Department of Education - Southern Province

First Term Test - 2020

Information & Communication Technology (80) E - I, II

Grade 11

Time - 3 hours

Name / Index No. ....

Additional Reeding Time: 10 minutes

Information & Communication Technology - I

Use additional reading time to go through the question paper, select the questions and decide on the questions that you give priority in answering.

Note :

- Answer all questions.
- In each of the question **1** to **40**, pick one of the alternatives (1), (2), (3), (4) which is correct or most appropriate.
- **Mark a cross (X) on the number corresponding to your choice in the answer sheet provided.**
- Further instructions are given on the back of the answer sheet, follow them carefully.

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1. The incorrect statement/s regarding data and information is/are,

    A. Data is considered as in raw materials.

    B. Data can be obtained by processing information.

    C. Value of an information increases with time.

    (1) A only   (2) A and B only   (3) B and C only.   (4) A,B and C only

2. Massage about the food storage in a micro controlled smart refrigerator can be taken into a mobile phone or to another smart screen without opening the door. In this, Radio frequency or Bar cord attached to the goods are scanned and informed the user about the available quentity at present to order goods in accordance to the information given to stock control.

    Which answer represents the input, process and output devices respectively?

    (1) Smart screen, Radio Frequency identification, Microprocessor

    (2) Mobile phone, Bar code Reader, Smart screen

    (3) Bar code Reader, Mobile phone, Bar code Reader

    (4) Radio Frequency identification, Microprocessor, Smart screen

3. "From the third generation of computers, cost of hardware has been decreased and the cost of software has been increased". Consider the following explanations **a** and **b** on the above statement.

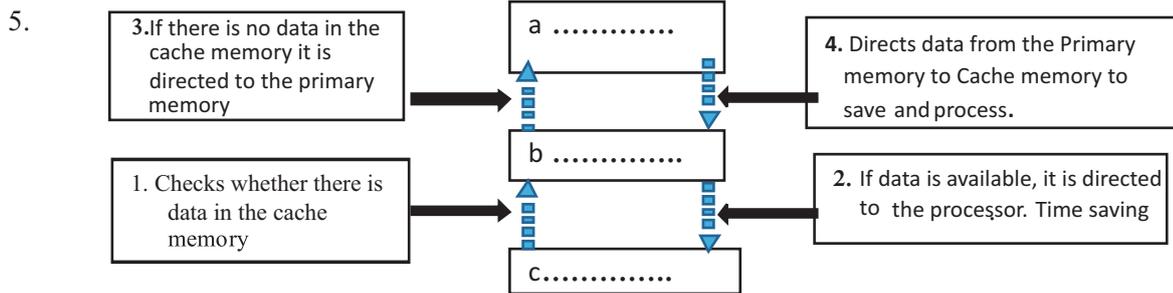   **a**   Cost of hardware is decreased with using new technology.

b Cost of producing software and economical values are increased according to the complexity of human needs.

Correct and reasonable explanation/s out of the statement/s **a.** and **b.** is /are,

(1) **a** only   (3) Both **a** and **b** are correct

(3) **b** only   (4) Both **a** and **b** are incorrect

4. An example for Impact Printers is,

    (1) Dot Matrix Printers   (2) Thermal Printers

    (3) Laser Printers   (4) Bubblejet/inkjet Printers

5.

3.If there is no data in the cache memory it is directed to the primary memory	a	4. Directs data from the Primary memory to Cache memory to save and process.
1. Checks whether there is data in the cache memory	b	2. If data is available, it is directed to the processor. Time saving
	c	

The above diagram shows the function of Cache memory. Function is happening to the direction of dotted arrows. The suitable answers for the blanks **a, b** and **c** respectively are,

(1) Cache memory, Primary memory, Central processing unit
(2) Cache memory, Central processing unit, Primary memory
(3) Primary memory, Central processing unit, Cache memory
(4) Primary memory, Cache memory, Central processing unit

6. If the letter 'A' is represented as 65_{10} inASCII system ,what is the binary value representing the letter 'G' in the word Google?
    (1) 1000111   (2) 1100111   (3) 1011001   (4) 1000100

7. Capacity of a secured digital storage card is 64 GB. Which of the following answer is equivalent to this capacity?
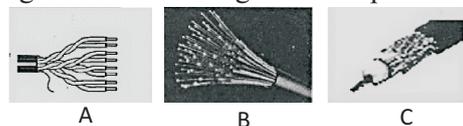   (1) 2^{32} KB   (2) 2^6 MB   (3) 2^{26}KB   (4) 2^{16} byte.

8. Consider the number $29E_{16}$ .What is the weighing factor of 2?
    (1) 16^2 (2) 16^0 (3) 16^3 (4) 16^{-2}

9. Consider the following different cables. Which answer gives the ascending order of speed in data transmission?
    (1) A , B , C   (2) C, A, B
    (3) A, B, C   (4) C, A, B

                                                          A   B   C

10. A paper containing numbers 1-9 is distributed among a crowd in a hall and instructed to mark the number relevant to their province using a pen or a pencil. Which of the following smart device can be used to input answers automatically?
    (1) Magnetic Ink Character Recognition(MICR)   (2) Bar Code Reader
    (3) Optical Character Recognition (OCR)   (4) Optical Mark Reader(OMR)

11. Which of the following statement is/are correct out of A, B and C regarding the functions of an operating system?
A- Memory management of a computer
B- Network management of a computer
C - Partitioning of hard disk
    (1) A only.   (2) A and B only.   (3) B and C only.   (4) All A, B and C

12. An incorrect statement regarding computer interface is,
    (1) An operating system provides the connection between the user and computer hardware.
    (2) User has the chance to communicate through Command Line Interface or Graphical User Interface.
    (3) WIMP components are used to create user friendly environment for Graphical User Interface.
    (4) Data can be input using keyboard and mouse in Command Line Interface operating system.

13. Year 2019' is typed erroneous in several different places of a document which is created using word processing software. Which short cut key can be used to correct it as 2020 simultaneously?
    (1) Ctrl + C   (2) Ctrl + V   (3) Ctrl + H   (4) Ctrl + R

14. Consider the following Table format:

    STUDENT DETAILS
    Name — A
    B
    NIC Number
    C
    Gender

    Which of the following answer represents the tools 1, 2, 3 used to format A,B,C respectively ?
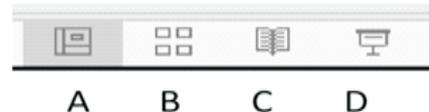   (1) 2, 3, 1   (2) 1, 3, 2
    (3) 1, 2, 3   (4) 3, 2, 1

    1   2   3
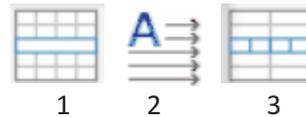
15. Combination of keys which do not give the similar results when functioning word processing software and presentation software is,
    (1) Ctrl + C   (2) Ctrl + V   (3) Ctrl + G   (4) Ctrl + X

16. Which are the icons used respectively to prepare the order of slides in a presentation and to view a slide show in a view tab?
    (1. A , B   (2) B , C
    (3) B , D   (4) A , C

    A   B   C   D

17. Which of the following answer is an incorrect statement about an electronic presentation?
    (1) Slide show can be done by pressing F5.
    (2) Background color of the slide can be changed in Slide Sorter View.
    (3) New slide can be added to an electronic presentation using combination of keys Ctrl + M.
    (4) Electronic presentation cannot be stored as video clip

    * Use this part of the spread sheet to answer question 18 and 19

18. In a textile shop, discount of 20% of the marked price is given for each item at the end of the year. To get the sales price of S1001 item, formula written in cell D2 (When copied it to remaining cells, the suitable formula to get the Sales price) is,
    (1) = C2-C2*C6   (2) = C2- C2*$C6
    (3) = C2- C2*C$6   (4) = C$2-C$2*C6

	A	B	C	D
1	Item No.	Item Name	Regular Price	Sale Price
2	S1001	Shirt	Rs: 1,250.00	1000
3	P1003	Frock	Rs: 2,500.00	
4	G1005	Jacket	Rs: 1,350.00	
5	T1004	T-Shirt	Rs: 960.00	
6	Discount			20%
7	Total			

19. The statement/s of the correct SUM function to be written in cell D7 in order to get the total Sales Price of the textile business is,

      A.   = SUM(D2,D3,D4,D5)
      B.   = SUM(D2:D5)
      C.   = SUM(D2,D3:D5)

(1) A   (2) B   (3) A, Band C   (4) Aand C

20. What would be the value when entered the formula $=2\char94 2/(5-1\char94 2)*3$ is entered in to a spreads sheet ?
(1) 4   (2) 6   (3) 3   (4) 5

Answer the questions 21 and 22 using the given part of spread sheet.

	A	B	C	D
1				
2	3		6	
3	AB		5	8
4	7			
5				9
6				

21. What would be the answer, when the function =SUM (A3:D5) is entered in cell D6?
(1) 29   (2) 38
(3) 13   (4) 22

22. What would be the value, when the function =count (A1:A5) is entered in cell A6?
(1) 6   (2) 5   (3) 3   (4) 2

23. Which of the following answer includes the <u>Chart tool</u> to create relevant smooth curve to the function, $Y = 2X^2 + 1$ in a spread sheet?

(1)   (2)   (3)   (4)

    LINE   X,Y SCATTER   PIE   COLUMN

24. Which of the following answer is relevant to Data Base System?
(1) A Foreign key must be included in a table.
(2) Only one field is enough in a table.
(3) A Primary key or a composite key must be included in a table.
(4) A Primary key or a composite key cannot be included in a table.

25. Data type entered in the field "EM2002" is,
(1) Text   (2) Numbers   (3) Boolean   (4) Date/Time

26. If a table is created to enter data of teachers in a school, the necessary fields that should be included are,

a. Identity card number   b. Name of the principal
c. Address of the principal   d. Subject taught
e. Telelephone number of the school   f. Address of the school
g. Name of the teacher

(1) a, b, c, d   (2) a,d,e,f,g   (3) a,b,c,d,e,f   (4) a,c,d,g

27. The correct statement regrading this table is,

Serial No.	Nane	Sport	Place
A1001	Nisal Nayanajith Gamage	Cricket	2
A1002	Kasun Nishantha Kudagama	Volleyball	3
A1001	Nisal Nayanajith Gamage	Swimming	1
A1002	Kasun Nishantha Kudagama	Cricket	1

(1) No Primary key   (2) Consists data consistency

(3) Consists data redundancy   (4) Composite key is not available

28. Not an advantage of data base system is,
    (1) Ablity to store more data in a less space   (2) Ablity to store less data in more space
    (3) Ablity to control data easily.   (4) Avoid data misplacing

29. What is the correct answer of output relevant to
    the part of pseudo code given out of the following?
    ?

```
Begin
    Writeln('January');
    Writeln('February');
    Writeln('March');
    Write('April');
End
```

  (1)
```
Writeln('January')
Writeln('February')
Writeln('March')
Writeln('April')
```

  (2)
```
January
February
MarchApril
```

  (3)
```
January
February
March
April
```

  (4)
```
January, February, March, April
```

30. Different classifications are introduced to identify computer languages. Some Features of classification
    are given below.
    - Time spend to write a program is less and updating is easy
    - Language are non-procedural.
    - Least cost for software development
    - A translator software is needed to translate into machine language.

    Eg:- Focus, Ideal, dbase III Plus, SQL

    Which programming languages denotes the above features?
    (1) Machine Language   (2) Assembly Language   (3) High Level   (4) Hardware Drivers

31. If X is an integer variable, how many times the following code executed?
    (1) 6 times
    (2) 5 times
    (3) 4 times
    (4) Never Ends

```
X = 10
Do While X> 5
        X = X-1
Loop
```

32. The following flow chart is used to find out whether the
    room temperature is below or above the freezing point. If
    the temperature is above 32 °C it shows 'Above Freezing'
    and if not 'Below Freezing', Select the answer that should
    be written for labels X, Y and Z.

    (1) No, Temperature < 32 ?, Yes
    (2) Yes, Temperature < 32 ?, No
    (3) Yes, Temperature <= 32 ?, No
    (4) Yes, Temperature >32 ? , No

         Grade 11 - ICT I - Southern Province
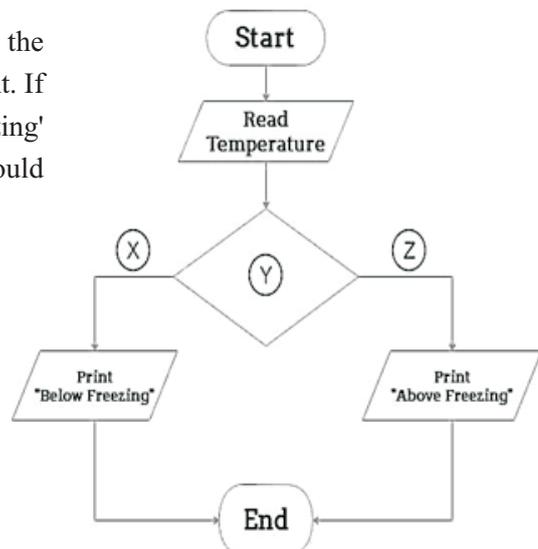
33. What is the output of the following pseudo code?

> forn = 3 to1 do
> Print n
> n = n-1
> end for

  (1) 3 1

  (2) 3 2 1

  (3) 3

  (4) Never stops.

34. What is the output of the following pseudo code?

> m=9,n=6
> m=m+1
> n=n-1
> m=m+n
> if (m>n)
> print m
> else
>   print n
> end if

  (1) 6

  (2) 5

  (3) 10

  (4) 15

35. Which of the following statement cannot be considered as a function of the step of designing the solution in an information system?

  (1) Planning of tests   (2) Using Prototyping

  (3) Identifying dependency of each sub-system   (4) Identifying software and software architecture.

36. The system development life cycle model which is developed gradually by adding one small component at a time again and again is,

  (1) Waterfall Model   (2) Iterative Incremental Model

  (3) Prototype Model   (4) None of the above.

37. Output of AND gate with 3 input is,

  (1) $X = AB$ (2) $X = ABC$ (3) $X = A + B + C$ (4) $X = AB + C$

38. If A=1 and Y =1 in the following circuit, what would be the respective inputs B and C?

  (1) B=1, C=1.

  (2) B=0, C=1.

  (3) B=1, C=0.

  (4) B=0, C=0.
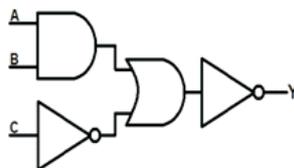
39. Out of the following statements which is / are the correct statement/s regarding online shopping?

    A. Can be order from any place

    B. A credit card can be used in payments

    C. Cannot check whether it is the exact item that was ordered

  (1) A and B only.   (2) A and C only.   (3) B and C only.   (4) All A, B and C

40. Which of the following statements are correct in relation to using Information Communication Technology in agriculture?

    A. Farmers can find out the impact of using fertilizer for plantation through web sites

    B. Farmers can use online shopping facility to sell their harvest

    C. Informing the farmers about the weather condition in different areas

  (1) A and B only   (2) B and C only   (3) A and C only   (4) All A, B and C

Department of Education - Southern Province

First Term Test - 2020

Information & Communication Technology (80) E I, II
Grade 11

Name / Index No. ....

Time - 2 hours

Information & Communication Technology - II

- **Answer Five (5) questions only, including the first question and four others.**
- **First question carries 20 marks and each of the other questions carries 10 marks.**

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01). i). At present it is a common fact that private telephone conversations and visuals of people are recorded and released to the social media without their knowledge. Write two bad effects of this, that can happened in using information and communication.

ii). The price of a book is Rs:160/= while the price of a pen is Rs:40/=. Write the total price of a pen and a book in binary.

iii). A father presents a talking electronic parrot for his son's birthday. It can be operated using two push button switches of a remote control.When both switches are on or off the parrot does not speak .When only one of the switches is on, the parrot speaks. Digital circuit relevant to the functions of the speaking parrot is given below in the diagram. Write the suitable logic gates for A,B and C.
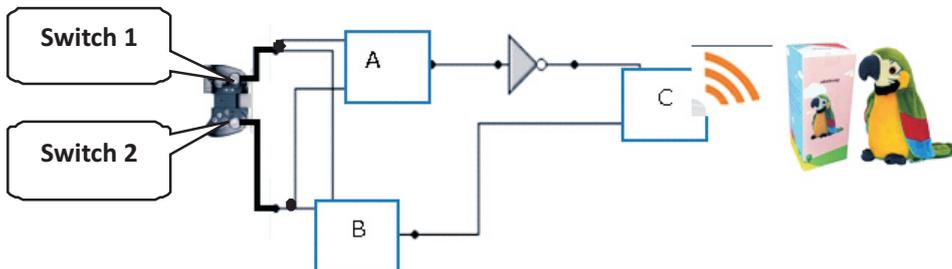
iv). The following document was prepared by using word processing software and formatted as label 1-4. Font size of the document was not changed. Match the letters of the tools which were used for formatting and given on your right side with the numbers 1-4.

```
A- Bold            ……......…
B- Superscript     ………......
C- Subscript       ………......
D- Numbering       ………….
E- Font color      ………….
F- Bullets         ……......…
```

Before Formatting

As shown in the table above (Table 3.12), four bits are used to indicate a hexadecimal number in binary form. (16 = 24)
Example
Converting number 101102 to a hexadecimal number.
First, divide the number into four-bit clusters from the right corner to the left corner.
Write hexadecimal numbers separately for each cluster.
Write these numbers in order from the left corner to the right corner and write

After Formatting

As shown in the table above (Table 3.12), four bits are used to indicate a hexadecimal number in binary form. $(16 = 2^4)$ ①

② **Example**

③ Converting number 10110_2 to a hexadecimal number.

④
- First, divide the number into four-bit clusters from the right corner to the left corner.
- Write hexadecimal numbers separately for each cluster.
- Write these numbers in order from the left corner to the right corner and write down the base.

v). The flow chart shows the input process relevant to National Student Information System (NSIS). Identify the correct statements from the below table which should be used to the places labeled as A,B, C and D. Write the number of the statement matching with each label.

Statement Number	Statement
1	Output 'Wrong'.
2	Are the user name and password valid?
3	Enter user name and the password.
4	Enter the user to the system.
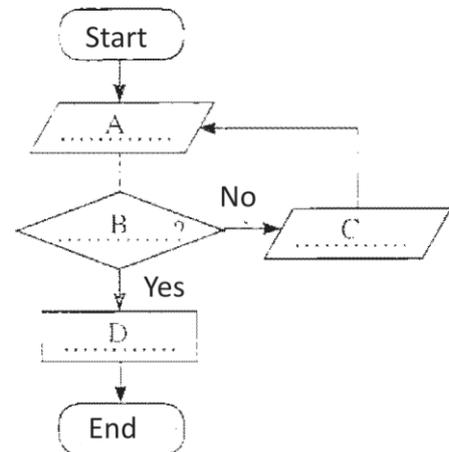
vi). In order to protect the computer from hazards and for smooth functioning of the computer a utility, software is entered to the operating system and also application software special functions fulfils Separate the software as utility and application, from the list of words given below.

Word List: Search engines, Disk defragmentation, Spreadsheet software, Disk scanning software, Word processing software, Backup software, Graphic Design software

vii).

External Devices
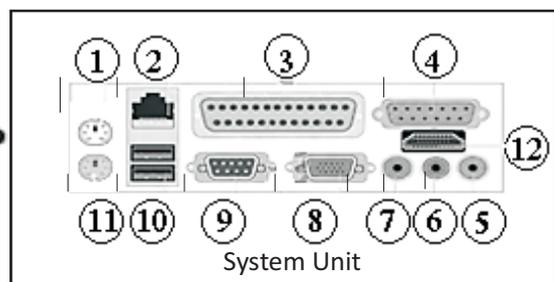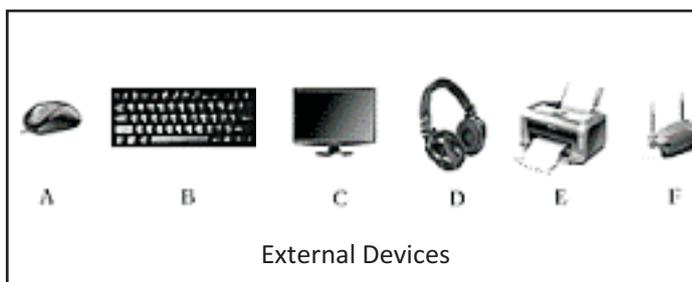
System Unit

Match the external devices with relevant ports in the system unit and write the matching number in front of letters A -F. (One device can be matched with more than one port.)

viii). The following table shows the activities done by sick people. Match and write the Field numbers against with the activities A, B, C, D.

	Field			Activity
1	Entertainment through Information Technology.	A		Keeping the patient at the home and using linked home monitoring system for checking the conditions.
2	Tele-medicine	B		A Child who has been hospitalized in an accident sits for GIT online exam
3	Education Management System	C		A patient lyingin the hospital bed pays the hospital fee through the mobile phone using his bank account.
4	E -Banking	D		Watching a missed musical show using internet.

ix). The diagram on the right hand side shows how the hardware and software are connected with the user in layers. Write down the letter corresponding to the layer of hardware and software below, in front of it.

Word Processing Software   ……………….

Keyboard   ……………….

Website   ……………….

Antivirus Software   ……………….

Operating system   ……………….
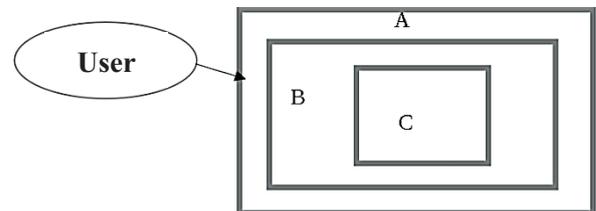
x). Department of Education of Southern province maintains a manual information system regarding the physical resources of the institution. It is planned to convert to a computerized information system from 2020. Write two advantages and two disadvantages of this.

02). The deputy principal, Mr. Siripala of Saliya Secondary school enters daily attendance of students in a spread sheet and receives the necessary details for school Management.

	A	B	C	D	E	F	G
1	Daily attendance Repot						
2	GRADE	Monday	Tuesday	Wednesday	Thursday	Friday	Weekly Average
3	GRADE 6	75	100	80	90	100	89
4	GRADE 7	60	80	68	100	75	76.6
5	GRADE 8	100	90	110	80	75	91
6	GRADE 9	70	72	80	80	78	76
7	GRADE 10	89	80	100	80	88	87.4
8	GRADE 11	50	65	67	78	90	70
9	GRADE 12	110	100	90	90	92	96.4
10	GRADE 13	40	50	60	45	50	49
	Totale Of Daily attendance	594	637	655	643	648	
12	Daily Average	132	142	146	143	144	

i). Write the formulae to be written in cell B12, to get the average attendance on Monday. Write it as " = Function(cell1:cell2)".

ii). If this formulae is copied to E 12, write the formulae to be appear in cell E12?

iii). Write the formulae using only functions COUNT and SUM to show the average attendance of students in five days in a week.

iv). ICT teacher of the school suggests to write using the function as,

"   =Function(cell1:Cell2)" . Write down that function.

v). To find out the maximum attendance of students on a Wednesday, write the function to be written in cell D13 as "= Function(cell1:cell2)"

03. Smart Techo' is a company that purchases and sells electronic items from suppliers. The relevent database is shown below.

Item table

Item_ID	Item_Name	Price	Stock
I1001	Smartphone	Rs 40 000.00	20
I1002	Laptop	Rs 110 000.00	18
I1003	PCs	Rs 65 000.00	45

Supplier table

| Sup_ID	Name	Contact_No
S201	Kamal Perera	0112112381
S202	Sachi Gamage	0714832212
S203	Ravi Roy	0771231234

Purchase table

Item_ID	Sup_ID	Date (DD/MM)	Quantity
I1001	S202	22/09	30
I1002	S201	05/10	20
I1003	S201	13/11	50

Write the answers for the following questions using the above data.

i). Mention two primary keys with the names of the tables for the above database.

ii). If 25 headphones were purchased from supplier Sachi Gamage on 31/12.

   1. What are the Tables to be updated?

   2. Write down the Records to be updated.. (Assume the required field-values)

iii). Explain the most suitable method of having data separately as in the above Tables or having data in one table given below.

Item_ID	Item_Name	Price	Supplier	Contact_No	Quantity	Stock
I1001	Smartphone	Rs 40 000.00	Kamal Perera	0112112381	30	20

04. The following diagram shows how the computers in the school lab are connected to the internet
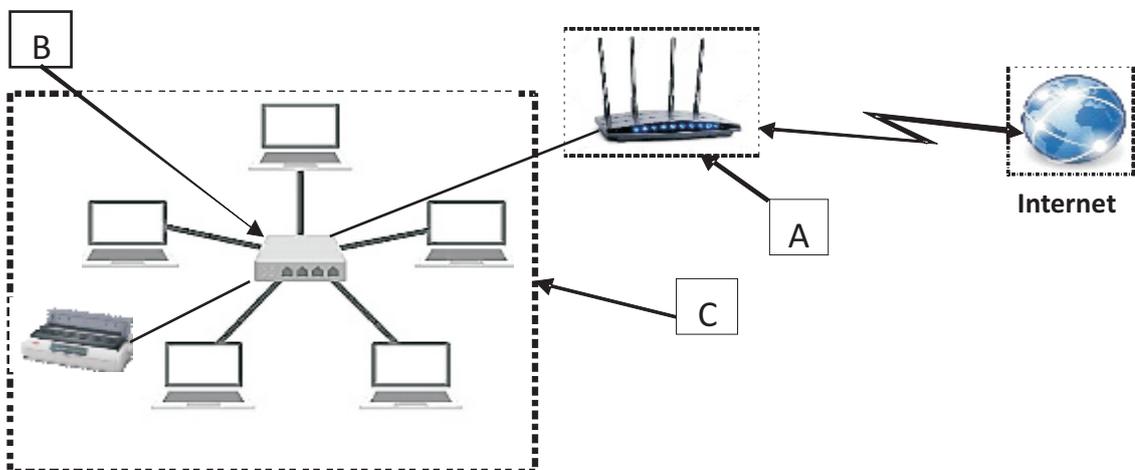
i). Write the type of network and network topology indicated as C in the computer lab.

ii). Name A and B.

iii). Write two advantages of using this type of computer network in a school computer lab.

iv). Which type of network cable is suitable to connect the desktop computer which is in the office, next to the computer lab.

v). Write a function of a firewall if it is connected to this network.

05. Imagine that you are asked to prepare a programe to calculate Body Mass Index (BMI) value. The following flow chart is prepared to output BMI value as follows:

If the BMI value is 25.0 or above it indicates "Over Weight" and if it is between 18.5-24.9 it indicates "Healthy" and if not it indicates "Under Weight"

$$BMI = \frac{weight(Kg)}{height^2(m^2)}$$

a) Complete the blanks A,B,C,D,E,F.G,H
b) Complete the pseudo code for the above flow chart.

```
Begin
    Weight = 0
    Height = 0
    Display "Enter height and weight"
    ……………………………………………………
    BMI = weight/ height²
    ……………………………………………………
    ……………………………………………………
    Elseif
    ……………………………………………………
    ……………………………………………………
    Else
    Display "Healthy"
End
```

Start

Weight = 0

Height =0   BMI =0

Input WeightHeight

$$BMI = \frac{weight(Kg)}{height^2(m^2)}$$

B

C

A

D

F

G

E

H

"Healthy"

End
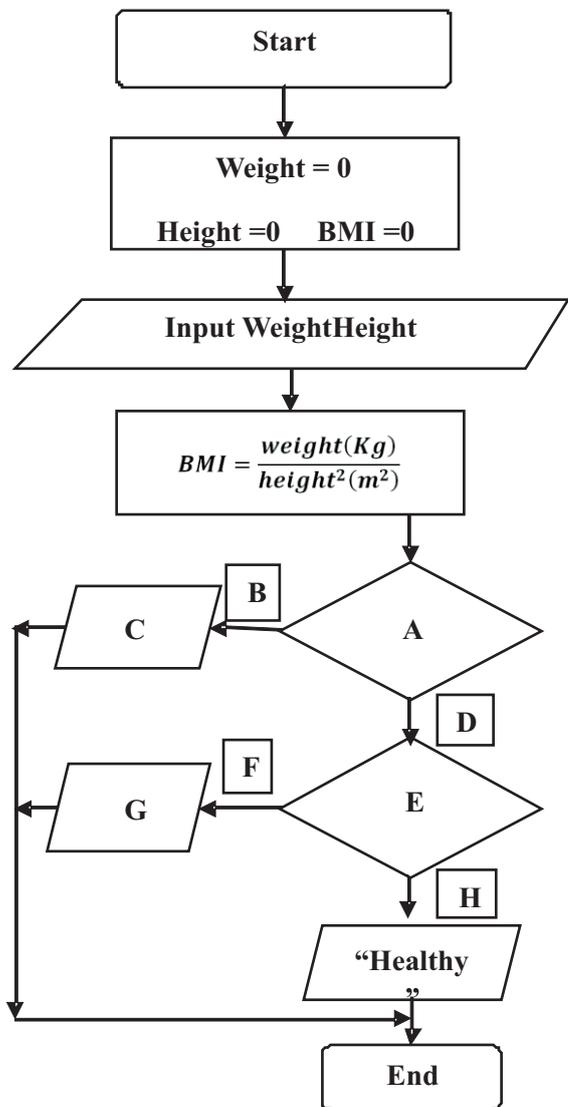
06.

i). When saving a file in a computer, it maintains a lot of relevant characteristic information. Write two of them.

ii). For methodical file storage in a computer, folder structures are used. A businessman called Saman uses his leisure time to watch movies in Sinhala, Tamil and English and listen to songs in Sinhala, English and Hindi. In addition he likes to save and watch Audio/ video clips of stage dramas.

The following shows folders and sub-folders created by Saman.

Write down folder names suitable for A to F, from the given list.

(Folder list -Sinhala,Tamil, English, Hindi, Stage dramas, Movies)
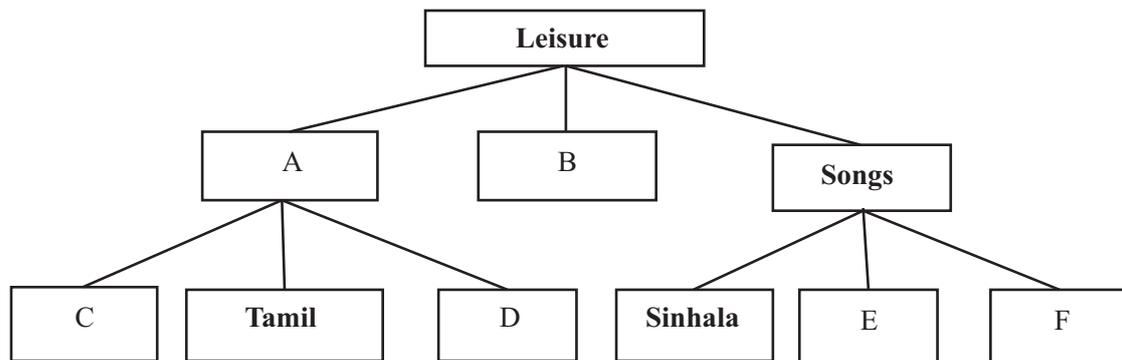
iii). A) Gamini Vidyalaya uses the manual system for lending and borrowing books of the library. Write two advantages of computerizing this manual system.

B) Write three methods used by a system analyst to computerize the library relevant to the first step "identification of requirements" of System Development Life Cycle.

07. A grade 10 student is assigned to create an electronic presentation about "Prevention of Dengue" to present at the school student council. Use the diagram to answer the questions.

a).
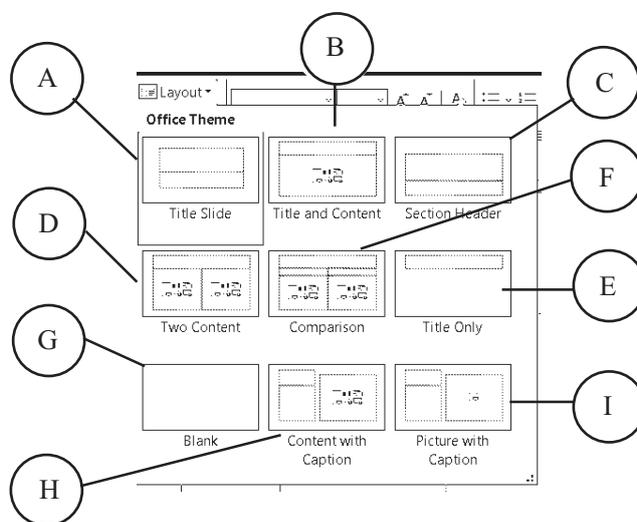
i). Which is the letter of the design view that is suitable to show the two statements 'Joint with us to prevent Dengue' and 'Grade 10-2020' in two rows of the first slide?

ii). Write the letter of relevant design view, if a description and selected photos of three places of the school are needed to be places of added for three slides from the second slide.

iii). What is the short -cut key to get fourth new slide?

Write a suitable word for the blank in question number iv) and v)

iv). At the end of the fifth slide, ---------- is inserted to go to the web site ' https://www.dengue.lk', by clicking the word 'More Details'

v). The word 'Thanks' is noted in sixth slide. ………is applied to show letters of the word one by one in the slide show mode.

b).

i). Write two fields which can be used to develop the economy in Srilanka by using applications of information and communication technology.

ii). Write two advantages for a businessman by running an online shop, for a businessman

iii). Write two favorable characteristics using of online distance education for a student.

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