



**T/T/ST. Mary's College (National School)**

**Information Communication & Technology**

**Third Term -2019**

**Grade - 10**

**Time – 3 Hours**

**PART I**

Answer the all questions

1. Which of the following is incorrect?
  - 1) The first generation computers were based on vacuum tubes.
  - 2) UNIVAC belongs to second generation of computers.
  - 3) Ada Lovelace is the first programmer of the world.
  - 4) Joseph Jacquard introduced the punch card system
2. Which piece of computer hardware is known as the “brain” of the computer and is responsible for processing instructions?
  - 1) RAM
  - 2) ROM
  - 3) Motherboard
  - 4) CPU
3. What is the largest decimal number that can be represented using a 5 bit binary number?
  - 1) 32
  - 2) 64
  - 3) 16
  - 4) 8
4. The minimum number of bits required to store the octal number 173 is
  - 1) 12
  - 2) 5
  - 3) 9
  - 4) 7
5. A number is represented as  $101_y$ . If  $y$  is the base of the number system, which of the following number it could belong to?
  - 1) Hexadecimal and Binary only.
  - 2) Octal and Binary only
  - 3) Either Binary, Octal or Hexadecimal
  - 4) Octal and Hexadecimal only.
6. Which of the following is incorrect if  $A = 1$  and  $B = \bar{A}$  in the given logic circuit?

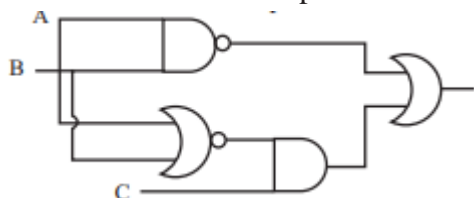


- 1)  $C = 0$
  - 2)  $A = 1$
  - 3)  $B = 0$
  - 4)  $B = 1$
7. Which of the following statement is **true** about data and information?
  - 1) Processed data is always correct.
  - 2) The accuracy of information depends on the input data.
  - 3) There should be a lot of data to make a decision.
  - 4) Processed information is reliable.

8. A canteen offers three types of fruit juices for students which are called as S, T and U. if a student selects S for a meal he or she cannot select it throughout the day. Which of the following represents the selection of a fruit juice by a student?

- 1) S OR (T OR U).
- 2) S AND (T AND U)
- 3) S AND (T OR U)
- 4) S OR (T AND U)

9. What is the boolean expression related to following logic gate circuits ?



- 1)  $[C + (\overline{A} \cdot B)] \cdot (\overline{A} + \overline{B})$
- 2)  $[C \cdot (\overline{A} + \overline{B})] + (\overline{A} \cdot B)$
- 3)  $[C \cdot (\overline{A} \cdot \overline{B})] \cdot (\overline{A} + \overline{B})$
- 4)  $[C + (\overline{A} \cdot \overline{B})] + (\overline{A} \cdot B)$

10. Consider the following soft wares.

A - Dos

B - Windows xp

C - Linux

D – Explora

What are the operating systems of them ?

- 1) Only A, B and C
- 2) Only A, and D
- 3) Only A, and B
- 4) Only A, B, C and D

11. Which is not a characteristic of good information.

- 1) Relevance , fulfillment , accurate
- 2) Fulfillment , stored in Computer ,Accurate
- 3) Timeliness , Relevance , Accurate
- 4) Lowcost , Accurate. Fulfillment

12. Lahiru, Thisun, Sanjeewa, and Kasun are members of a family. Lahiru's age  $31_8$  , Thisun's age  $28_{16}$ , Sanjeewa's age  $100011_2$  and Kasun's age is 33. Who is the eldest among them?

- 1) Lahiru
- 2) Thisun
- 3) Sanjeewa
- 4) Kasun

13. What are the types of keys in, Shift key, Alt key, F1 key in the key board?

- 1) control key / special key / function key
- 2) function key / control key / special key
- 3) special key / control key / function key
- 4) special key / control key / numeric key

14. Select the operation represented by the following truth table:

Input 1	Input 2	Output
0	0	0
1	1	1
0	1	0
1	0	0

- 1) AND
- 2) OR
- 3) NOT
- 4) NAND

15. Which of the following icon is used in a word processing software to grow font?

1)

2)

3)

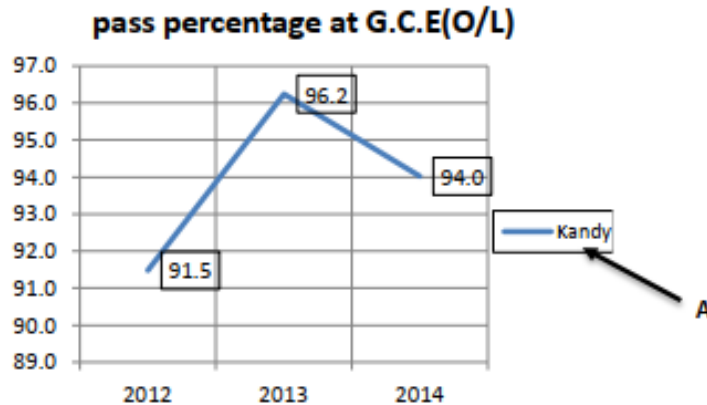
4)

16. Consider the following statement and identify the feature applied to 'th' in it

My birthday is 25<sup>th</sup> of October 2002.

- 1) Superscript                      2) Subscript                      3) Strikethrough                      4) Hidden

The below chart is prepared using a spreadsheet software. it displays the pass percentage at G.C.E(O/L) examination in a certain subject from 2012 to 2014.



17. A in chart is called as

- 1) Label                      2) Title                      3) Legend                      4) Axis

18. Figures 91.5, 96.2 and 94.0 in chart are called as

- 1) Series                      2) Point                      3) Data label                      4) Grid

19. Which is not a facility of word processing soft wares?

- 1) Create animation                      2) Insert pictures to document  
3) Insert a table to document                      4) Put a password to save the document

20. In Word processing software, 'ctrl + A' and 'ctrl l+ v' shortcut keys are used to,

- 1) To Open & go to.                      2) To select the whole document and paste.  
3) To Find & Help.                      4) To Find & Replace.

21. Select suitable font effect which use for the word ~~Communication~~.

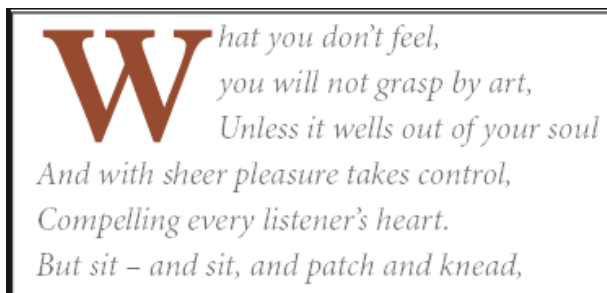
- 1) Outline                      2) Emboss                      3) Double strike through                      4) Strike through `

22. What is the indentation used in following paragraph?

Video provides a powerful way to help you prove your point. When you click Online Video, you can paste in the embed code for the video you want to add. You can also type a keyword to search online for the video that best fits your document. To make your document look professionally produced, Word provides header, footer, cover page, and text box designs that com

- 1) Left Indentation                      2) Right Indentation  
3) First line indents                      4) Hanging indent

23. Select the effect which is used in the word “What” letter “W” of the given document.



- 1) Font size
- 2) Column
- 3) Word Art
- 4) Drop Cap

• Questions from 24 to 26 are based on the following spreadsheet fragment.

	A	B	C	D
1	Name	Sub 1	Sub 2	
2	Dasun	23	65	
3	Anuk	75	92	
4	Tharu	ab	86	
5	Meena	60	56	
6				

24. Select the incorrect formula which display the incorrect average marks of Sub1.

- 1) =B2 +B3+B4+B5/3
- 2) =(B2+B3+B4+B5)/3
- 3) =SUM(B2:B5)/3
- 4) =AVERAGE(B2:B5)

25. Which is the correct functions to find maximum and minimum values respectively the Sub

- 1) =MIN(C2:C5) and =MAX(C2:C5)
- 2) =Sum(C2:C5) and =AVG(C2:C5)
- 3) =Maximum(C2:C5) and =Minimum(C2:C5)
- 4) =Max(C2:C5) and =Count(C2:C5)

26. When the formula =COUNT(A1:C5) included in B6 cell, what should be the output value.

- 1) 9
- 2) 7
- 3) 15
- 4) 14

27. Which of the following key combination is used to move to the extreme end of right hand cell of the given spread sheet segment?

- 1) Alt + End
- 2) End
- 3) Ctrl + End
- 4) Shift + End

28. Which of the following value is displayed, if the formula =2\*3+5^2 is entered in a cell of spread sheet?

- 1) 16
- 2) 31
- 3) 20
- 4) 21

29. Which of the following are examples for ‘Spread sheet’?

- A – Photoshop
- B – Excel
- C – Numbers
- D – Openoffice Calc

- 1) A and B only
- 2) A,B and C only
- 3) B and C only
- 4) B,C and D only

30. When data entered into a cell in spreadsheet, that data was right-aligned. What could be that data type?

- 1) Values
- 2) Labels
- 3) Special characters
- 4) All of the above

31. Which of the following is / are advantage(s) of a Presentation Software,  
 A – Include videos for visual frames  
 B – Ability to create a hyperlink from a slide to web site  
 C – Capability of printing the Electronic Presentation  
 1) A and B only                      2) B and C                      3) A and C only                      4) All of the above
32. Select the view method to see all the slides at same screen.  
 1) Normal View                                      2) Slide Sorter  
 3) Reading View                                      4) Slide Show View
33. Which of the following key combination is used to insert a new slide to a presentation?.  
 1) Ctrl + M                      2) Ctrl+ N                      3) Alt + M                      4) Alt + N
34. Slide Design use to creating Power Point presentation because,  
 A - We can reduce the time  
 B - There is a color scheme for suitable slide show  
 C - There are action buttons to slide show  
 What in the truth statement?  
 1) Only A and B                      2) Only B and C                      3) Only A and C                      4) Only A B and C
35. In Microsoft Power point following icon represent,



- 1) Slide Design  
 2) Slide Sorter  
 3) Slide Show  
 4) Normal Slide

The following data base table in an OPD of a hospital that stores data of registered patients, Doctors and channel information. Consider tables to answer question 36 – 40.

**Patient Table**

Patient_ID	P_Name	Address	Phone
P001	Kasuni	Nugegoda	0112547874
P002	Vishwa	Rajagiriya	0115203647
P003	Thimali	Moratuwa	0112114736
P004	Priya	Kottawa	0114885562

**Doctor Table**

Doctor_ID	Doctor_Name	Phone_No	Speciality
D001	Fernando	0117422547	Arthritis
D002	Amal	0113669851	Diabetes
D003	Pathirana	0112003585	Cardiologist
D004	Anuradha	0114586230	Dentist

**Channel Table**

Patient_ID	Doctor_ID	Add_Date	Is_Paid
P002	D003	2019/08/23	Yes
P001	D001	2019/09/07	Yes
P004	D002	2019/08/25	No
P002	D002	2019/08/23	Yes
P003	D004	2019/09/20	Yes

36. How many records are there in the channel table?

- 1) 4                                      2) 3                                      3) 5                                      4) 6

37. Which of the following is an example of a foreign key in this Database?

- 1) Patient\_Id of Channel table                                      2) Doctor\_Id of Doctor table  
3) Patient\_Id of Patient Table                                      4) Phone\_No of Doctor Table

38. Which of the following data type is suitable for the field Is\_paid in the channel table?

- 1) Text                                      2) Yes/No                                      3) Number                                      4) Memo

39. Which of the following doctors has the patient Vishwa channeled?

- 1) Pathirana and Anuradhaa                                      2) Fernando and Amal  
3) Anuradha and Amal                                      4) Pathirana and Amal

40. What is the specialist of the doctor that the patient Thimali has channeled?

- 1) Cardiologist                                      2) Dentist                                      3) Arthritis                                      4) Diabetes

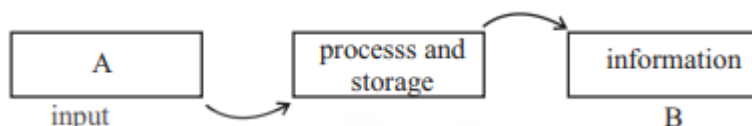
## PART II

- *Answer five questions only including first question and four other questions.*
- *First question carries 20 marks and each other questions carry 10 marks.*

01.

i) Express the octal number 562 using the BCD representation

ii) Name the A and B in blanks



iii) Complete the blanks of the following table using your knowledge of number conversions.

Decimal	Binary	Octal	Hexa Decimal
47	.....	.....	2F <sub>16</sub>
.....	101110 <sub>2</sub>	56 <sub>8</sub>	.....

iv) Operating systems are classified as follows. Write one example for each of the following operating system type, selecting words from the list.

A. Single User

B. Multi User

C. Multi Task

D. Real-Time

**Ms DOS      Windows Server      Ms Word**

**Mac OS      OS of an ATM Machine**

v) Match column A and B.

A		B	
a	Charles Babbage	1	Punch card System
b	Ada Augusta	2	Adding Machine
c	Blaise Pascal	3	First Computer Programmer
d	Joseph Jaquard	4	Analytical Engine

vi) Compare RAM and ROM giving two features.

vii) Name two types of utility software.

viii) A merchant sells a pack of three items for Rs. 100. The Pack contains a book (A), color box (B). The Customer can select either a pen (C) or a pencil (D) as the third item. Write the suitable Boolean expression for above statement. ix)

ix) Classify the computers according to the size

x) What are the functions of the following short cut key?

a. Ctrl + V

b. Ctrl + B

02. “A greenhouse uses a logic circuit to water the plants inside it. The plants should be watered
- When the plants become dry or
  - When it is dark.

If someone needs to water the plants at any other time there is also a manual switch. You are assigned the task of implementing the above logic circuit using AND, OR, NOT gates only.

- Construct a truth table to represent the functionality of the above system.
- Write the Boolean expression (no need to simplify) to represents logic circuit of above system
- Draw the logic circuit using AND, OR, NOT gates only

- 03) Mr.Perera is a whole sale dealer. He uses a database for Vegetables and Suppliers supply them. A Supplier can supply number of Vegetables whereas Vegetables can be supplied by number of suppliers. Part of this file is shown below.

item table

ItemID	Item	Unitprice
I001	White sugar	95
I002	Brown sugar	125
I005	Wheat flour no 1	120
I065	Nadu rice	67.50
I074	Wheat flour no 3	100

stock table

supNum	ItemID	Currentstock
s009	I001	75
s456	I005	90
s009	I002	35
s089	I001	70
s001	I074	100

Supplier table

supNum	Surname	Initials	Address
s009	Perera	W.T.	No.45, Temple lane, Kandy
s456	Silva	A.K.D	Park Lane, Nugegoda
s234	Wijesinghe	S.G.	No.22.Cross Street, Matale
s089	Perera	C.F.	6/15,University Quarters, Peradeniya
s001	Silva	A.K.D	No.45/A, Temple lane, Kandy

- How many fields and records are there in “item table”?
- Give a suitable data type for the following fields:
  - supNum
  - Currentstock
  - Initials
  - Unitprice
- Name the primary key fields with corresponding tables.
- What are the special attributes of primary key?

04. Write the short note for only four topics among following topics.

- Universal serial Bus (USB) port
- Social network
- Advantages of Networking
- Simplex Data transmission
- State two differences between first generation computers and second generation computers.
- Write two different points on Open source software and Commercial software



05) The sample spreadsheet following shows marks obtain by five children for four subjects.

	A	B	C	D	E
1	Name	Sub 01	Sub 02	Sub 03	Sub 04
2	Rashmika	50	70	90	50
3	Anne	70	65	50	60
4	Fathima	80	81	70	95
5	Kumara	65	ab	71	80
6	Amila	82	52	62	70
7	Minimum Marks				
8	Maximum Marks				
9	Average				
10	Count				

i. Write the required formula to calculate minimum marks, maximum marks , Average marks in B7 , B8 and B9 cells.

ii. Explain how the values for other columns in cell B7 be obtained (from B7 to E 7 ) without introducing a formula again.

iii. What would be the cell value of C<sub>10</sub> if the function, =COUNT(C2:C6) is entered?

iv. What would be the cell value if the following equation is entered to a cell?  
 $= 8/2*3-2^3+5$

06) The following advertisement is created using word processing software



i. What is the tool used to insert A?

ii. Write the steps to insert B into the advertisement.

iii. Identify the formatting in C.

iv. What is D?

v. The word imediately is underlined in red color when viewed as a soft copy. Write two ways to remove it.

- 07) "Susan" works using computers in their different sections in his industry. He wants to develop his industry by networking the system. He is searching details about computer networking.
- i. Write two advantages of computer networking.
  - ii. How to get promotes or advertises to this industry.
  - iii. Write the two suitable computer network topologies which are implementing in this industry and name per two advantages of them.
  - iv. What are the two differences of LAN and WAN. Write an example to each network types.