



J/VEMBADI GIRLS' HIGH SCHOOL

First Term Exam - 2018

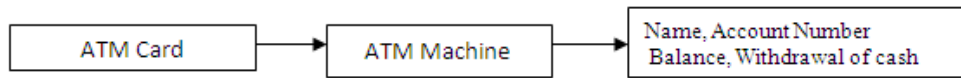
Information & Communication Technology

GRADE: 11 (2018)

TIME: 3 Hours

Part I

1. The appropriate word to fill in the blank in this diagram



Data

Information

1) Record

2) Processing

3) Program

4) Register

2. Match with correct combination

	Generation		Used Electronic Component
A	1 st Generation	I	Transistors
B	2 nd Generation	II	Integrated Circuits
C	3 rd Generation	III	Vacuum Tubes
D	4 th Generation	IV	Very Large Scale Integrated Circuits

1) A(II), B(III), C(I), D(IV)

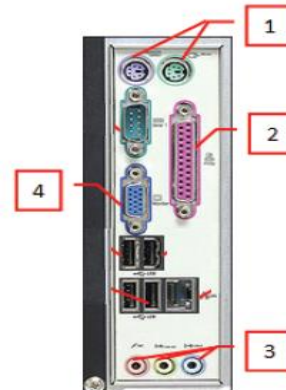
2) A(III), B(I), C(II), D(IV)

3) A(II), B(IV), C(I), D(III)

4) A(III), B(II), C(I), D(IV)

3. Identify the following ports which are labeled 1-4.

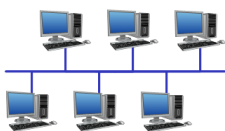
- 1) PS/2 ports, Serial port, Audio ports, Video port
- 2) USB Port, Serial port, PS/2 ports, Video port
- 3) PS/2 ports, Parallel port, Audio ports, VGA port
- 4) PS/2 ports, Parallel port, Audio ports, Serial port



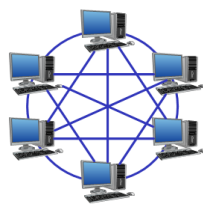
4. The correct order of Input, Output and Storage Devices.

	Input Devices	Output Devices	Storage Devices
1)	Hard Disk	Monitor	Floppy disk
2)	Microphone	Barcode Reader	Plotter
3)	Mouse	Multimedia Projector	MICR
4)	Joystick	Printer	Memory Card

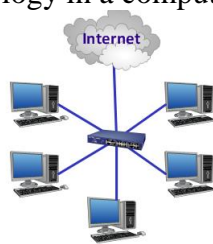
5. Which of the following icon represent Star Topology in a computer network?



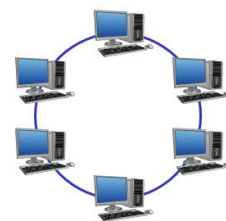
2)



3)

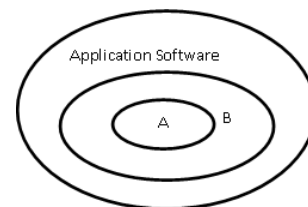


4)



6. Which of the following is most suitable for labels A and B shown in the given figure?

- 1) A = Operating system, B= Hardware
- 2) A= Utility software, B= Hardware
- 3) A= Hardware, B= System software
- 4) A= System software, B= Hardware



7. Consider the following computer software

- A) Windows 8 B) Linux C) Android D) Minix3 E) Mozilla

Which of the above is/are example(s) of an operating system?

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

8.is the process dividing a hard disk drive into multiple logical storage units to treat one physical disk drive as if it were multiple disks.

- 1) Disk Formatting 2) Disk Partitioning 3) Defragmentation 4) Disk Cleanup

9. Which of the following is not a function of an operating system?

- 1) Security Management 2) Memory Management
- 3) File Management 4) Multiuser Management

10. Which of the following is not a file type of the operating system?

- 1) FAT32 2) NTFS 3) Reiser FS 4) PPTX

11. MSD and LSD of 0.00634370 are respectively?

- (1) 0, 7 (2) 0, 0 (3) 6, 7 (4) 6, 0

12. Binary value equivalent of AB_{16} ?

- 1) 1011 0101 0010 2) 1011 1010 0010 3) 1010 1011 0001 4) 1010 1011 0010

13. 'If the Character 'E' is represented as 1000101_2 in ASCII coding scheme, what is the ASCII code for character 'ECG'?

- 1) 1000101_2 1000100_2 1001000_2 2) 1000101_2 1000011_2 1000111_2
- 3) 1000101_2 1000011_2 1000110_2 4) 1000101_2 1000100_2 1000111_2

14. Which of the following is approximately equivalent to one Gigabyte(GB)

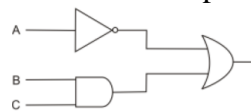
- 1) 1×10^6 MB 2) 1×10^6 KB 3) 1×10^6 GB 4) 1×10^6 TB

15. What is the Output of the given truth table?

A	B	output
0	0	1
0	1	0
1	0	0
1	1	0

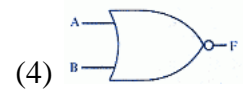
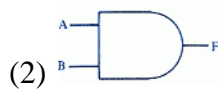
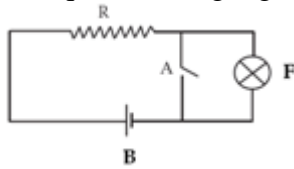
- (1) $A \cdot B$ (2) $\overline{A+B}$ (3) $\overline{A \oplus B}$ (4) $A \oplus B$

16. What is the output of the following logic circuit?

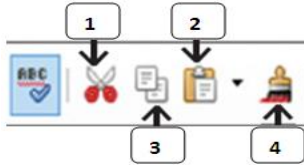


- (1) $\overline{A} + B + C$ (2) $\overline{A \cdot B} + A$ (3) $\overline{A+B+C}$ (4) $B \cdot C + \overline{A}$

17. The equivalent logic gate relevant to the given circuit.



18. Which of the following icon is used for 'copy' in the word processing software?



1) Label 1

2) Label 2

3) Label 3

4) Label 4

19. can be used to find synonyms for the words in word processing software.

1) Find and Replace

2) Thesaurus

3) Mail Merge

4) Word Count

20. -----tool used to create a large capital letter at the beginning of a paragraph.



1) Text Box

2) WordArt

3) Drop Cap

4) Shapes

21. Which of the following statement is correct regarding spreadsheet software?

(1) Intersection of a row and a column is known as an absolute address.

(2) Cell address is represented by the combination of column letter and row number.

(3) Cell entries can only be left aligned in spreadsheets.

(4) Content of a cell cannot refer to another cell.

22. Find the correct short cut keys used to cut, undo, and open in a word processing software respectively.

1) ctrl+x, ctrl+y, ctrl+o

2) ctrl+x, ctrl+z, ctrl+p

3) ctrl+x, ctrl+z, ctrl+o

4) ctrl+c, ctrl+y, ctrl+p

23. Landscape and portrait in a word processing software are called.

1) Page Layout

2) Margins

3) Columns

4) Page Orientation

24. How can you create a uniform appearance by adding a background image to all slides?

(1) Create a template

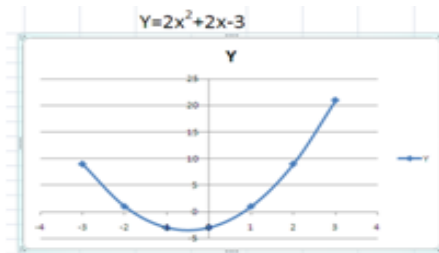
(2) Edit the slide master

(3) Use the autocorrect wizard

(4) All of the above

25. Write down the formula that should entered in cell C3 in order to obtain the value of Y, to draw the given chart for the equation $Y=2x^2+2x-3$

1	A	B	C	D	E	F	G	H	I
2		X	-3	-2	-1	0	1	2	3
3		Y	9	1	-3	-3	1	9	21
4									



1) $= (2 * C2^2) + (2 * C2) - 3$

3) $= (2 * C2^2) + 2 * (C2 - 3)$

2) $= (2 * C2 * 2) + (2 * C2) - 3$

4) $= (2 * C2^2) + (2 * C2) - 3$

- Question 26 and 27 are based on the given spreadsheet and information given below.
 - Area of a circle is πr^2 , where r is the radius of the circle
 - Assume that the value of π is given in the cell A2

	A	B	C
1	π	Radius	Area
2	3.14159	8	201.06176
3		10	314.159
4		14	615.75164
5		12	452.38896
6			

26. What formula should be entered into cell C2 to calculate the area of the circle?

- 1) =A2*B2^B2 2) =\$A2*B2*B2 3) =\$A\$2*B2*B2 4) =\$A\$2*B2^B2

27. Which of the following will appear in cell B6 if the formula =SUM(B2:B5)/COUNT(B2:B5) is entered in cell B6?

- 1) 11 2) 44 3) 4 4) 1

- Use the following database tables 'Computer Parts', 'Supplier' and 'Purchase' to answer the questions 28 and 29.

Computer Parts Table

PartsID	PartsName	No.Of Parts
P001	Hard Disk	20
P002	RAM	25
P003	NIC Card	30
P004	Motherboard	10

Supplier Table

Supplier ID	Supp Name	Contact No.
Su001	MicroSysyte m	0212222189
Su002	PCMicro	0212222245
Su003	AccessSyste m	0212222255
Su004	PCCom	0212222345

Purchase Table

Date	SupplierID	PartsID	PartsCount
11/05	Su001	P001	35
24/05	Su002	P003	10
28/05	Su003	P004	08
29/05	Su001	P001	12

28. How many fields and records are in the above Supplier Table respectively?

- 1) 4, 3 2) 3, 4 3) 12, 3 4) 4, 4

29. What would be an example for a foreign key in the data base?

- 1)PartsID in Computer Parts Table 2)SupplierID in Supplier Table
3)SupplierID in Purchase Table 4)PartsCount in Purchase Table

30. Phase of information development which is concerned with specification of system's goal is known as.....

- 1) System analysis 2) system design
3) System development 4) System implementation

31. Process of modifying information system to meet changing needs is called

- 1) System analysis 2) System modification
3) System maintenance 4) System management

32. What is the output of $8*4 + 3+8 \text{ DIV } 4$ in a Pascal computer program?

- 1) 10 2) 58 3)72 4) 37

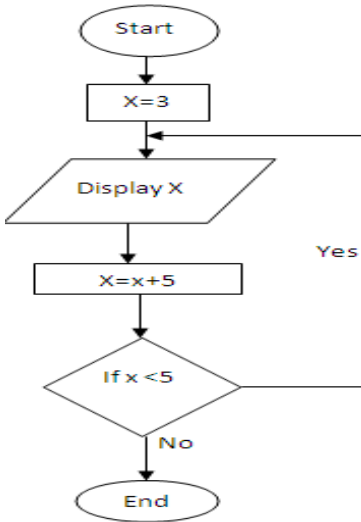
33. If you considered an integer array `var num: array [0..4] of integer ;`

30	60	70	80	90
----	----	----	----	----

What is the value stored in element `num [3]`

- 1) 70 2) 90 3) 80 4) 30

34. what is the output of the given flow chart



- 1) 3,8,13 2) 3
 3) 8, 13, 18 4) 3, 8, 13, 18, 23

35.

Begin

For count:=10 downto 6 do
 write (count);

End

What is the output of the above pseudo code?

- 1) 10, 9, 8, 7, 6 2) 6, 7, 8, 9, 10
 3) 10, 9, 8, 7, 6, 5 4) 6

36. Consider the following pascal programme:

```

Program repetition (input,output);
var X: integer;
begin
  X:=1;
  Repeat
    Writeln(X);
    X:=X+1
  Until X=3;
End.
  
```

What is the correct output when the above programme is executed?

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

37. What is the output of following Pascal code segments?

```
sum:=0;  
x:=1;  
while x<=5 do  
begin  
sum:=sum+x;  
x:=x+1;  
end;  
write(sum);
```

1) 21

2) 15

3) 10

4) 5

38. What is the output of following Pascal code segments?

```
a :=1;  
b:=7;  
for i:=b-a to b+a do  
writeln(i*i);
```

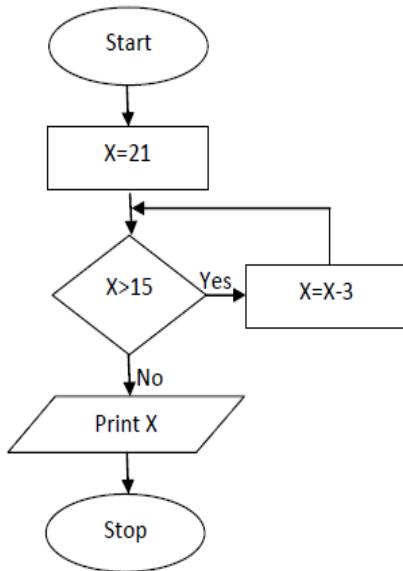
(1)
36
49

(2)
364964

(3)
36
49
64

(4)
7 8

39. What is the output of the flow chart?



1) 21

2) 18

3) 15

4) 12

40. In the above question (39) if the decision $X > 15$ is changed to $X \geq 15$, what is the output?

1) 15

2) 12

3) 18

4) 21

(40 x 1 =40 Marks)

Part II

Answer all the five Questions.

1)

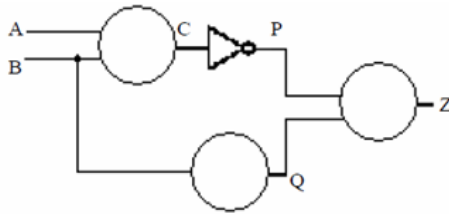
- 1) Identified the input, process and output of QR Code which used in newspapers and magazines?
- 2) Consider the following term labeled from A to D

- A-Topology C- Bluetooth
 B- Fiber optics D- e -government

Select the correct examples for the above terms from the given list

[G2E, WAN, Guided medium, Mesh, Radio waves, Microwaves]

- 3) A) Convert the binary number 11011011_2 to octal. Show steps in your calculation.
- 4) Study the following incomplete logic circuit and its incomplete truth table and then answer the question below.

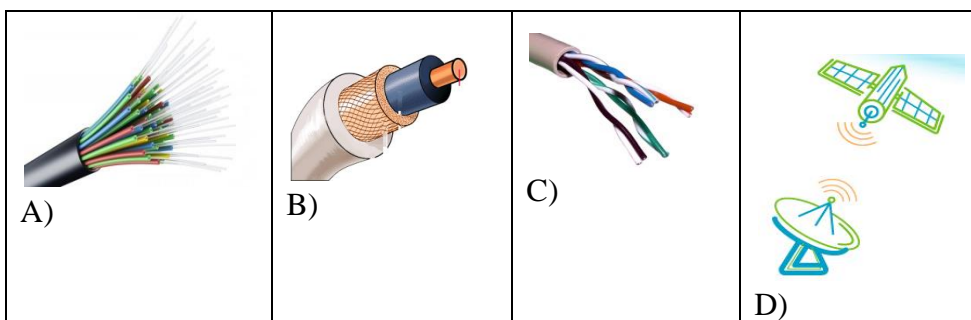


A	B	C	P	Q	Z
0	0				
0	1	1	0	0	
1	0		0	1	0
1	1				

- a) Label the gates that are represented by the three circles in the circuit.
- b) Complete the truth table, that it matches the logic circuit.
- 5) BCD(Binary Coded Decimal) Coding system used ...**A**...bits and it can represent ...**B**....symbols.
 EBCDIC Coding system used ...**C**...bits and it can represent ...**D**....symbols.
 Identified the labels A to D.
- 6) Match A with B

- | A | B |
|-----------------|----------------|
| Hard Copy | ECG Machine |
| Scanners | LED Monitor |
| Softcopy | Impact Printer |
| Hybrid Computer | OCR |

- 7) “The user can create documents using internet as well if the computer does not have a word processing software” write down 2 software user can use this purpose?
- 8) Write down the names of the following transmission media?



9) State whether following statements are **True** or **False**.

- 1) Prototyping is a one of the data gathering technique of System development Life Cycle. (-----)
- 2) Integration testing carried out at the late stage of testing. (-----)
- 3) In iterative incremental model, the system gets developed more and more, incrementally until the last stage. (-----)
- 4) Data is opened to lots of threads in computer based information system. (-----)

10) Consider the following pseudo code:

```
X=0
Do
  Display '*'
X=X+1
While X< 5
How many times the '*' will be displayed?
```

(10 x 2 =20 Marks)

2)

The following spread sheet segment shows average rainfall in Sri Lanka districts in years 2016 and 2017.

	A	B	C	D	E
1	Average Rainfall -December (mm) of some district in Sri Lanka				
2					
3	Places	2016	2017	Difference	Percentage
4	Jaffna	250.4	257.1		
5	Vavuniya	256.7	263.5		
6	Trincomalee	335.6	369.5		
7	Galle	239.6	274.4		
8	Badulla	356.1	388.8		
9	Kandy	308.8	350.1		
10	Colombo	191.7	256.7		
11	Total rainfall (mm)				

- 1) Write down the formulae that should be in written in cell D4 to find the difference of rainfall between years 2017 and 2016 in Jaffna?
- 2) Write down the formulae that should be in written in cell E4 to calculate the percentage increase of rainfall from 2016 to 2017 for Jaffna?
Note: Percentage Increase= (Difference/Value of year 2016) x 100
- 3) Assume that the two formulae entered to cells D4 and E4 are copied to the cell range D5:E10. Write down respectively the two formulae displayed in Cell D10 and E10 that are related to Colombo.
- 4) A formula in the form of =function (cell1:cell2) is written in B11 to calculate the total rainfall in all districts in 2016. Write down the relevant terms for function1, cell1, cell2.
- 5) Name the most suitable chart type in spreadsheet software to show the rainfall of given districts in 2016 and 2017.

(10 Marks)

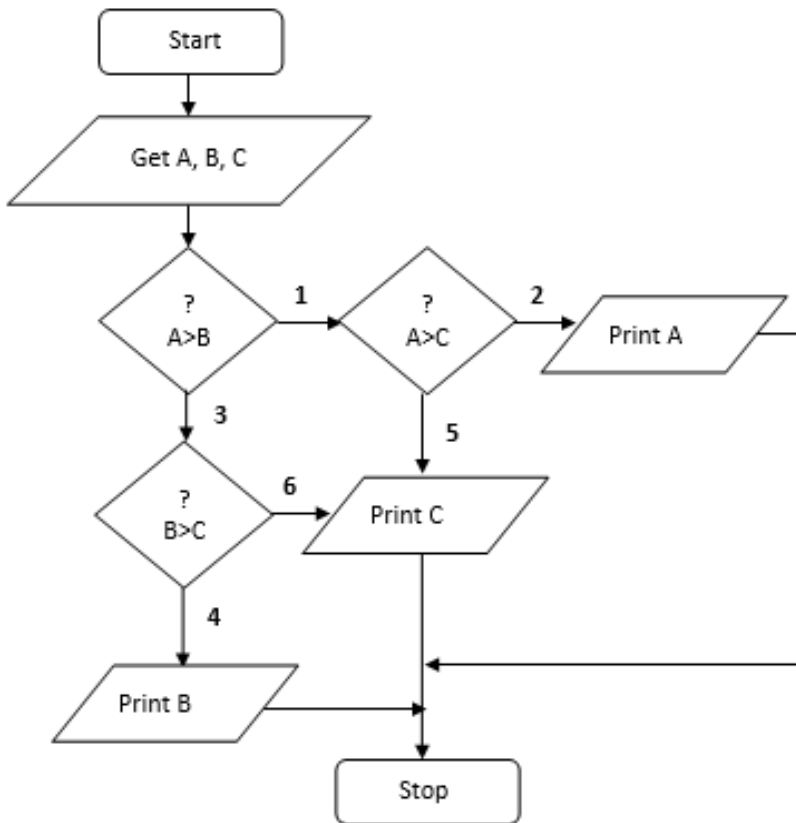
3) A Company maintains a database with the following tables Employee, Department and Salary. This company has several departments.

Employee			Department		Salary		
Emp_No	E_Name	Dep_No	Dep_No	D_Name	Emp_No	Effective_Date	Amount
E1000	Sawmiya	3	1	Finance	E1000	1/1/2007	18000
E1001	Thiviya	2	2	Sales	E1001	3/7/2006	19000
E1002	Gayaththiri	1	3	Management	E1002	1/6/2000	27000
E1003	Aswini	3			E1003	1/6/2006	17500

- 1) List two primary keys with the corresponding table names?
- 2) List a foreign key with the corresponding table name?
- 3) A new employee Aiswarya joins to Finance Department on 12/03/2018 (Emp_No:E1004)
 - a) What table(s) need(s) updating? b) Write down the relevant updated record(s)?
- 4) Write down the field names of 'Salary' Table with the proper data type?
- 5) What tables should be joined to run a query to find the Employee Name who works in 'Sales' department?

(10 Marks)

4)The following flow chart, pseudo code and Pascal program are show to find the largest number of three numbers A, B and C. Fill the correct word used from 1 to 20 for incomplete flow chart, pseudo code and Pascal program.



```

...11.....
Input .....12.....
If ...13....then
  If ...14... then
    Print ...15...
  Else
    Print ...16....
  Endif
Else
  If ...17... then
    Print ...18...
  Else
    Print ...19..
  Endif
Endif
..... 20.....
  
```

Pseudo code

```

.....7..... findLargenumber(.....8..... , ...8.....);
uses crt;
var A,B,C: integer;

Begin
  clrscr;
  ...10.....('Enter Number1');
  ...9...(A);
  ...10.....('Enter Number2');
  ...9...(B);
  ...10..... ('Enter Number3');
  ...9...(C);
  If A>B then
    if A>C then
      ...10.....('Large number is',A)
    Else
      ...10.....('Large number is',C);
    Else
      if B>C then
        ...10.....('Large number is',B)
      Else
        ...10.....('Large number is',C);
      readkey();
    End.
  
```

Pascal Program

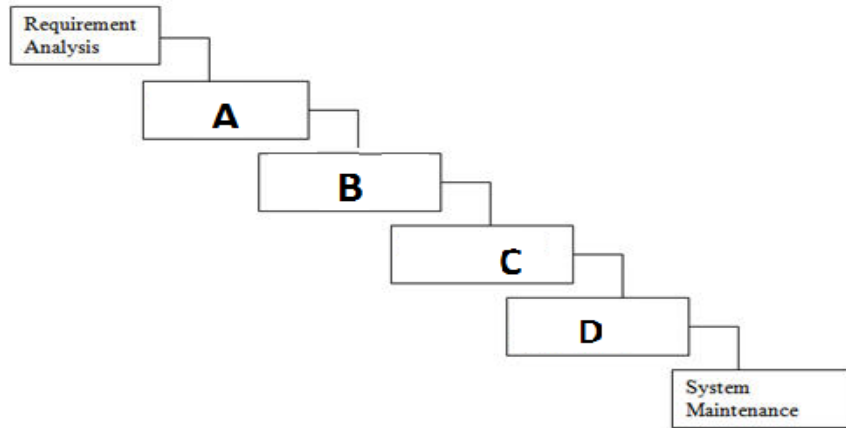
1	
2	
3	
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8	
9	
10	
11	
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13	
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15	
16	
17	
18	
19	
20	

Copy the above table
your answer sheet and fill it.

(20 x 1/2 =10 Marks)

5)

- I) Write down the labels A to D in the waterfall model with suitable terms given below.
[Implementation, System Testing, Planning Solution, System Deployment]



- II) Consider the following scenario related to the development of a School Management Information system.

The principal proposed to introduce a new computerized information system to manage school management operations. **Sajitha** identified the requirements of the proposed system. Then she designed a system that satisfies the requirements. Based on the design made by **Sajitha**, **Kavitha** programmed(Coding) the software. **Jasinth** tested the software. **Thibishana** installed the system in the school. A few weeks later **Mathula** fixed problems in the new system and modified the software to print analysis summary reports.

- Who is involved in the development phase of above system development life cycle?
- Which phase of the system development life cycle was carried out by Thibishana?
- Which phase of the system development cycle was carried by Jasinth?
- Write **two** different methods that Sajitha can use to understand the requirements of the proposed system?
- Waterfall model is one of the System development life cycle model, write other **two** System development life cycle models which used to develop systems in different ways?

(10 Marks)