

# Information & Communication Technology II

## Grade 11

- Answer *five* questions only, selecting the *first question* and *four* others.
- *First question* carries **20** marks and each of the other questions carries **10** marks.

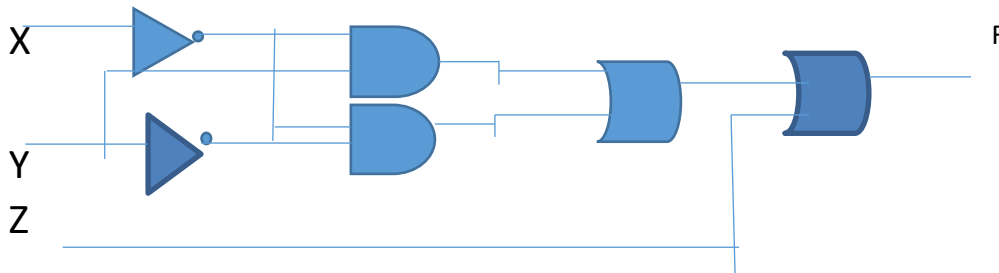
(1)

- i.
  - a. What is the major hardware technology used in second generation computers.
  - b. Write two differences between second and third generation of computer's. (2 marks)
- ii.
  - a. List four ways how ICT helps in field – education. (1 mark)
  - b. Write four characteristics of information. (1 mark)
- iii.
  - a. Do the following calculation and provide the answer in base decimal. (1 mark)

$$4BF_{16} + 3456_8$$

- b. Convert  $502_8$  into a binary number. Write down the steps. (1 mark)

- iv.
  - a. Write down the output (F) .Simplify the answer using Boolean Algebra. (1 mark)



- b. Prove the De Morgan's law using truth tables. (1 mark)

- v. Match column A with B.(1/2 marks \*4)

A		B	
1	Key board	A	Video Port
2	Printer	B	PS/2 Port
3	Router	C	Parallel Port
4	Monitor	D	Network Port(RJ 45)

- vi. Write down the coding systems used by the computer. (2 marks)
- vii. Following pseudocode is designed for the purpose to find a given number as odd or even.
  - a. Fill in the blanks. (1/2 marks \*4)

```

Begin
    Input X
    IF X mod ..... = 0 Then
        ..... "X is even number"
    Else
        Print "X is ..... number"
    .....
  
```

viii. Read the following paragraph and answer the questions.

Malan watched a TV programme using his smart phone with a connection to Bluetooth speaker. The TV programme consisted of some conversations and also songs.

- a. Which data transmission medium is used in above scenario? (1 marks)
- b. What is the mode of transmission, used in above scenario? (1 marks)

ix. Match column A and B. (1/2 marks \*4)

A	B
Software which checks attached devices when a computer turns on	Disk defragmentation
Operating System with command line Interface	Format
A mechanism of initializing suitable storage structure	BIOS
A mechanism that rearranged files in hard disk	DOS

x. List two advantages of a computer network. (2 marks)

(2) “Tech Zone” is a store that sells computer parts. They Purchase item from consignment supplies and the details of supplied items and supplier is recorded in following tables of a database.

**Purchase Table**

Date	Supp_ID	Item_ID	Count
20/01/2019	S01	B001	40
29/01/2019	S03	B004	20
12/02/2019	S02	B002	30
25/02/2019	S04	B003	15
14/02/2019	S02	B001	20

**Supplier Table**

Sup_ID	Supp_Name	Phone No
S01	Tech Lanka	0352225456
S02	IT Zone	0112857832
S03	City Smart	0412256453
S04	Tech park	0112564875

**Item Table**

Item ID	Item Name	Stock
B002	19” LED Monitor	15
B002	1TB Hard Disk	20
B003	16 GB USB Flash Drive	15
B004	1Tb RAM	20

- i. Mention two of the suitable primary Key with their respective fields in the table.
- ii. Avishka goes to Tech zone and buy five 16GB USB flash Drives
  - a. Which table/s should be updated?
  - b. Write the update d record/s in table.
- iii. The Tech Zone decided to start a sale of a new item called “Optical Mouse”. They purchased 40 units of the item from the supplier on 0112839797.
  - a. Which table/s should be updated?
  - b. Write the updated record as it appears in table/s.
- iv. Mention two methods that can be used to protect this database.

(3) Following notice is created by a student who is in the Computer Club of Mahanama College. He used a Word processing software to create this notice. Write answers to below questions using the given notice.

**ICT CLUB-MAHANAMA COLLEGE**

The club is an educational and fun group. Which meets after School about every week. MR. Farshan our computer instructor, manage this group. Our membership grows day by day, as it has become quite popular within in the School mainly, it is up to the student to decide what they wish to accomplish.

There are many things to choose from. some of the most popular activities are :-

- C Using Educational Software
- ❖ Making web pages Creating
- ❖ 2D/3D Animations
- ❖ Programming in JAVA

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i.

- a. Write down the steps to save this document in desktop as ICT CLUB.
- b. What is the tool used to do the formatting in label A.
- c. Name the tools that are used in labels B C and D.
- d. What is the method used to insert a hyperlink for school web site as mentioned above.

ii.

- a. Write 5 qualities of a good presentation.
- b. What are the views types of an electronic Presentation.

(4)

- 1) Telemedicine is one advantage of information and communication technology. State what is meant by Telemedicine and give two instances where telemedicine is used.
- 2) A member of hardware team stated that the partitioning is an important activity in utility programme of an operating system. state
  - a. What is meant by partitioning and mention when to do it
  - b. Give two reasons for partitioning.
- 3) Gayani has registered herself in an electronic banking System. She uses this facility to do online Shopping.
  - a. Mention two advantages she receive from online shopping.
  - b. Mention two other facilities she receive from e-banking system.

(5) Consider the following **income report of Mahaweli Maha Vidyalaya** and answer questions I to VI

	C	D	E	F	G	H	I	
3				Sportsmeet -2019 Income Report				
4	Date	House Name	No.of Students	Fee per Student	Amount	Contribution to School	Amount after Contribution	
5	5-Jan-19	Hansa	1040	Rs. 100.00	Rs. 104,000.00	Rs. 10,400.00	Rs. 93,600.00	
6	10-Jan-19	Lihini	1030	Rs. 100.00	Rs. 103,000.00	Rs. 10,300.00	Rs. 92,700.00	
7	14-Jan-19	Mayura	1025	Rs. 100.00	Rs. 102,500.00	Rs. 10,250.00	Rs. 92,250.00	
8	16-Jan-19	Parevi	1035	Rs. 100.00	Rs. 103,500.00	Rs. 10,350.00	Rs. 93,150.00	
9		Total					Rs. 371,700.00	
10	Contribution Percentage		10%					

I. Write down the correct formula to find out the amount of Hansa House in cell G5.

The **contribution percentage** is given in cell E10. The amount of **Contribution to School** is calculated by multiplying the **Amount** by the **Contribution Percentage**. Write down the formula to display the **Contribution to School in cell H5**, for the Hansa house, assuming that this formula will be copied to other cells to calculate the **Contribution to School** for all the houses.

II. Write down the correct formula to find out the total amount after contribution of Hansa House in cell I5.

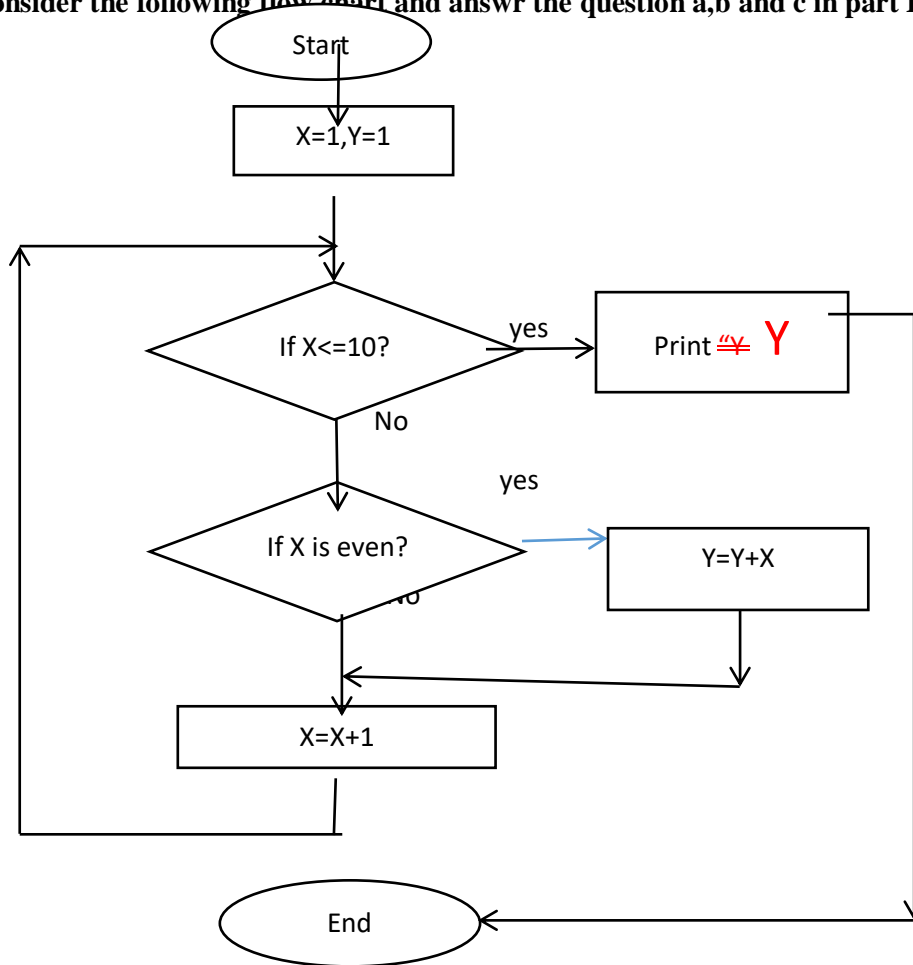
III. Write down the correct formula to find out the total income in cell I9.

IV. Organization committee determined change the contribution percentage 10% to 12% ,Which cell values should be changed?

V. Name the two types of charts, to display the house name vs amount after contribution.

(6) Consider the following flow chart and answer the question a,b and c in part I

1.



a. What is the output of given flow chart.(04 marks)

b. Write down the correct control structures for the following.(Sequence,Selection,Repetition)

- I.  $X=X+1$
- II.  $X \leq 10?$
- III.  $X=1, Y=1$
- IV. If X is even?(2\*4= 8marks)

c. If we use  $x=x+2$  instead of  $x=x+1$  ,How many times  $y=y+x$  will be repeated?(03 marks)

2. What should be the output of given pseudo code segment.

```

Begin
  N=0
  Repeat
    N= (N+2)*2
  Until (N>10)
  Display N
End
  
```

(3marks)

3. What is the advantage of using control structures in programming? (2 marks)

