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දකුණු පළාත් අධ්‍යාපන දෙපාර්තමේන්තුව / தென் மாகாணக் கல்வித் திணைக்களம்

DEPARTMENT OF EDUCATION-SOUTHERN PROVINCE

අවසාන වාර පරීක්ෂණය - 2021 (2022 මාර්තු)

Grade 10	Information and Communication Technology I	Time: 3 hours

Name / Index No: .....

Note:

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

Information and Communication Technology II

1. In photosynthesis, it uses water and carbon-di-oxide to make glucose and oxygen. Which of the following answer contains input, process and output respectively?

   1. Photosynthesis → Glucose and Oxygen → Water and Carbon-di-oxide
   2. Glucose and Oxygen → Photosynthesis → Water and Carbon-di-oxide
   3. Water and Carbon-di-oxide → Photosynthesis → Glucose and Oxygen
   4. Water and Glucose → Photosynthesis → Carbon-di-oxide and Oxygen

2. Consider the following statements about E-Banking Systems. Which of the following statement/s is/ are correct about E-Banking Systems?

   A – ability to withdraw money at anytime and anywhere
   B – ability to transfer money between different bank accounts using bank system software
   C – ability to convert cheques into cash and exchange at anytime

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

3. Which of the following answer is **incorrect** about third generation computers?

   1. Birth of an Operating System
   2. Using high level computer languages for computer programming
   3. Using keyboard and mouse to input data.
   4. Ability to transmit data and information easily due to use of fast computer networks.

4. Which of the following component of the hard disk is used to write and read data in the platters of the hard disk?

   1. Spindle
   2. Head
   3. IDE Connector
   4. Disk Drive

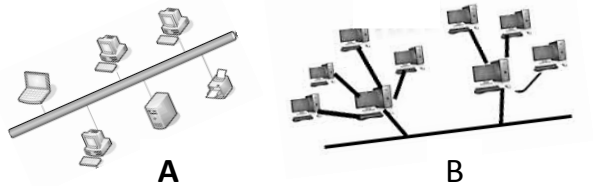
5. Consider the following statements.
   A. CD-R, DVD-RW, Blue-Ray 3D
   B. CD-R, DVD-R, Blue-Ray 3D
   C. DVD-R, DVD-RW, DVD ROM

   Which of the following answer is correct regarding the optical media device about the"capacity 650MB-900MB","ability to rewrite several times deleting data and information within the 4.7-9.4 Giga Byte" and "record 3D videos" respectively?

   1. A only 2. B only 3. C only 4. A and B only

6. Which of the following answer contains the correct statement about input and output devices?
   1. Optical Character Recognition is an input device that belongs to the scanner category and web camera is an output device that widely used.
   2. Touch screen can be used for data input as well as output, and touch pad which is used only for input, is widely used in laptop computers instead of the mouse.
   3. CRT, LCD and LED are the three types of computer screens which are the input devices used commonly.
   4. Impact printers provide higher quality outputs than non-Impact printers.

7. Which of the following statement is correct according to the given network topologies?



A B

   1. A – relatively higher cables are occupied B – widely used
   2. A – very easy design B – able to connect limited number of computers
   3. A – very complex connection B – able to control each and every network separately
   4. A – occupy less cables B – able to control each and every network separately

8. Consider the following statements related to server computer.
   A –has installed a computer network operating system in the computer
   B – Obtaining services only within a computer network is frequently done
   C – Providing and operating data and information in the computer network

   Among the above statements,

   1. A and B are true and C is false.
   2. A and C are true and B is false.
   3. A and C are false and B is true.
   4. All the above are true.

9. Shani and Madhu have 25 and 22 Lotus flowers respectively. Which of the following answer shows it respectively?
   1. 11001_2 and 25_8
   2. 31_8 and 10111_2
   3. 11001_2 and 26_8
   4. 31_8 and 25

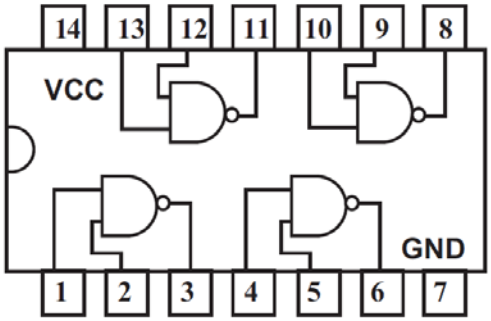
10. How many numbers would be need to represent the hexa-decimal number of the binary number, 1111101111_2?
    1. 3 2. 4 3. 12 4. 1

11. Which of the following is the weighting factor of the least significant number of 0.1780?
    1. 10^{-1} 2. 10^{0} 3. 10^{-3} 4. 10^{-2}

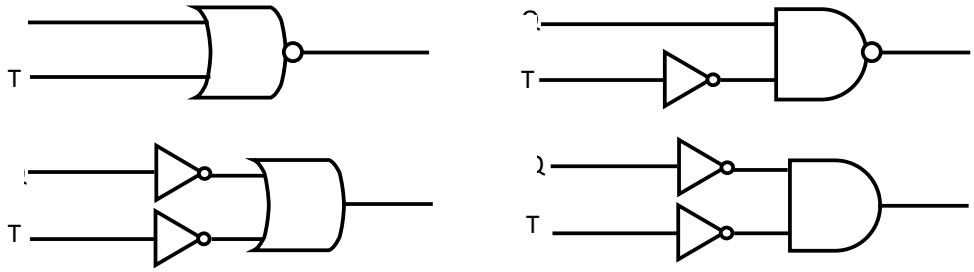
12. Which of the following is the correct ascending order of the numbers given below respectively?
    A. 63_8 C. 10110110_2
    B. 77_{10} D. $2A_{16}$
    1. A<B<C<D 2. A<D<B<C 3. D<A<B<C 4. C<B<A<D

13. The capacity of the file saved to the computer by Uvindu is 2048MB. Given capacity equals to,
    1. 2^{21}KB 2. 2^{20} Byte 3. $2x2^{11}$MB 4. 2TB

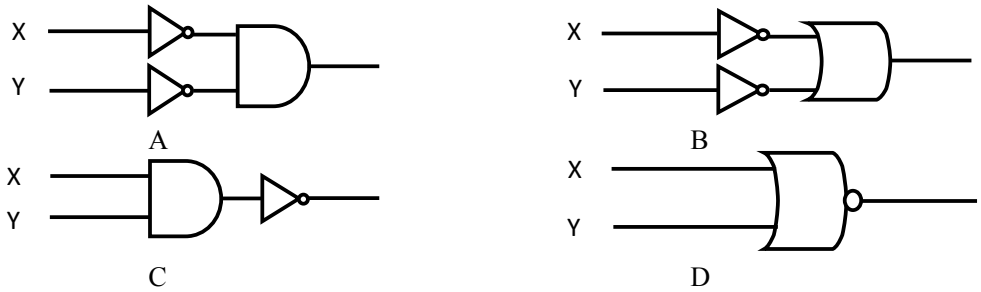
14. The following shows logic circuit included integrated circuits. Which of the followingstatement is **incorrect**?
    1. 3, 6, 8, 11 pinsare output.
    2. When all the pins 1,2 and 4,5 are 0, pins 3 and 6 are 0 and 1 respectively.
    3. When pin 8 is 1, pins 10 and 9 are 0 and 1 respectively.
    4. When pins 12 and 13 output 0 and 0 then pin 11outputs 1.



15. A security system is activated in modern motor vehicles. An electric bell rings when the door is opened without using the key and the door of the driver's side is opened. Which of the following logic gate circuit is the most suitable for practical use of open the door using the key as '0' and if not as '1', When opened the door in the driver's side as '1' if not as '0', ringing bell as '1' and if not as '0'?
    Open the door without using key - T
    Does is opened in the driver side - Q



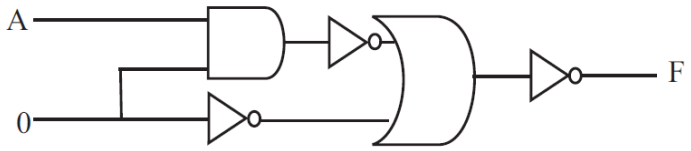
16. Which of the following logic circuits are equivalent to each other?



    1. A,D and B, C 2. B,D and A, C
    3. A,B and C, D 4. all of the above

17. Which of the following answer contains the two corresponding outputs for F when '0' and '1' are given as inputs for A in the logic circuit given below respectively?

1. 1 and 0
2. 0 and 1
3. 1 and 1
4. 0 and 0



18. X = NOT (A OR B) Y = NOT (A AND A)
Out of the above two statements, which of the following is equivalent to the logic NOT?
1. X only 2. Y only 3. X and Y 4. None of the above

19. Which of the following types of software can be used to fulfill the needs of a computer user?
1. by System software
2. by Application software
3. by backup software
4. by Operating System

20. Imagine you bought a new computer. Which of the following is the most suitable answer for installing an operating system to the computer?
1. Installing the operating system after supplying the electricity to the computer
2. Installing the operating system after defragmenting and disk partitioning
3. Installing the operating system after disk partitioning and formatting
4. Installing the operating system after disk formatting and partitioning respectively

21. Which of the following statement is **incorrect** regarding the functions of an operating system?
1. Getting instructions that need to control hardware by the application software.
2. Function of an operating system is protecting the computer system from the threats such as deleting and destroying data and information.
3. Deleting the unwanted files by the operating system under file management.
4. Device Driver programmes are installed automatically on the most of plug and play devices.

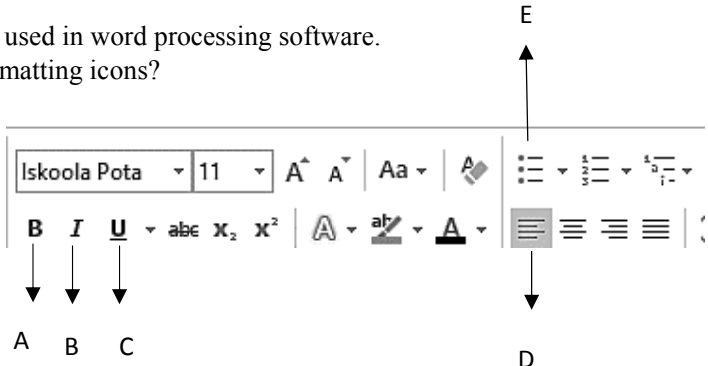
22. Which of the following is the reason for the popularity of the operating systems with Graphical User Interfaces at present?
1. User friendliness and no need to memorize the commands due to WIMP usage
2. No user friendliness and need to memorize the commands due to WIMP usage
3. Need to memorize the commands and use mouse and keyboard
4. User friendliness and need to memorize the commands due to WIMP usage

23. Which of the following statement is **incorrect** regarding the operating systems that are used for the operations of computers and computer peripheral devices at present?
1. The programs that operate complex machines are called embedded systems.
2. Mobile phones, flat computers and complex machinery needed its own operating system for themselves.
3.Need not an Operating System for functions of multitasking computers use at present.
4. Use Android and MS Windows mobile operating systems for mobile devices specially.

24. Consider the following statements given regarding the selections of word processing software.
A – CTRL + A can be usedto select a document at once.
B – A word can be selected by double clicking the mouse at once.
C – A document can be selected by clicking the mouse thrice at once.
1. A and B are true and C is false
2. A and C are true and B is false
3. A is true and B and C are false
4. All A, B, and C are true

25. Following are some of the icons that are used in word processing software.
Which answer contains only the font formatting icons?

1. A, B, C and D
2. A, B, and C
3. A, B, C and E
4. All A, B, C, D and E



26. Consider the following statements regarding inserting table when creating a document in word processing software.

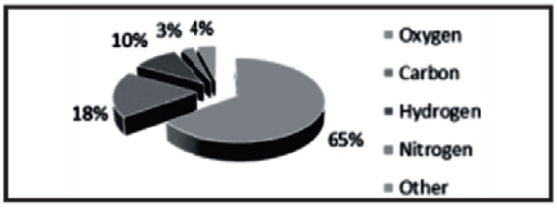
A – Columns and rows can be added to the table and unwanted rows and column scan not be deleted.
B – One cell can be created by merging a range of cells in the table.
C – The orientation of a text inside a cell can be changed.

1. Only A is correct
2. Only A and C are correct
3. Only A and B are correct
4. Only B and C are correct

27. The …….A…….. key combination can move the cursor to the beginning of the document and the …….B…… key combination can move the cursor to the end of the document in a word processing software. Which of the following answer contains the correct short cut keys respectively?

1. Ctrl + N and Ctrl + A
2. Ctrl + C and Ctrl + V
3. Ctrl + Home and Ctrl + Insert
4. Ctrl + Home and Ctrl + End

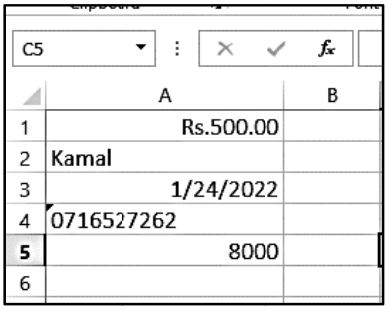
28. The following graph shows the percentage of the weight of major elements of human body. Which of the following answer contains only the software that can be used to get this graph?



1. Word Processing Software, Electronic Spreadsheet Software, Database Software
2. Electronic Presentation Software, Database Software, Word Processing Software
3. Word Processing Software, Electronic Presentation Software, Electronic Spreadsheet Software
4. Electronic Spreadsheet Software, Electronic Presentation Software, Database Software

29. Which of the following answer contains the correct numberthat isdisplayed by inserting the function =count(A1:A5) to cell A6 in the segment of the given spreadsheet?

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



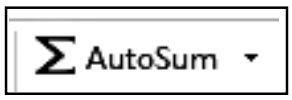
30. Sama inserted the following equation into a cell in an electronic spreadsheet to receive get the summation of two rectangle. Which of the following shows the correct answer?

1. 56
2. 45
3. 28
4. 80

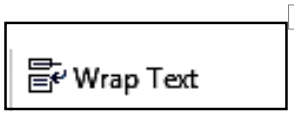
=(1/2*8*4)+(1/2*10*8)

31. Which of the following answer shows the correct tool that can be used to change the content of F1 into F2?

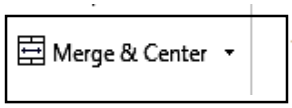
(1)



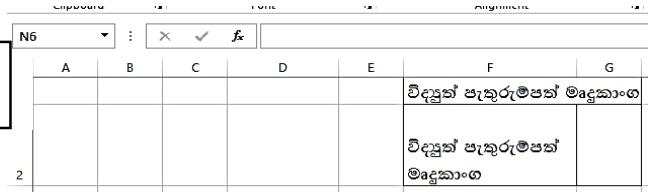
(2)



(3)



(4)



32. Consider the following statements regarding the C3:F4 cell range in an electronic spreadsheet.

A – It gives a rectangular box.
B – This cell range can be shown as C3, D3,E3,F3,C4,D4,E4,F4.
C – There are 8 cells in the cell range.

Which of the following statement is correct?

1. Only A
2. Only A and C
3. Only B and C
4. All A,B and C

33. Which of the following facilitates the inclution of something to be known by the presentation creator about the content of an electronic presentation?

1. Task Pane
2. Status Bar
3. Note Pane
4. Reading view

34. Consider the following statements regarding the functions that can be performed during an automatic slide transition used for a presentation.

A. Speed and sound can be edited.
B. Letters of the content can be edited.
C. The type of transition can be edited.

Which of the following answer contains only the correct statements?

1. A and B
2. A and C
3. B and C
4. All A, B and C

35. Binuri created a presentation using electronic presentation software. Which of the following shows the details of all the number of slides, the number of the selected slide and the language using by then?

1. Title Bar
2. Task Bar
3. Quick Access Tool Bar
4. Status Bar

36. Following are some statements about the characteristics of Database.Which of the following is the correct statement?

1. The same data stored in several tables called data redundancy. Database must always be consistent of data redundancy.
2. Data consistency is lost by minimizing data redundancy.
3. Data consistency can be maintained by minimizing data redundancy.
4. Data must be encrypted to run a database in a computer.

- **Questions 37 to 39 are based on the following database section.**

Student_table

Admission_No	Name	Class	Date_Of_Birth
12432	Fahis Ahamad	5A	2011/12/20
12433	Sarojan Thambaiya	5B	2011/05/30
12434	Aruni Fernando	5A	2012/01/20
12435	Nuwanthi Ranathunga	5C	2011/03/05

Result_table

Index_No	Result	Admission_No
2304356	165	12432
2304363	179	12433
2304520	145	12434
2304500	180	12435

37. Which field is the most suitable for the primary key in Student table?
    1. Admission_No 2. Class 3. Name 4.Date_of_Birth

38. Which of the following is an example for a foreign key in the given database?
    1. Admission_No in Student_Table 2. Index_No in Result_Table
    3. Date_Of_Birth in Student_Table 4. Admission_No in Result_Table

39. The number of fields and records of the result table are respectively,
    1. 3 and 5 2. 5 and 3 3. 3 and 4 4. 4 and 3

40. Which of the following statement/ statements is/are correct?
    A – When creating a database using database management system, it should be saved at first.
    B – The table should be planned using Design View before inserting data to the tables of database.
    C – A primary key field should be specified to maintain the unique of the records.
    1. A and B 2. B and C 3. A and C 4. All A, B and C

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අවසාන වාර පරීක්ෂණය - 2021 (2022 මාර්තු)

Grade 10	Information and Communication Technology I,II	Time: 3 hours

Name / Index No: .....

Note:

* *Answer the **first question** and **four** other questions.*
* *First question carries **20** marks and each of the other questions carries **10** marks.*

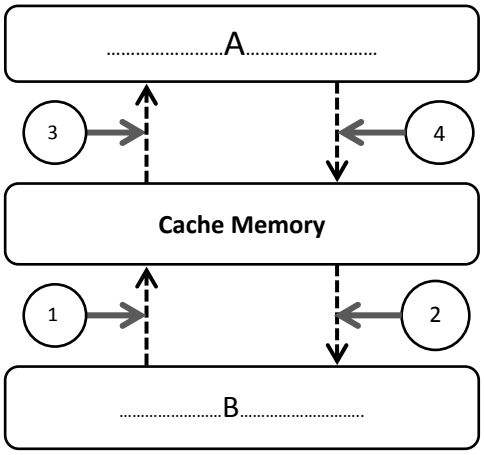
Information and Communication Technology II

1.

(i). Following are the services that are provided by e-Government. Write down to which party each of these services are provided. It is sufficient to write the label and the name of the party related to the service.

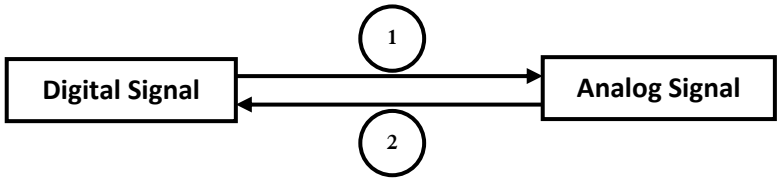
A - Facility of Bill payment service
B - Ability to obtain Sri Lanka Customs Details
C - Circulars and gazette details
D - Obtaining information of Business and investments

(ii). Following is a diagram that describes the function of the cache memory.Write down the appropriate terms for labels A and B in the diagram.



(iii). Select the suitable words to complete the diagram from the list of terms and write down with the label number to describe the function done by the computer modem.

List of terms:{Modulation, Demodulation, Sequence access, Random access}



(iv). Select and write down the appropriate data transmission method for each of the cases from the list of terms given.

(a). Students who are in grade 10 and studying Information and Communication Technology as a subject, watch a video relevant to the subject using internet at the computer lab.

(b). A grade 11 student is listening to a lesson related to Information and Communication Technology broadcast by Ruhunu Guru Gedara radio programme.

List of terms: {Full-duplex, Half-duplex, Simplex}

(v).

(a). Convert the number 345_8 to a hexa-decimal number.

(b). Write down the Most Significant Digit (MSD) and the Least Significant Digit (LSD) of number 0.289.

(vi). Arrange and re-write the following storage devices in the order of increasing the storage capacity.
RAM, Hard disk, Cache memory, DVD, Flash drive, Magnetic tape

(vii). Write down the appropriate values for P, Q,R and S of the following truth table that is drown for the Boolean expression, F = (X.X) + □.

X	Y	F
1	1	**P**
1	0	**Q**
0	1	**R**
0	0	**S**

(viii). Following table contains some types of operating systems in column A and some examples for the operating systemsin column B.Select the matching letter for the number in column A from column B and write down as number → letter.

A	B
1. Single user	a) Mac OS
2. Multi user	b) Linux
3. Multi-tasking	c) DOS
4. Real time	d) ATM

(ix). Suppose that you are going to buy a computer as a student that follows an Information and Communication Technology as a subjectat school.

a. Suggest two essential application software that should be installed to the daily computer activities and educational work.

b. Write down two programmes that can be used to maintain the function ingof this computer and to protect the computer form various threats.

(x). Following is a segment of a spreadsheet. Write down answers for the given questions based on it.

	A	B	C
1	12	8	= (4^2)+3*4/6-(-3)
2	5	0	
3			

a. What is the value gained by the formula shown in cell C2?(Indicate the steps)
b. What is value displayed when =Average(A1,B1) is used?

2. Following are some of the media that are used fordata transmission.

a	b	c	d

(i). Recognize the above diagrams separately and write down the name with the corresponding letter.
(ii). Write down the correct answer to the description given below using the diagrams above.

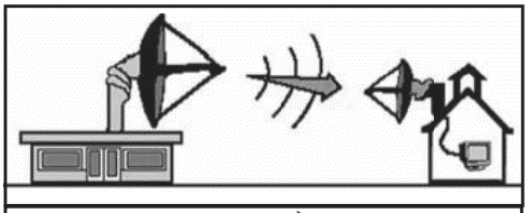
1. The outer poleconsists of a pair of cables that centralizedis in the form of a copper wire mesh. .....

2. This is a cheap data transmission media that used in buildings with electromagnetic noises. .....

3. It is the fastest media of data transmission. .....

4. It is one of the most cost-effective media of data transmission and it does not use to transmite data to a long distance. .....

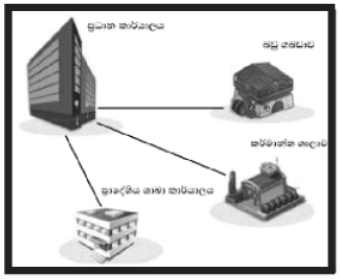
(iii). Following is a picture relevant to microwave data transmission.



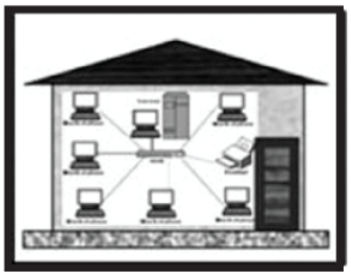
Write down two special features that can be seen in micro wave data transmission.

(iv). Following three are computer network type diagrams.
Recognize the given diagrams, select and write down the name from the list of terms given.

A



B



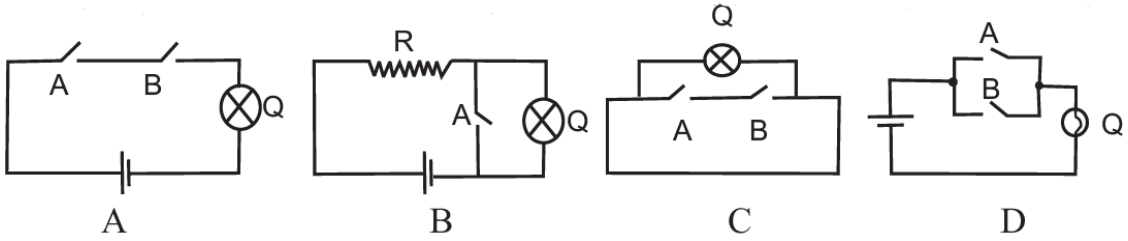
C

List of terms: {Local Area Network(LAN), Metropolitan Area Network(MAN), Wide Areanetwork(WAN)}

(v). Seethawaka MahaVidhyalaya has ten computers in the computer lab and the principal is planning to network the computers. Write down one advantage and one disadvantage that principal receives from computer networking.

3.

(a). Following are the simple electric circuits drawn by a teacher to explain each of the logic gates. Answer the following questions accordingly.



(i). Write down the label of the diagram and the relevant logic gate which is used to describe above electric circuits.

(ii). Which of the above circuit is used to describe a combinational logic gate?

(b). Following is a symbol found in an elevator. Functioning of the elevator is done as follows.

The elevator has two doors with it. The elevator works when the whole weight of the elevator is less than 1500 kilogram and the both inner and the outer doors are closed. An incomplete logic gate circuit drawn by a student according to the incident in given below.

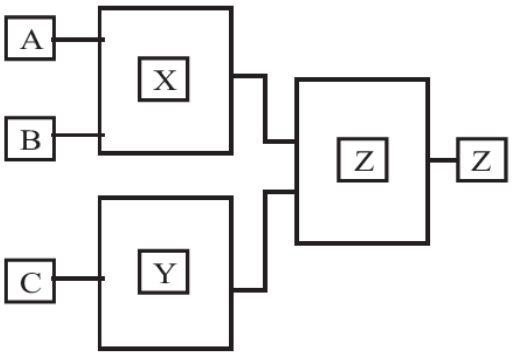
A. Inner door sensor (closed = 1 opened = 0)

B. Outer door sensor (closed = 1 opened = 0)

C. Weight Sensor

(Greater than 1500Kg = 1 Less than 1500Kg = 1)

$$\text{Z Output} = \begin{cases} 1 - \text{Elevator isactivated} \\ 0 - \text{Elevator is not activated} \end{cases}$$



(i). What could be the logic gates ofX,Y and Z in above circuit? Write the name of gate with the corresponding label name.

(ii). Draw a truth table for the above circuit.

(c).

(i). If 74 is the decimal ASCII value of letter J, then create the ASCII code for the word **NO.**

(ii). Find the binary value and the hexa-decimal value of number 632_8. (Write down with the steps.)

4.

(i). Describe the difference between multi-user operating system and multi-tasking operating system.

(ii). Write down the management tasks of the operating system that are performed on the computer for the events given below.

(a). Allocating memory for the process by avoiding any issues

(b). Allocating the input and output units related to the functions performed by Central Processing Unit

(c). Arranging the folders in order and deleting unnecessary folders

(d). Facilitating common use of hardware and software as wired or wireless

(iii). Name one of a Command Line Interface operating system and write one characteristic of it.

(iv). A utility programme that is used in operating systems can be called as backup software. What is the purpose of backing up data and information in an institute?

(v). Following are someof the statements of disk partitioning, formatting and defragmenting that are focusedin the study of operating systems. Write them down as true and false separately using labels.

1. When disk partitioning, it does not destroy the data and information included into a hard disk but when disk formatting, it destroys the data and information.
2. It has more probability to fragment in Windows operating systems than Linux operating systems when storing data and information.
3. In Windows environment identifies one part of a hard disk as a driver and the Linux environment identifies a part of hard disk as a directory.

5. The following segment of electronic spreadsheet displays is the 10 countries Olympic medal chart for the years 2016 and 2021 using the countries.

K19

	A	B	C	D	E	F	G	H	I	J
1		2021				2016				
2	Country	Gold	Silver	Bronze	Total	Gold	Silver	Bronze	Total	
3	United state	39	41	33	113	46	37	38	121	
4	China	38	32	18	88	26	18	26	70	
5	Japan	27	14	17	58	12	8	21	41	
6	Great britain	22	21	22	65	27	23	17	67	
7	ROC	20	28	23	71	19	18	19	56	
8	Australia	17	7	22	46	8	11	10	29	
9	Nethenland	10	12	14	36	8	7	4	19	
10	France	10	12	11	33	10	18	14	42	
11	Germaany	10	12	16	38	17	10	15	42	
12	Italy	10	10	20	40	8	12	8	28	
13	Canada	7	6	8	21	4	3	13	20	
14										

Use the above spreadsheet and answer the questions given below.

(i). Write down the relevant formula for getting the total number of medals won by United State in the year 2021 to cell E3, using only cell addresses.

(ii).

(a). Write down the formula for getting the difference between the total number of medals won by United State in 2016 and 2021 to cell J3.

(difference = 2021Total – 2016Total)

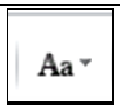
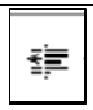
(b). Write down the formula using function *=Function(Cell1,Cell2)* for getting the total number of silver medals won by Australia in the years 2021 and 2016.

(iii). Write down the formula to be used in cell B14 to explore the maximum number of gold medals won in the year 2021.

(iv). If copied the formula written in question number 3 above, then write the formula appears in cell F14 for 2016.

(v). Write down the formula using *=Function(Cell1,Cell2)* for getting the number of all the countries who won bronze medals in the year 2021 to the cell D15.

6. Consider the following tools used in word processing software.

											
1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**

(i). When creating a word processing document, write down the tool/tools number that can be used for the following purposes with the corresponding question number.

(a). To add page numbers
(b). To insert hyperlink
(c). To insert a shape
(d). To add mathematical equations and formulas
(e). To add a numbered list
(f). To change simple letters into capital letters
(g). To set the line spacing in the document
(h). To enlarge the first letter of a word(Drop Cap)
(i). To insert a text box
(j). To separate a page content into two columns

(ii). Write down whether the following statements regarding presentation software are true or false.

i. Inserting animations makes the presentation live as it moves from slide to slide.
ii. Inserting transition styles to the objects of a slide makes the presentation live.
iii. The running slide show stops when the ESC button is clicked.

iv. When creating a presentation, a new slide can be gained by CTRL+ M and a new presentation by CTRL+N.

(iii). Consider the following statements. Select and write the words from the given list of terms that match with those statements.

(a). The order of slides can be easily changed according to the user needs.

(b). A slide can be displayed as full screen and its contents can be easily read.

(c). This view facilitates to create a presentation.

(d). A selected slide can be seen in full screen.

List of terms: {Slide show, Normal view, Reading view, Slide sorter view}

(iv). Write down two characteristics that should be included in a quality presentation.

7. Subhasetha is a book shop. A computerized database is used to keep details ofbook purchases such as novels and short stories purchased from various institutes. The following are some of tables excerpt from relational database used by the institute.

Book_Table

Book_ID	**Book_name**	**Author_name**	**Publisher_ID**	**Availability**
B001	Madolduwa	Martin Wickramasinghe	P007	Yes
B003	Senkottan	Mahinda Prasadh	P009	Yes
B005	Poliyana	Ganga Niroshani	P010	Yes

Publisher_Table

Publisher_ID	**Publisher_name**
P007	Gunasena
P009	KathruPrakashana
P010	L.C.Page

Purchase_table

Book_ID	**Publisher_ID**	**Sup_date**	**count**	**Unit_prize**
B001	P007	20-12-2021	50	Rs.300.00
B003	P009	25-12-2021	14	Rs.320.00
B005	P010	10-01-2022	23	Rs.250.00

(i). Write down two primary key fields in this database with the corresponding table name.

(ii). Write down the foreign key fieldin this database with the correspondingtable name.

(iii). Write down the relevant data types as field →data type, for the fields given below.

Book_ID Count Availability Unit_price

(iv). If all the books in the bookstore,Senkottan and Madolduwaare sold out due to the sudden order for a price giving ceremony, then

a) Write the updating table/tables

b) Write down the new records relevant to the updates.

(v). If 25 books of book Bumuthurunu written by Sumithra Rahubaddha were received by the bookstore on 18/01/2022, then

a) Write down the table/tables which should be updated.

b) Write down the new records relevant to updates.

Southern Province Education Department

Grade 10 – Third Term Test - 2021

Information & Communication Technology I, II
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80	S	I, II

Three hours
පැය

Answers.(English Medium)

Part 1

Q No.	Answer	Q No.	Answer	Q No.	Answer	Q No.	Answer
1)	3	11)	3	21)	1	31)	2
2)	1	12)	3	22)	1	32)	4
3)	4	13)	1	23)	3	33)	3
4)	2	14)	2	24)	1	34)	2
5)	1	15)	2	25)	2	35)	4
6)	2	16)	1	26)	4	36)	3
7)	4	17)	4	27)	4	37)	1
8)	2	18)	3	28)	3	38)	4
9)	3	19)	2	29)	3	39)	3
10)	1	20)	3	30)	1	40)	1

Part 2

i. A - for citizen, B - for other governments, C for Employees, D-for Business (0.5x4 = 2)

ii. A Central processing Unit / Random Access Memory
B Random Access Memory / Central processing Unit (1 x 2= 2)

iii. 1 Modulation
2 Demodulation (1 x 2= 2)

iv. a – simplex mode
b – simplex mode (1 x 2= 2)

v. a. 345
1110/0101
$E5_{16}$ (1 x 2 = 2)
b. MSD – 2 LSD - 9

vi. cache memory, DVD, RAM, Flash Drive, Hard disk, magnetic tape (2)

vii. P. 1 Q. 1 R. 0 S. 1 (0.5 x 4 = 2)

viii. 1- c 2 -b 3- a 4- d (0.5 x 4 = 2)

ix. a- word processing software, Data base, electronic presentation, electronic spread sheets etc.. (0.5 x 2 = 1)
b- Anti-virus software backup software, Screen server etc.. (0.5 x 2 = 1)

x. a- = (4^2) +3*4/6-(-3)
= 16 +3 *4/6+3
= 16+ 12/6+3
= 16 + 2 +3
= 21 (0.5 x 4 = 1)

b- 10 (1)

02) I a – Fiber optics
b- UTP
c- STP
d – Coaxial cable (0.5x 4=2)

ii 1 – d
2 – C
3 – a
4 – b (0.5 x 4 =2)

iii The two data transmission centers should be appeared to each other.
It is a linear data transmission (1x2=2)

iv A – MAN B – LAN C – WAN (give 0.5 marks for one correct answer, give 1 mark for two correct answers, if all are correct then give 2 marks)

v advantages - Easy exchange of data and information
Centralize software control (for any appropriate answer)
Disadvantages - Computer errors
Effects of virus (for any appropriate answer) (1x2 =2)

03) a I A – AND gate B – NOT gate C – NAND gate D – OR gate (0.5x4 = 2)
ii NAND gate / C (1)
b i X – AND gate Y – NOT gate Z- AND gate (0.5x3=1.5)

ii

A	B	C	A.B	C’	(A.B).C’
0	0	0	0	1	0
0	0	1	0	0	0
0	1	0	0	1	0
0	1	1	0	0	0
1	0	0	0	1	0
1	0	1	0	0	0
1	1	0	1	1	1
1	1	1	1	0	0

(2.5)

c I J – 74 N – 78 O – 79
10011101001111 (1)

ii 632
110011010_2

$19A_{16}$ (1x2 = 2)

04) I Multi- user computers are the operating systems that facilitate many people to connect.
Multi-tasking computers are the operating systems that able to do multiple tasks at one time. (any other appropriate answer) (2)

ii I – Process Management
ii – Device Management
iii – Memory Management
iv – Network Management (0.5x4=2)

iii MS DOS (1)
Commands should be remembered, A prompt is required, the correct syntax has to be used (any other appropriate answer) (1)

iv For the protection of data and information (2)

v 1 - false 2 - 3 – true (1x2=2)

05) I =B3+C3+D3 (2)

ii (a) =I3-E3 (1)

(b) = SUM(C8,G8) (1)

iii =MAX (B3:B13) (2)

iv =MAX (F3:F13) (2)

v = COUNT (D3:D13) (2)

06)i a - 3 I - 8
b – 7 j - 2
c - 1
d - 12
e - 11
f - 9
g - 4
h – 6 0.5 x10=05

ii I - false
ii - false
iii - true
iv - true 0.5x04=02

iii a – slide sorter view
b – reading view
c – normal view
d – slide show 0.4x4=02

iv. Number of lines should be limited to 6-9
Font size should be 32 points or more
Spelling and language applications must be correct
When inserting images, graphics or charts, only two should be inserted into one slide.
Should be careful when applying colors
The aim must be targeted

0.5x2=01

07) I Book_Table - Book_ID

Publisher_Table - Publisher_ID (2)

ii Purchase_table - Book_ID / Purchase_table - Publisher_ID (1)

iii Book_ID - Text

Count - Number (integer)

Availability - Text

Unit_price – Currency (1)

iv Book_Table (1)

B001	Madolduwa	Martin Wickramasinghe	P007	No
B003	Senkottan	Mahinda Prasadh	P009	No

(1)

v Book_Table

Publisher_Table

Purchase_table (1)

Book_Table

B006	Bumuthurunu	Sumithra Rahubaddha	P011	Yes

Publisher_Table

P011	Sumithra Rahubaddha

Purchase_table

B006	P011	18/01/2022	25	

(3)

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