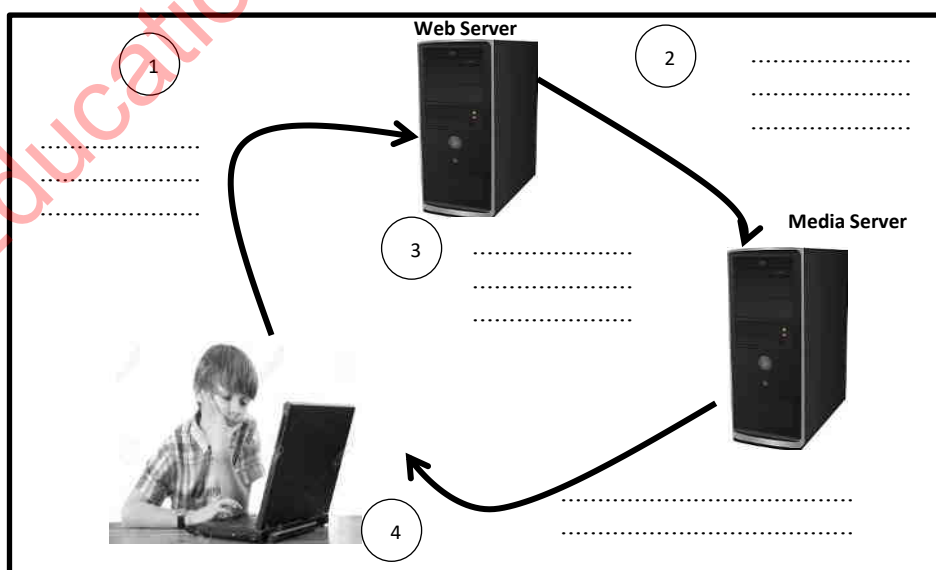
- iii) How does the streaming of media differ from a service of an Internet?

.....

.....

.....

- iv) Fill the blanks in the diagram below related to the streaming of media.





14.

- i) What are Search Engines? Explain the need of Search Engines.

.....

.....

.....

.....

- ii) Write down the URLs of several Search Engines.

1. ....	4. ....
2. ....	5. ....
3. ....	

15. What is Domain Name System Server (DNS Server)? Explain its functionality.

.....

.....

.....

16.

- i) What do you mean by e-mail?

.....

.....

.....

- ii) Name the parts indicated by the arrows in the e-mail address below

[vidyarthamv@gmail.com](mailto:vidyarthamv@gmail.com)



.....

- iii) What are the two essential parts of an e-mail account?

1. ....
2. ....

- iv) Mention the user name of the following e-mail address.

[ITPanthiya@gmail.com](mailto:ITPanthiya@gmail.com)

.....

- v) Which of the following indicates an invalid e-mail address?

- |                       |   |
|-----------------------|---|
| 1. malani@hotmail.com | 2. Mail.ruwan_gmail.com   |
| 3. Abc.@results.com   | 4. <a href="mailto:abc@nimal@ymail.com">abc@nimal@ymail.com</a> |

- vi) Mention the function of each category given below which can be seen in an e-mail account.

To : .....  
 Cc : .....  
 Bcc : .....  
 Subject : .....  
 Attachment : .....  
 Inbox : .....  
 Draft : .....  
 Sent : .....  
 Trash/Deleted : .....  
 Spam : .....

- vii) “E-mail is beneficial than the normal mails”. Do you agree with this statement or not? If agree, explain the reasons.

.....  
 .....  
 .....  
 .....

- viii)

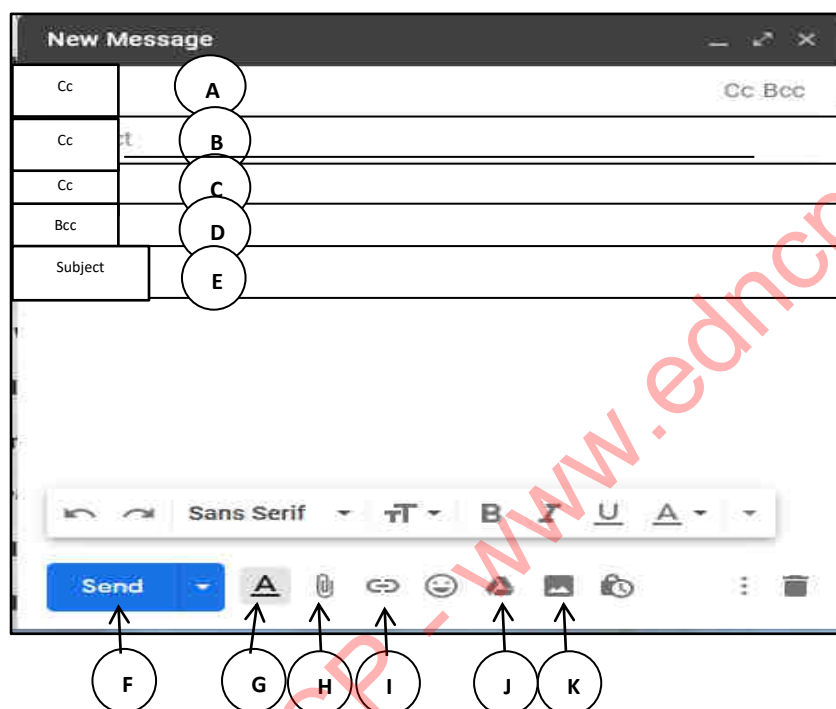
[TO - ITPanthiya@gmail.com](mailto:ITPanthiya@gmail.com)  
[Cc - Kasun@gmail.com](mailto:Kasun@gmail.com)  
[Bcc - Sunil@gmail.com](mailto:Sunil@gmail.com), [Anura@hotmail.com](mailto:Anura@hotmail.com)

- State whether the following statements are True or False according to the above e-mail addresses.

- Anura sees that a letter has been sent to Kasun.
- Sunil sees that a letter has been sent to Anura.
- Kasun sees that a letter has been sent to ITPanthiya .

☐  
☐  
☐

- ix) Nuwan has decided to send an e-mail to his father ([samantha@xmail.com](mailto:samantha@xmail.com)) regarding the current situation of his university education and intends to send a copy to his brother Ruwan ([ruwan@xmail.com](mailto:ruwan@xmail.com)). He also wants to send some digital images with this e-mail which were taken at the last weekend. Nuwan also wants to send a copy of this e-mail to uncle Senaka ([senaka@xmail.com](mailto:senaka@xmail.com)) as if others were unaware.



The above figure shows the interface of the e-mail software used by Nuwan with labels up to A-K.

- Where should Nuwan type the e-mail addresses of the following persons?  
 Father .....  
 His Brother .....  
 Uncle Senaka .....
- Where should Nuwan type the title of the e-mail?  
 .....
- Which button should be selected by Nuwan for the attachment of digital images?  
 .....
- Write the name of the folder where the copies of the e-mails which sent by Nuwan are stored.  
 .....
- An e-mail sent by Nuwan had been returned. Write a reason for this e-mail returned.  
 .....
- In which folder does Nuwan see the returned e-mail?  
 .....

- x) Name 03 free e-mail services and 02 e-mail software based on the World Wide Web.
- |         |         |
|---------|---------|
| 1. .... | 1 ..... |
| 2. .... | 2. .... |
| 3. .... |         |

17.

- i) Briefly explain about sending Instant Messages (IM) used on the Internet.
- .....
- .....
- .....

- ii) Mention 05 modern Instant messaging mechanisms.

- |         |
|---------|
| 1. .... |
| 2. .... |
| 3. .... |
| 4. .... |
| 5. .... |

- iii) Write a benefit that can be obtained by a company because of using video conferencing technology.
- .....

- iv) Write a problem that you face due to the use of video conferencing technology
- .....

- v) What are the requirements that you need to fulfill to do a video conference using computers?

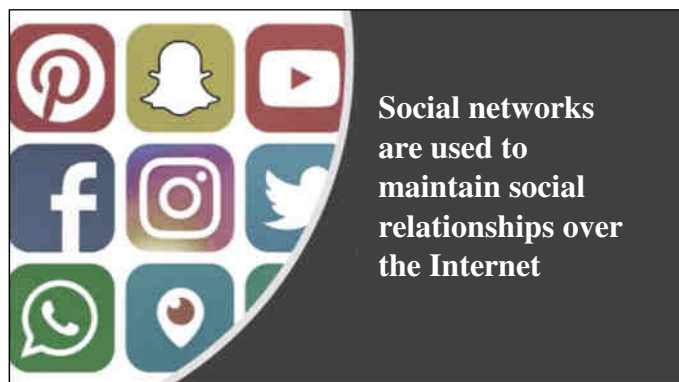
- |          |
|----------|
| 1) ..... |
| 2) ..... |
| 3) ..... |
| 4) ..... |

- vi) Name 04 software that can be used for video conferencing.

- |          |
|----------|
| 1) ..... |
| 2) ..... |
| 3) ..... |
| 4) ..... |

## Social Networks

Social networks are one of the most popular forms of communication today.



18.

i) Name the social networks which are shown in the above diagram respectively.

- |          |          |
|----------|----------|
| 1) ..... | 2) ..... |
| 3) ..... | 4) ..... |
| 5) ..... | 6) ..... |
| 7) ..... | 8) ..... |

ii) Mention 04 good and bad effects of using social networks

Good effects

Bad effects

- |         |       |
|---------|-------|
| • ..... | ..... |
| • ..... | ..... |
| • ..... | ..... |
| • ..... | ..... |

19.

i) What do you mean by the 'Cloud Computing Concept'?

.....

.....

.....

ii) What are the three main services provided by the 'Cloud Computing Concept'?

- 1) .....
- 2) .....
- 3) .....

- iii) Explain in briefly about the above mentioned services of Cloud Computing providing suitable examples.

- 1) .....
- 2) .....
- 3) .....

- iv) What are the advantages and disadvantages of Cloud Computing?

**Advantages**

- 1) .....
- 2) .....
- 3) .....
- 4) .....

**Disadvantages**

- 1) .....
- 2) .....

**Multiple Choice Questions**

1. ....Facilitates retrieving and storing information from anywhere at any time using computer networks including personal computers and mobile devices. The most suitable term for the blank is,
  - 1) Global village
  - 2) Multi-Media
  - 3) Cloud Computing concept
  - 4) Natural Computers
2. The **incorrect** statement regarding an IP address is,
  - 1) Several computers in a network may have the same IP address.
  - 2) IP addresses are provided by the Internet Service Providers.
  - 3) The IP address is used to uniquely identify every computer in the Internet.
  - 4) IP addresses consist of four values from 0 to 255 separated by decimal points.

3. It can be used to find a website when we do not know the address of the site. It is,
  - 1) A search Engine
  - 2) A Web Browser
  - 3) A Top Level Domain name
  - 4) A protocol
4. Which of the following statement/s is/are false regarding Cloud Computing Concept?
  - 1) Requires a constant Internet connection.
  - 2) High software cost and difficulty in updating software.
  - 3) Using computer networks including personal computers and mobile devices, to facilitate retrieving and storing information from anywhere at any time.
  - 4) Fewer maintenance cost issues and Improve performance.
5. An e- mail that Kaveesha was preparing to send closed before it could be completed. The folder which include this e- mail is,
  - 1) inbox
  - 2) outbox
  - 3) draft
  - 4) trash
6. A collection of web pages which can be accessed by the Internet is called ..... The most suitable term for the blank is,
  - 1) Internet
  - 2) web sever
  - 3) IP address
  - 4) website
7. The software which designed to enable a user to display and interact with information in a web page is,
  - 1) Web Browser
  - 2) DNS Server
  - 3) Search Engine
  - 4) Operating System
8. If the name used at the beginning of the e-mail address needs to be divided into two parts, what is the mark that can be used for it?
  - 1) backward slash
  - 2) semi colon
  - 3) underscore
  - 4) Colon
9. When linking web pages, a link between the web pages of that website (same website) or the pages in another web site can be provided,
  - 1) By file sharing
  - 2) By Hyperlinks
  - 3) By Web Server
  - 4) By URL
10. The ability to install software in the Server computers to Client computers is an advantage of,
  - 1) E- mails
  - 2) Search Engines
  - 3) Remote Access ability in the Internet
  - 4) IP addresses.

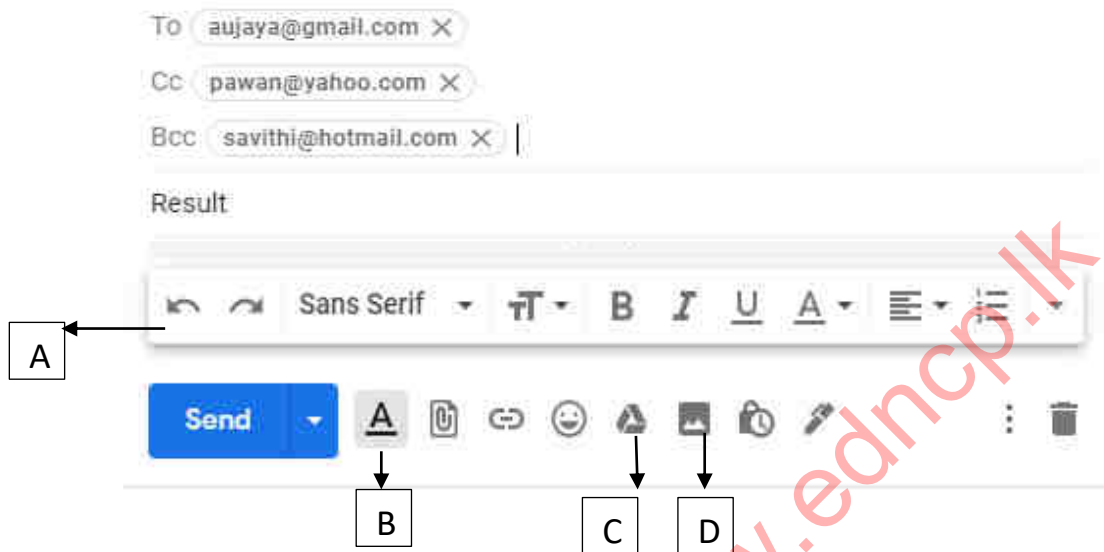
11. The main task of SMTP protocol is,
- 1) File exchange.
  - 2) Informing messages when there are errors.
  - 3) HTML document exchange.
  - 4) Electronic mail exchange.
12. “Cloud Computing concept facilitates for software development without installing an operating system to your computers”. This service of Cloud Computing is called as,
- 1) Infrastructure as a Service
  - 2) Platform as a Service
  - 3) Software as a Service
  - 4) Social welfare as a Service
13. The server which converts a web address into an IP address and sends that IP address to the Web Server is known as,
- 1) Web Server
  - 2) DNS Server
  - 3) File Sever
  - 4) FTP Server
14. The following indicates how the operation of the internet is happening in few steps.
- A. The web browser redirects the URL to the DNS server
  - B. Web server returns HTML data stream
  - C. The request is directed to a web server with an IP address
  - D. Web browser renders HTML web pages
  - E. The user opens the web browser and enters the URL.
- The correct sequence of steps is,
- 1) ACDBE
  - 2) BACDE
  - 3) EACBD
  - 4) EACDB

### Essay Type Questions

- 1) The principal of Vijayabahu school intends to build up a network among computers in the computer laboratory in the school. Also he needs to get an Internet connection for the school computer laboratory.
- i) If the principal asked from you as you are a student of the school, the requirements should be fulfilled for the above task, prepare a list of requirements that you will provide to the principal.
  - ii) Mention the suitable Guided media for data communication in the computer laboratory.
  - iii) Suggest a suitable network topology to build up the network and give reasons why it is suitable.
  - iv) Describe the function of the Firewall when accessing to the Internet.



- 2) Electronic mail is a method of sharing and sending frequently used data. It is a method of creating, sending, receiving and storing messages through an electronic communication system. The following is an interface with an e-mail which is ready to be sent.



- i) What is the e-mail address of the recipient of the original mail in the above interface?
  - ii) What is the purpose of indicating e-mail addresses in Cc: and Bcc: locations?
  - iii) What are the functions of the icons represented by labels A, B, C and D?
  - iv) What is the type of the attachments mentioned in the above e-mail?
  - v) Write 02 examples of software which can be used only for sending e-mails.
- 3) Information is one of the most valuable things in the world today. The Internet plays a major role in the exchange of information.
- i) Suppose that you want to search for information through the Internet under the topic **“Mother Theresa”**. But if you do not know the relevant web address in this regard, write the steps to be taken to obtain this information.
  - ii) Mention 02 benefits of using Cloud Computing Concept.
  - iii) Select and write the most suitable answers for the blanks given below.
    - a) There can be written notes, pictures, videos and other multimedia and hyperlinks included in a .....
    - b) The activity of retrieving information from the Server computers to Client computers is called .....
    - c) ..... gives an identity to all the websites which exist in the Internet.
    - d) Sharing the resources in a Server computer among Client computers is called as .....  
( Domain name, Web page, File sharing, Downloading )

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## **Unit 4**

# **Use of Multimedia**

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- 1) "The bit size of a pixel is determined by the colors used in the graphic design. One bit represents two colors."

a) A pixel in a graphic has 6 bits. What can be the color range of that pixel? (Indicate how the answer was obtained)

.....

b) A pixel in a graphic has 8 bits. So what is the color range of that pixel? (Indicate how the answer was obtained)

.....

c) If a graphic has 36 colours, how many bits in a pixel of that graphic can have?

.....

d) A graphic has 64 colors. What can be the number of bits per pixel in that graphic?

.....

- 2) Indicate the graphic resolution of the images below.

A)



pix 200

B)



pix 400

pix 180

- 3) The diagram is part of a toolbar commonly used in graphic editing software. Write down the work that can be done by the tools labeled A - F.

A. ....

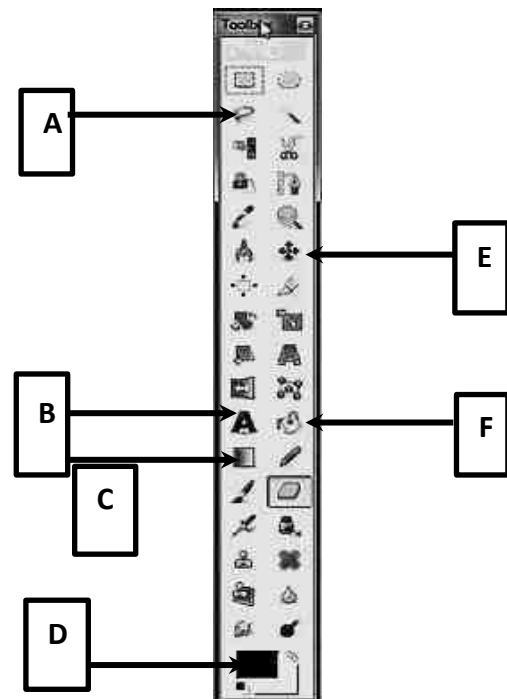
B. ....

C. ....

D. ....

E. ....

F. ....



4) Provide short answers to the following questions.

a) There are two types of color substitutes used in graphic design. What are they?

.....

b) Write down the variants of the primary color.

.....

c) Name the two types of graphic compression.

.....

d) Mention two types of graphic types.

.....

5) The following are some of the tools used in GIMP software. Briefly outline what they do.

Bucket Fill .....

Rectangle .....

Fuzzy .....

Foreground .....

Pencil .....

paintbrush .....

Clone .....

Smudge.....

Airbrush .....

Eraser .....

6. Below are the names of some of the tools used in GIMP software and their functions. In column A, select the task corresponding to the tool in column B and enter its English letter in front of the relevant number.

Column A	Answer Column	Column B
I) Move tool		A) Cropping the graphic as needed
II) Path tool		B) Scaling
III) Crop tool		C) Drawing and modifying shaped lines
IV) Align Tool		D) Selecting a color in the graphic
V) Text tool		E) Moving a selected part
VI) Rotate tool		F) Changing perspective
VII) Magnify		G) Insertion of letters
VIII) Colour Picker tool		H) Zoom out and Zoom in.
IX) perspective tool		I) Assembling the graphic
X) Scale tool		J) Rotate the selected part

7. Use only the words given in parentheses to fill in the blanks in the following sentences.

- a) ..... A .... or ..... B ..... can be used to store and distribute an optical transcript as a video.
- b) The Preview Execution Window is called ..... C .....
- c) ..... D .... is used to formulate the theatrical contribution of a visual medium.
- d) The timeline platform is called ..... E .... Uses ..... F .... to crop audio files.
- e) .....G..... is used to save the created file.
- f) The use of ..... H... .. is very important in the creation of complex as well as simple animations.
- g) Creating Animation and Getting a New Window is called ..... I .....
- h) ..... J .....is used to export audio consoles.  
( **Preview, Layers, Export Audio, Trim Audio, Save Movie, Starring, Save, Publish Movie, New Movie, Timeline stage** )

### Multiple Choice Questions

1. What are digital graphics?
  - 1) Graphs or images created by substituting a specific color for a specific bit.
  - 2) Are graphics or images created using computer graphics software.
  - 3) Graphics created using only binary numbers.
  - 4) Graphs or images created using a higher quality and higher color range.
2. Which of the following are the elements of a digital graphic?
 

1) Bits, resolution colors, size	2) Colors, numbers, pixels, resolution
3) Size, numbers, colors, pixels	4) Size, pixels, color, resolution
3. What is a pixel?
  - 1) The basic building block of a digital graphic.
  - 2) The next bit pattern after 64 bits.
  - 3) A tool used to replace binary number bits.
  - 4) A tool used to create graphics using software.
4. What is graphic resolution?
  - 1) The sum of the bit size and color size of a digital graphic.
  - 2) The amount of color in a pixel.
  - 3) The binary value of a digital graphic.
  - 4) The physical scale of a digital graphic.
5. Which of the following are the two most commonly used types of color substitutes?
 

1) RGB and EBCDIC	2) RGB and CMYK
3) CMYK and G2C	4) IMGSRG and Infrared

6. Which of the following is a mix of color variations in the creation of tertiary colors?
- 1) From 111, 111, 111 to 254, 254, 254
  - 2) From 000, 000, 000 to 255, 255, 255
  - 3) From 000, 000, 000 to 256, 256, 256
  - 4) From 000, 000,001 to 256, 256, 256
7. Which of the following reasons is important for graphic compression?
- 1) To avoid inconveniences during storage and transmission of high quality graphics.
  - 2) To reduce the color level of graphics that have used a larger color range.
  - 3) To increase the productivity of digital graphics.
  - 4) To prevent color substitution changes in graphics.
8. Which of the following can be used to reopen a graphic in its original state?
- 1) Lossy compression
  - 2) Glossy Compression
  - 3) Lossless Compression
  - 4) Loose Compression
9. In which graphical compression is the JPEG file format used?
- 1) Resolution compression
  - 2) Damaging compression
  - 3) Pixel compression
  - 4) Non-damaging compression
10. In which graphical compression is the GIF file format used?
- 1) Damaging compression
  - 2) Color substitution compression
  - 3) Non-damaging compression
  - 4) Bit compression
11. Below is the correct answer given by the file formats used for graphic compression which is damaged by them?
- 1) BPP add TIFF
  - 2) TIFF and PNG
  - 3) RGB and BMP
  - 4) TIFF and BMP
12. Which of the following software is used only for raster graphics?
- 1) Adobe Image Ready and Adobe Fireworks
  - 2) ProArtRage and Deluxe Paint
  - 3) GIMP shop and Adobe Illustrator
  - 4) Litha-Paint and Artweaver
13. Which of the following answers contain the correct file formats for Non-damaging graphical compression?
- 1) GIMP and PNG
  - 2) JPG and BMP
  - 3) PNG and RAW
  - 4) RAW and JPG
14. Which of the following software is used only for vector graphics?
- 1) Microsoft Expression Design and GIMP
  - 2) Microsoft Photo Editor and Litha-Paint
  - 3) Corel PHOTOPAINT and Adobe Image Ready
  - 4) Adobe Live Motion and CorelDRAW

15. In which of the following ways is a vector graphic created?
- 1) Using standard lines and pixels.
  - 2) By constantly doubling the number of bits.
  - 3) By joining straight or curved lines together.
  - 4) Using the CMYK color substitute.
16. Which of the following statements is true about creating and saving a raster graphic?
- 1) Raster graphics use less computer memory capacity.
  - 2) Corel Paint Shop Pro software is used to create raster graphics.
  - 3) Changing the graphics volume does not change the quality of the design and does not change the performance speed of the computer.
  - 4) The speed of the computer does not change during design, but slows down during storage or retrieval.
17. If a digital graphic is 100 pixels wide and 300 pixels high, what is the graphical resolution of that graph?
- 1) 400 pixels.
  - 2) 200 pixels.
  - 3) 30000 pixels.
  - 4) 3 pixels.
18. If one bit in a pixel represents two colors and 8 bits in a pixel, what is the color size of that pixel?
- 1) 4 colours
  - 2) 16 colours
  - 3) 256 colours
  - 4) 64 colours
19. What is the number of bits in a 16-color pixel?
- 1) 4 bits
  - 2) 8 bits
  - 3) 32 bits
  - 4) 12 bits
20. Consider the following factors and select the highest quality digital image.
- 1) 250 ppi
  - 2) 600 dpi
  - 3) 10 ppi
  - 4) 375 dpi

\*\*\*



## **Chapter 05**

# **Web Designing Using Multimedia**

Education NCP - [www.edncp.lk](http://www.edncp.lk)

1. Write the output of the following HTML codes.

i) `<h1><b>P </b>Programming Language</h1>`

.....

ii) `<a href="abance.html">Click more info</a>`

.....

iii) `<ul type="circle">  
       <li>Biscuits</li>  
       <li>Cake</li>  
       <li>Donet</li>  
     </ul>`

.....

.....

.....

iv) `<table border="0" >  
     <tr ><th>Name </th><th>Address</th></tr>  
     <tr><td>Gayan</td><td>Apura</td></tr>  
     <tr><td>Sanuka</td><td>Kgala</td></tr>  
   </table>`

.....

.....

.....

.....

Write the appropriate code to enter the list below (It is sufficient to write only the relevant part of the code )

**Fruits**

• Banana

.....

• Pineapple

.....

• Mango

.....

• Grapes

.....

• Apple

.....

2. Write the following table in the answer sheet and fill in the blanks writing the function performed by that HTML tag.

tag	Description
<code>&lt;dl&gt;</code>	
<code>&lt;dt&gt;</code>	
<code>&lt;dd&gt;</code>	

3. Describe the following attributes used under HTML tags.

Attribute	Description
align	
Border	
background-color	
height	

4. Write the HTML code which need to insert the list below on the web page (It is sufficient to write only the relevant part of the code )

i)

- first
- second
- third

.....

.....

.....

.....

.....

ii)

- HTML  
Hypertext markup language
- CSS  
Cascade style sheet

.....

.....

.....

.....

.....

iii)

- a. Fruit
- b. Vegetable
- c. Sweets
- d. Snacks

.....

.....

.....

.....

.....



7. Write down the output of below HTML code.

`<p> <b>O</b>Your country temperature is 27 <sup>0</sup>C.</P>`

.....

8.

- i) Assume that you have been assigned to design a website for your school. In creating that website, Your ICT teacher says that if the site is well organized, it will become more popular. Write down 4 qualities of a web site that is organized in such a way,

.....  
 .....  
 .....

- ii) Explain how to prepare the videos that you get to upload into that website

.....  
 .....  
 .....  
 .....  
 .....

- iii) Write the HTML code need to center your school name as a heading (It is sufficient to write only the relevant part of the code )

.....

- iv) When Advanced Level students clicked on AL application in this website, application.html is opened and can be applied to that school through the form in that web page. For that, write only the HTML code required to write that hyperlink.

.....  
 .....  
 .....

- v) Write the html code which need to insert the image named 'school.jpg' in to this web site. If this image is not displayed, that should be displayed as pic\_school.

.....  
 .....

- vi) Below are some of the requirements to be fulfilled to publish this website. Select only the correct requirements and place a ☐ symbol or ☐ symbol in front of them.

- A. Web Browse
- B. Web designing software
- C. Domain name
- D. Video editing software
- E. Uploading software
- F. Internet Connection

<input type="checkbox"/>
<input type="checkbox"/>
<input type="checkbox"/>
<input type="checkbox"/>
<input type="checkbox"/>
<input type="checkbox"/>

9. Write down 3 computer languages that will help you to create dynamic websites .

.....

.....

.....

10. Write a difference between dynamic website and static website

.....

.....

### Multiple Choice Questions

1. What does HTML stand for?
 

1) High Text Make up Language	2) High Transfer Machine Language
3) Higher Text Make up Language	4) Hyper Text Mark-up Language
2. Which of the following is not a requirement for creating a website?
 

1) Identifying family members	2) Developing business
3) Entertainment	4) News distribution
3. Who are the subscribers of a website?
  - 1) People who access the site and use it.
  - 2) People who release information on a website to the external society.
  - 3) People who post information on other websites on their own websites.
  - 4) Groups of people who trying to own a website.
4. Which of the following is not suitable for including on the home page of a website?
 

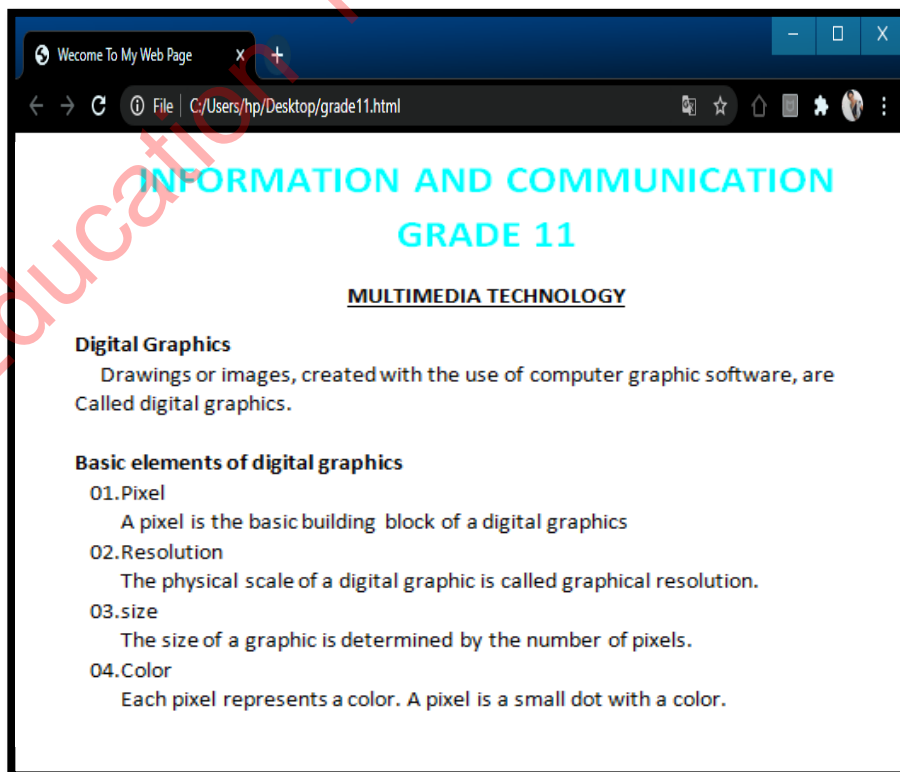
1) Ownership and update year	2) Designer's phone number
3) Facility to change font size	4) Navigation bar between web pages
5. Which of the following is not an attribute of a website where the sandaraya is organized?
  - 1) Ease of updating.
  - 2) Ease of use.
  - 3) Easy to add new features later.
  - 4) Ease of users getting their phone numbers.

6. Which of the following is not an attribute of a structured website?
  - 1) The home page should contain as much information as possible
  - 2) Highlight important points
  - 3) The website can be accessed from any / different types of computers.
  - 4) Maintaining the identity of website on every page.
7. What should not be considered when choosing media resources for a website?
  - 1) Graphics have gray in addition to black and white.
  - 2) Ability to compress graphics.
  - 3) Decreasing the number of channels in the audio file.
  - 4) Removing unwanted frames and unwanted noises from video files.
8. What can not be used to write code when creating a website using html code?
  - 1) word processor
  - 2) Notepad
  - 3) Notepad ++
  - 4) Above (2) and (3).
9. What is the correct html tag?
  - 1) <head<
  - 2) <head>
  - 3) >head>
  - 4) >head<
10. Which of the following is correct html tag?
  - 1) fontface=iskoolapota
  - 2) font face="iskoolapota"
  - 3) font style="iskoolapota"
  - 4) fontstyle=iskoolapota
11. Which html tag is used to make heading on the middle of the page?
  - 1) <Head>
  - 2) <middle<
  - 3) <center>
  - 4) >column<
12. What is not the correct way to apply a color?
  - 1) Color=" 000000"
  - 2) color="silver"
  - 3) clr -> red
  - 4) Above (1) and (2)
13. What is the font face according the html language?
  - 1) changing the font size
  - 2) font formatting
  - 3) Applying animation to fonts
  - 4) Applying font designs
14. What is the attribute used to display a text that should be displayed in place of the image only if the image that indicated by a tag is not in relevant place?
  - 1) alt
  - 2) Real
  - 3) Next
  - 4) Lose
15. An attribute that can be used to align an image or phrase (text),
  - 1) place
  - 2) put
  - 3) Do
  - 4) Align
16. What symbol can not be used to enter non-numbered lists?
  - 1) square
  - 2) disk
  - 3) star
  - 4) circle
17. What is the correct tag that can be used to start a detailed list??
  - 1) dt
  - 2) Dl
  - 3) Dd
  - 4) ol
18. For what function is the <a href> tag part used?
  - 1) To create a horizontal line
  - 2) To apply color to tables
  - 3) To apply a border to an image
  - 4) To create hyperlink

19. The tag used to create a cell containing data in a table,
  - 1) td
  - 2) th
  - 3) tr
  - 4) None of the above
20. What is the tag that can be used to apply an image to background for a cell of the table?
  - 1) bg img
  - 2) Img src
  - 3) background
  - 4) Bkg imgs
21. What is the calling name of websites with a constantly changing content?
  - 1) Soft websites
  - 2) Dynamic websites
  - 3) Navigation Websites
  - 4) Static websites
22. Which of the following is a website to can download open source CMS software?
  - 1) COBOL
  - 2) Drupal
  - 3) Ruby
  - 4) Python
23. The following is not a related role in creating a website?
  - 1) Editor
  - 2) Website Administrator
  - 3) Electrical Engineering
  - 4) Publisher
24. What is not an essential factor to should fulfill a web publisher for publication of a website?
  - 1) Having a web host
  - 2) having a domain name
  - 3) connection of social network
  - 4) Maintaining an Internet connection
25. What is the international agency responsible for assigning and controlling domain names unique to websites?
  - 1) DNCWI
  - 2) IWDC
  - 3) ICTAD
  - 4) ICANN

## Essay Questions

1. Answer the following questions, assuming that your school teacher has instructed you to create the following website using HTML code.





- i) Write down the code needed to create the text Communication Technology Grade 11.
  - ii) Write steps to need to format the topic Multimedia Technology according to above image.
  - iii) What code is required to indicate the title of Digital Graphics in bold?
  - iv) What code is used to adjust the spacing between words at the beginning of a paragraph or in the middle of a paragraph?
  - v) According to the image above, where the code should be entered to display "Welcome To My Web Page" in the title above?
2. The output is shown below image corresponding to the following HTML source code and attributes. Select and write from 1 to 10 named tags from the list provided here.



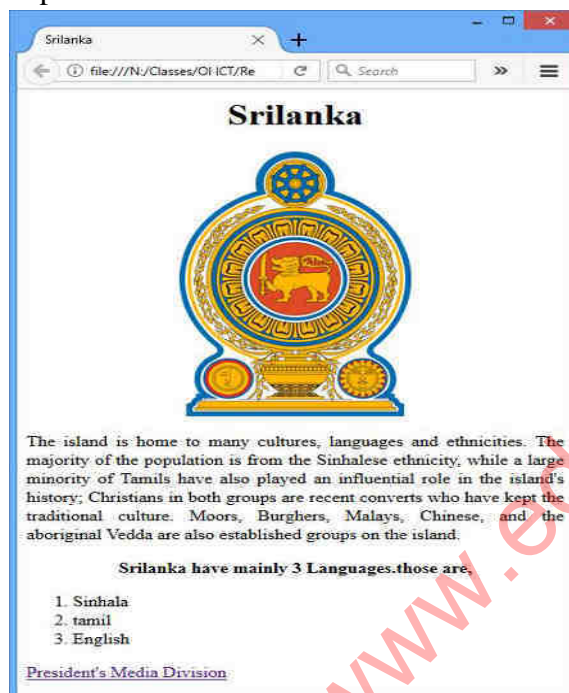
```

<html>
<head><title>New Grand</title></head>
<1>
<h1><1><u>New Grand Resort</u></1></H1>
<p align="center">365,Colombo Road,Wattala</p>
<2>
<1><3 src="pic1.jpg" alt="batch" width="100px" height="100px"></1>
<2>
<4 border="1">
<5><th>Room category</th><6 colspan="2">price</6></5>
<tr><7 rowspan="2">standard</7><td>with breakfast</td><td>2240</td></tr>
<tr><td>without breakfast</td><td>2128.00</td></tr>
<tr><td 8="2">Luxury</td><td>with breakfast</td><td>3136</td></tr>
<tr><td>without breakfast</td><td>3024</td></tr>
<tr><td colspan="3">15% discount on Amex</td></tr>
</4>
<9 href="hotel.html">More detail</a>
</10>
</html>

```

List - table / u / hr / center / th / tr / td / rowspan / colspan / body / html

- 3.
- i. Consider the example web page created using the source code. Select and write from 1 to 10 name tags from the list provided here.



```
<html>
<head>
<①>Srilanka</①>
</head>
<body>
<② ⑥="③">Srilanka</②>
<③>
<img ④ ="image\srilanka.png"style="⑤:200px">
</③>
<p ⑥ =" justify ">The island is home to many cultures, languages and ethnicities.
The majority of the population is from the Sinhalese ethnicity, while a large
minority
of Tamils have also played an influential role in the island's history; Christians in
both groups are recent converts who have kept the traditional culture. Moors,
Burghers,
Malays, Chinese, and the aboriginal Vedda are also established groups on the
island.
</p>
<p ⑥ ="③"><⑦>Srilanka have mainly 3 Languages.those are,</ ⑦><p>
<⑧>
    <li>Sinhala</li>
    <li>tamil</li>
    <li>English</li>
</⑧>
<⑨ href="http://www.pmdnews.lk/si/" ⑩="_blank">President's Media
Division</⑨>
</body>
</html>
```

List : - { h1 / target / center/ src / title /width / align / ol / b / a }

- ii. Fill in the blanks in 1 to 5 following incomplete sentences with selecting most suitable word/phrases from list below. Just write only the label number and the corresponding words / phrases.

- ...①..... is a web page editing software.
- We need to ...②... a website to make it publish.
- ...③... can be taken as an example of an ISP in Sri Lanka.
- Facebook is an example of a ... ④ ... website.
- Websites created with using HTML are an example of a ...⑤... website.

List : - { dynamic / dialog / Adobe Dream viewer / static / Host }

4. Select and write from the given list the words that best suitable the labels 1 to 4 of the following incomplete clauses.

- Malicious software that act of deceiving users into obtaining information from his bank account or electronic account is called .....1..... .
- .....2..... is malicious software that linking to other web pages by misleading the user.
- Malicious software that infects a computer program and spreads its copy on the computer is called .....3.....
- Malicious software that has the ability to operate and spread alone is called .....4.....

List : (Spyware, worms, virus, hijackers, adware, phishing)

- ii) Write from ① to ⑩ by selecting HTML codes in parentheses to display the following web page.

List : ( H1,p ,a, li, td, ol, tr, table border , th ,href )

### Components of a Computer System

1. Input devices
2. Output devices
3. Computer Memory

Input device	Output device	Computer Memory
Mouse	Monitor	CD
key board	Printer	Hard Disk

[Google](#)

```

<html>
<title>devices</title>
<body>
<center><①>Components of a Computer System</①> </center>
<②>
<③>Input devices</③>
<④>Output devices</④>
<⑤>Computer Memory</⑤>
</②>
<④="2">
<⑥><⑥>Input device</⑥> <⑥>Output device</⑥><⑥> Computer
Memory</⑥></⑥>
<⑥><⑦>Mouse</⑦><⑦>Monitor</⑦><⑦>CD</⑦></⑥>
<⑥><⑦>key board</⑦><⑦>Printer</⑦><⑦>Hard Disk</⑦></⑥>
</table>
<⑥>
<⑥ ⑩="www.google.com"> Google </⑥>
</body>
</html>
    
```

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**Unit 06**

**INFORMATION AND  
COMMUNICATION TECHNOLOGY  
AND SOCIETY**

Education NCP - [www.edncp.lk](http://www.edncp.lk)

1. With the evolution of Information and Communication Technology, the use of Information and Communication Technology tools and tactics in various fields of art such as film and music has expanded.

i) Name three such tools and strategies.

- .....
- .....
- .....

ii) Identify such tools and technologies that can be used for the following purposes.

	Requirement	Tools and Technology tactics
a	Fake creation of natural environment based on actions take place in normal life	
b	Capturing the image of an image shot elsewhere in the camera lens display it in a different place	

2. Information and Communication Technology is contributing many aspects of human life today.

i) Write down each issue that may arise in the following areas using Information and Communication Technology

Field	Possible issues to experience
Legal issues	
Issues related to values	
Physical problems	
Harmful software	
Environmental issues	
Health related issues	
Social issues	

ii) Explain the following terms

- Intellectual property: .....
- Patent : .....
- Plagiarism : .....
- Use in good faith : .....

- ii) A student has to obtain information from a design created by another person for his school work. Outline two actions that can be taken in such cases.

- .....
- .....

3. The unsafe use of ICT tools and services can lead to various problems.

- i) The following are some of the problems encountered in using the computer lab and personal computer. Below are some of suggestions on how to look or get an appointment for antique items

	The problem	Instructions or actions
A	Damage to a computer device due to high voltage of the main electric.	
B	His sister had altered the contents of a document typed on a home computer for the public use	
C	Installing unwanted computer games on a school computer by someone	
D	A sudden crash on the computer system destroys all data on the hard drive	
E	Failure to open the desktop computer due to sudden power cut	
F	Someone stole a printer from a computer lab	
G	An unauthorized access to a computer network and stealing data from a computer connected to the network	

(Use of passwords/ keeping backups/ Use of stabilizers/ creating user accounts/ Using an uninterruptable power supply / Use of firewall/ Lock the laboratory doors)

4. Malicious software/ malicious codes can severely affect computers and computer networks

- i) Name three such damages and effects

- .....
- .....
- .....

- ii) Some of the possible damages to computers and computer networks are shown in the table below. Specify the type of malicious software that could be damaged

	Damage	Malicious software
A	Gather personal information through instant messaging and online conversations	
B	Cheating users and obtaining information such as their bank accounts and electronic accounts.	
C	Advertising goods emails sent by strangers	
D	Malicious software that unknowingly connect to the system, pretending to be genuine	
E	Spreading your copy on a computer by connecting to the computer	
F	When users connect to the internet, he is misleading and linking to other web pages.	
G	Malicious software can operate and spread on its own without human intervention	
H	Exhausting the user by displaying unwanted advertisements on the computer screen	

5. i) Mention two possible actions that can be taken to protect a computer that is not connected to the internet from harmful soft wares

- .....
- .....

- ii) State three possible actions that can be taken to a computer that is connected to the internet from harmful software

- .....
- .....
- .....

- iii) Write down three symptoms that can be detected when computer is infected with a virus.

- .....
- .....
- .....



6. i) Explain “cyber security”

.....

.....

.....

.....

.....

ii) Name two institutions that provide cyber security in Sri Lanka.

.....

.....

7. Continuous use of a computer for a long period of time without correct posture has led to the development of ICT as well as health issues

I. Name three health issues that can be caused by using the computer continuously for a long period of time as shown in the picture

- a) .....
- b) .....
- c) .....



II. To avoid the health issues mentioned above state each possible course of action

a	
b	
c	



8 i) Explain electronic waste.

.....

.....

ii) Give three examples for electronic waste from your home or school.

- .....
- .....
- .....

iii) Name three diseases that can be caused by improper disposal of electronic waste.

- .....
- .....
- .....

9 The 3R method is used to systematically dispose of electronic waste.

i. Explain that 3R method

.....

.....

.....

.....



ii. Name two institutions operating in Sri Lanka that assist in the systematically disposal of electronic waste

- .....
- .....

10. Explain the following words.

- Digital divide: .....
- Digital bridge: .....
- Digital literacy: .....
- De- skilling: .....
- Social media: .....
- Cyber crimes : .....

11.

i. Write three possible reasons for digital divide in a country like Sri Lanka

- .....
- .....
- .....

ii. Outline three measures that the government can take to eliminate the digital divide in a country and create a digital bridge.

- .....
- .....
- .....

- iii. There are many benefits to developing digital literacy of individuals in a highly literate country like Sri Lanka. Mention three such advantages.

- .....
- .....
- .....

12.

- i) State three benefits you can get as a school student through social medias

- .....
- .....
- .....

- ii. Mention three potential problems when using social media.

- .....
- .....
- .....

- iii. List down three advices/ tips that can be help you as an IT student to minimize those problems when using social media.

- .....
- .....
- .....

13. The following are some of the jobs related to information and Communication technology. Adjust those jobs according to the relevant task

a. Computer and Information System Manager	d. Software Developer	g. Web Developer
b. Computer System Analyst	e. Computer Aid Specialist	h. Web Master
c. Computer Hardware Engineer	f. Computer Programmer	i. Desktop/ Application Support Specialist

	Function /Task related to the post	Post
I.	Assist the Director board/ owner using computer technology efficiently and effectively	
II.	Research,design,development,testing and monitoring the manufacture and installation of computer chips, circuits boards and computer system	
III.	Supervise computer and information system managers who supervise the computer activities of organizations and companies.	
IV.	The computer writes programs that enable them to perform their functions	
V.	Working with office software	
VI.	Responsibility for how websites work	
VII.	To help solve computer problems for company clients or staff	
VIII.	Creates programs and operating systems that run computers and other devices.	
IX.	Tasks such as maintaining, designing, analyzing user data and responding to user feedback	

### Multiple choice questions

- The optimal solution is to minimize the risk of frequent power failure to a personal computer
  - 1) Firewall installation.
  - 2) The use of surge protector.
  - 3) Use of an uninterrupted power supply.
  - 4) Use of a flash drive.
- How to prevent unauthorized remote access to data on a computer connected to the internet
  - 1) By installing CCTV.
  - 2) By installation Firewall
  - 3) By using passwords.
  - 4) By using anti various software
- It may cause the computer abnormally behavior after using a flash drive
  - 1) Constant power supply failure.
  - 2) Do not use anti-virus software.
  - 3) Do not use surge protector.
  - 4) Do not use passwords.
- Plagiarism is not a way for a student to add text from a website to his essay without stealing it
  - 1) List the sources which the information was taken
  - 2) Obtain proper permission from the author and mentioned it
  - 3) Use inverted comma and provide information of the claimant
  - 4) Enter the details of the student instead of the claimant

5. A way to protect a spreadsheet on your computer that is not connected to the internet from unauthorized access
  - 1) Get regular backups
  - 2) Using a password.
  - 3) Using anti-virus software.
  - 4) Installing CCTV.
6. It is not a suitable solution to the health problem of “Carpal Tunnel Syndrome/ CTS”
  - 1) Stand up and stretch your arms, fingers and back regularly.
  - 2) Avoid pressing keys tightly while typing.
  - 3) Avoid the bending wrist
  - 4) Keep the computer screen 15° – 20° below the eye level
7. The health problem that can be prevented by keeping the computer in the right place to prevent glare is
 

1) Carpal Tunnel Syndrome/CTS	2) Repetitive Stress Injury/RSI
3) Computer vision syndrome CSV	4) Musculoskeletal Problems
8. Use user names and passwords to access a computer .....examples.
 

1) Physical security	2) Legal security
3) Logical security	4) Cyber security
9. Patent confirmation of intellectual property is.....
 

1) Physical security	2) Legal security
3) Logical security	4) Cyber security
10. You don't want to be careful when using social media,
  - 1) Think twice before using social media.
  - 2) Trust anonymous e-mails.
  - 3) Be careful when choosing social media friends
  - 4) Don't open suspicious e-mails.
11. It is another side effect of ICT
 

1) Using social media	2) Digital bridge
3) De-skilling	4) Using forums
12. When using a computer unsafely ,It is not a physical problem
  - 1) Unauthorized access to computers or computer systems using passwords
  - 2) Unnecessary power failure can cause computer errors
  - 3) The threat of theft
  - 4) Computer network crashes due to malicious software

### Essay Type Questions

1. “Digital Divide” is a social problem caused by information and communication technology. Sri Lankan government has taken step to eliminate “Digital Divide” and create “Digital Bridge”

i) What do you mean “Digital Divide”?

.....

ii) Mention three reason for “Digital Divide”

a) .....

b) .....

c) .....

iii) What do you mean by “Digital Bridge”?

.....

iv) Mention three ways to create “Digital Bridge”

a) .....

b) .....

c) .....

2. Malicious software among the problem that arise when using Information and Communication Technology. Otherwise computers and computer networks are destroyed by malicious codes.

i) What do you mean by malicious software?

.....

ii) Mention three examples for malicious software?

a) .....

b) .....

c) .....

iii) How to protect computer from malicious software?

.....

.....

iv) Mention three examples of virus protection software that can be installed to computers to protect from malicious software.

a) .....

b) .....

c) .....

3. Electronic waste is not dispose in a proper way and it causes to damage to the environment. .

- i) What is “electronic waste” ?
  - a) .....
- ii) Mention three diseases caused by improper disposal of electronic waste.
  - a) .....
  - b) .....
  - c) .....
- iii) What is the most suitable way to dispose electronic waste?  
.....
- iv) Describe it.
  - a) .....
  - b) .....
  - c) .....

\*\*\*

## **Sample Answers**

- Visit [www.edncp.lk](http://www.edncp.lk) for all sample answers

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*General Certificate of Examination ( Ordinary Level )*  
*Information & Communication Technology*  
**Student Activity Book**



***Information & Communication Technology Unit***

**Provincial Department of Education  
North Central Province**