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| First Term Test - Grade 11-2018 |  |  |  |  |  |
| Index No .............................. |  | Information \& Communication Technology - I | Time : One Hour |  |  |
| Note:$\bullet$ answer all question <br>  In each of the question 1 to 40 pick one of the alternatives (1). (2). (3), (4) which is correct of most <br> appropriate.  <br>  $\bullet$ Mark a cross (X) on the number corresponding to your choice in the answer sheet provided. |  |  |  |  |  |
|  |  |  |  |  |  |

1. The world first digital electronic computer is,
i. Pascaline Machine
iii. ENIAC
ii. ABACUS
iv. Mark 1- Automatic Sequence Control Calculator
2. Not a feature of a quality information is,
i. Timeliness
ii. Accuracy
iii. Completeness
iv. Size
3. The basis of classifying computers as Analog, Digital and Hybrid is, i. According to the size
ii. According to the technology
iii. According to the purpose
iv. According to speed of the computer
4. Consider the following sentence

A - Keyboard is an input device
B - Joystick is a storage device
C - Compact disk is a storage device
Which the following statement is / are true ?
i. A only
ii. B only
ii. A and C only
iv. All A, B and C only
5. Use of the floppy disk for secondary storage has been started
i. In second generation computers
ii. In third generation computers
iii. in first generation computers
iv. in fourth generation computers
6. Consider the following statements,

A - Thermal Printer is a impact printer
B - Ink ribbon used in the impact printers is expensive
C - Laser printers best suited for obtaining quality images and documents
Which of the following statements is? are true?
i. A only
ii. C only
ii. B and C only
iv. All A, B and C
7. A disadvantage of computer networking is,
i. Sharing resources
ii. Ability to connect anywhere at any time
iii. Ability to spread computer viruses to other computers
iv. Less storage space to store data.
8. Which of the following is a false statement regarding the universal serial bus port?
i. The computer must be turned off before connecting the keyboard.
ii. Several types of devices can be connected to this port.
iii. The electricity needed for the USB devices is provided through the USB port itself.
iv. Ability to use devices just after connecting.
9. Firewall is,
i. A device used to store information on a computer network.
ii. A software or hardware that work as a security barrier between internet and a computer network.
iii. A device that prevent the entry of computer viruses
iv. A device used to connect computer in a network.

10．Which one cannot be the base of the number 12012 is，
i．three
ii．eight
iii．four
iv．two

11．The sum of $1010_{\mathrm{two}}$ and the $1011_{\mathrm{two}}$ is，
i． 22
ii． 16 sitteen
iii． $25_{\text {eight }}$
iv． $10011_{\text {two }}$

12．Which of the following is a BCD number？
i． 10100001
ii． 10010000
iii． 10001010
iv． 10011011

13．If the inputs to the logic gate given in the diagram are 1 an 0 ，which answer gives the correct outputs respectively？
i． 1 and 0
ii． 0 and 1
iii． 0 and 0
iv． 1 and 1


14．Which answer gives the correct outputs in the order when the inputs in the table are given respectively to the logic gate in the diagram below？
i． 0110
ii． 0111
iii． 1110
iv． 0001


| ๕ャロパ |  |
| :---: | :---: |
| A | B |
| 0 | 0 |
| 0 | 1 |
| 1 | 0 |
| 1 | 1 |

15．When booting the computer startup programs are located in the，
i．Random Access Memory
iii．Cache Memory
ii．Memory Registers
iv．Read Only Memory

16．Which one is the programme file extension from the file extensions given below
i．．docx
ii．．jpg
iii．wmf
iv．．exe

17．An example for a single user－multi tasking operating system is，
i．MS DOS
ii．Windows 8
iii．Unix
iv．Ubuntu Server

18．Consider the following statements regarding the shortcut keys in word processing software．
A－ $\mathrm{Ctrl}+\mathrm{C}$ is used to copy a text or object．
B－$\quad \mathrm{Ctrl}+\mathrm{X}$ is used to cut a text or object
C－Ctrl＋P is used to paste a text or object that has been copied．
Which of the above statement $/ \mathrm{s} /$ is／are true？
i．A and B only
ii．B and C only
iii．A and C only
iv．A，B and C only

19．Consider the following statement regarding the selection of a word document are，
A－Enter Key is the shortcut key to select the entire document
B－Double click the mouse on that word to select a word
C－To select a sentence，click on the beginning of the first word of the sentences and drag till the end of last word．
Which of the above statements is／are true？
i．B only
ii．A and B only
iii．A and C only
iv．B and C only

20．Which of the following tool should be used in a word processing software to change the orientation of a page？
i．

ii．

iii．

iv．


21．The facilities provided by the slide background are，
A－Adding different colors to background of a slide．
B－Making different types of shapes．
C－Inserting pictures of graphics
Which of the above statements is／are true？
i．A only
ii．A and B only
iii．C only
iv．A，B and C only
22. Which of the following is electronic presentations software which can be taken from the cloud computing service?
i. Open Office.org Impress
ii. Microsoft One Drive word
iii. MS Office - 365 Power Point
iv. MS Office - 365 Excel

Answer the Questions no 23 and 24 using tables of a database given below.

| Students Table |  |  |
| :--- | :--- | :--- |
| Index No. | Name | Grade |
| 45507 | Amal | 10 A |
| 45508 | Kasun | 10 A |
| 45509 | Mala | 10 C |
| 45510 | Vimala | 10 D |


| Books Table |  |
| :--- | :---: |
| Book Name | Book No. |
| Madol D oowa | 1007 |
| Hathpana | 1008 |
| Heensaraya | 1009 |
| Sudu Neluma | 1005 |


| Students Book Table |  |  |  |
| :--- | :--- | :--- | :--- |
| Index No. | Book No. | Date of Borrow | Date of Submitted |
| 45507 | 1007 | $2017 / 05 / 11$ | $2017 / 05 / 29$ |
| 45508 | 1008 | $2017 / 05 / 13$ | $2017 / 05 / 31$ |
| 45509 | 1009 | $2017 / 05 / 31$ | $2017 / 06 / 13$ |
| 45510 | 1005 | $2017 / 06 / 03$ | $2017 / 06 / 20$ |

23. What is the answer that shows the suitable data types in the order for the fields of above Students Books Table.
i. Number, number, Date/ Time, Date/Time ii. Text, Number, Date/ Time, Date/Time
iii. Number, Text, Text, Text
iv. Text, Text, Date/ Time, Date/Time
24. The Primary key field/s of the above Students Books Table is/are?
i. Index_Number ii. books_Number
iii. Index_Number and Book_Number iv. Date_of Borrow

25 . Which one is used to get the information from the relational tables?
i. table
ii. Forms
iii. Queries
iv. Reports
26. The Correct statement regarding the primary key is,
i. The primary key is a combination of two or more columns that is used to uniquely identify a record in a table.
ii. Name of the person is an example for the primary key.
iii. Records should not be repeated in a primary key field.
iv. Primary key field can be empty.
27. Which cannot be considers as a characteristic of a database.
i. Maximum data redundancy
ii. Data Consistency
iii. Increasing the efficiency of data manipulation
iv. Increasing the accuracy
28. Which of the following cannot be taken as an example for a database management system software.
i. Access
ii. Base
iii. Oracle
iv. Lotus 123
29. School children play together (group) as extra- curricular activities. There are a few sports in the school as netball, Volleyball, Cricket and one student must have done at least one game. There must be a group of students for a one game. According to the above data the relationship between students and sports tables are,
i. One to one relationship
ii. One to many relationship
iii. Many to Many relationship
iv. No relationship
30. A 1 and B 2 cells contain the numbers 12 and 34 respectively in a spread sheet.

What is displayed if a cell is having "=A1\&B2"?
i. 46
ii. 1234
iii. 1234
iv. Display an error
31. If you insert '= COUNT (A1:B3)' in a cell of the spread sheet given in the figure question 31, it displays,
i. 5 .
ii. 4.
iii. 3 .
iv. Display an error
32. If '=AVERAGE (A1: A3, B1)' Is included in a cell in spread sheet given in the figure

| A |  |  |
| ---: | ---: | ---: |
| 1 | B |  |
| 2 | 24 | 0 |
| 3 | 45 |  |
| 3 | abc | 25 |
| 4 |  |  |

question 31, it displays,
i. 23
ii. 34.5
iii.17.25
iv. 69
33. Select the false statement from the followings regarding the spread sheets.
i. The formula should be started with " $=$ " sign.
ii. Cell addresses should be given by separating commas in the "Sum ()" function But nearby cells could be given as a cell range.
iii. Cell addresses given by separating commas is the same as the giving cell addresses as a cell range in a function.
iv. "=" sign must be used at the beginning of a function.
34. The answer to 19 MOD 20 is:
i. 19 .
ii. 20
iii. 1
iv. 0
35. The output of the following program segment is,

Write ('saman'): Write (75): Writeln ('Amal): Wtire (79)
i. Saman 75

Amal 79
ii. Saman 75 Amal 79
iii. Saman 75 Amal 79
iv. Saman

75
Amal
79
36. Which is not a valid identifies in Pascal programming language?
i._Num
ii. Num1
iii. Num_1
iv. Num\#
37. What is the output of the following segment of a pascal Programme?
i. 012345
ii. 0123456
iii. 12345 iv. cannot compile because of an error
38. what will be the output in expression 20 DIV 6 in a

Pascal program?
I. 2
ii. 3
iii. 4
iv. 3.3333333333E+000
39. What is the output of the Pascal statement, Writeln (234.56); ?
i. $2.34560000000000 \mathrm{E}+002$
ii. 234.56
iii. 234
iv. $2.3450000000000 \mathrm{E}-002$

Program abc; Var n:InTeGeR;
Begin
n : =0;
While $\mathrm{n}<=5$ do
Begin Write (n);n:=n+1; end;
Write (n);
End.
40. A valid statement to assign a value to the Boolean variable Bool is,
i. Bool:= faLsE;
ii. Bool:='True';
iii.Bool=False
iv. True:=Bool;

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| First Term Test - Grade 11-2018 |  |  |  |  |
| Index No .............................. Information \& Communication Technology - II Time : 2 Hours |  |  |  |  |
| Note: <br> - Answer five questions only including the first question and four other. <br> - First question carries $\mathbf{2 0}$ marks and each of the other questions carries $\mathbf{1 0}$ marks. |  |  |  |  |
|  |  |  |  |  |

1. Give short and exact answers.
2. Vikum who has the computer spare parts selling business obtains a financial report at the end of the day by calculating the daily sales and purchases. Name an;
a. Input Device
b. Outputdevice that the Vikum can use to perform this task.
3. Write two major differences between the QR code and the bar code which use to get information about the consumer goods.
4. Consider the following table about the e-Government applications. Match the items in the first column appropriately with the items in the second column, and state the pairs of labels in your answer sheet.

| First Column | Second Column |
| :--- | :--- |
| A. Give Sri Lankan Custom information to other countries. | P. G2E |
| B. Provide Information about commercial organizations to <br> the businesses. | Q. G2G |
| C. Issuing circulars to government employees. | R. G2C |
| D. Renewal of vehicle licenses. | S. G2B |

4. State a difference between the switch and the Hub used in the computer networking.
5. If $\mathrm{X}=10010$ two and $\mathrm{Y}=1111$ two, find the hexadecimal equivalent of $\mathrm{X}+\mathrm{Y}$.
6. Briefly explain why does the Unicode System is necessary for representing data in computers.
7. The figure shows an integrated circuit which has 14 pins.


When the input values of $0,1,1,1,1,0,0,0$ to the pins. $1,2,5,6,8,9,12,13$ respectively are given, what are the output values for the pins $3,4,10,11$ respectively.
8. Write three security management functions of an operating system.
9. The Student intends to create a program to find the perimeter of a rectangle. Mention the solution space by analyzing the problem.
10. Find the output of the Pascal program given below.

```
Program exercise;
var
    a,b:integer;
begin
    \(\mathrm{a}:=\mathrm{o}\);
    for \(\mathrm{b}:=1\) to 7 do
    begin
        \(\mathrm{a}:=\mathrm{a}+\mathrm{b}\)
        writeln (a);
    end;
    readln;
end
```

2. A phrase of music is created by arranging a sequence of different musical notes. A beautiful picture is created by using different lines and colors.
i. State the data and information separately by reading the paragraph given above.
ii. Give a device that can be connected to each of the ports mentioned below.

Ps/2 Port, HDMI Port, USB Port, Serial Port, Parallel Port
iii. There are three data transmission modes according to the direction of transmission.

Name those three modes and describe each of them.
iv A diagram of a computer networking is given below.
a) What is the networking topology of the given diagram?
b) Mention two advantages and two disadvantage of a network topology mentioned above.
c) A hub has been used to connect computers in the above network. Give another device that can be used instead of the hub.

d) That network is in a small area. Name the type of network that spreads in a small area.
e) Name two guided media that can be used to build that network.
3. A) Answer the questions regarding the word processing documents given below.

i. What are the tools used to format the text shown in the lable A?
ii. What is the tool used to format the list shown in the lable B?
iii. What is the tool used to join the cells shown in the lable C?
iv. Wtrie the steps in the order to insert the image shown in the lable D ?
v . what is the tool used to format the text to connect to another website shown in the lable E?
vi. What is the shortcut key used to get the tool given in part $(\mathrm{V})$ above?
B. Write two advantages of using electronic presentation software instead of conventional presentation.
4. A part of spreadsheet used to calculate the salaries of the employees in the Lakdinu furniture sales company is given below Rs. 100 commission is paid for each sales unit in addition to their basic salary.

|  | A | B | C | D | E |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | Laknidu Furniture Sellers |  |  |  |  |
| 2 | Commission per unit |  |  | Rs. 100.00 |  |
| 3 | Name | Basic salary | No. of units sold | Commission | Total salary |
| 4 | Sachintha | Rs. 5,000.00 | 25 | Rs. 2,500.00 | Rs. 7,500.00 |
| 5 | Isria | Rs. 4,700.00 | 36 | Rs. 3,600.00 | Rs. 8,300.00 |
| 6 | Dimal | Rs. 5,300.00 | 42 | Rs. 4,200.00 | Rs. 9,500.00 |
| 7 | Mohomad | Rs. 3,850.00 | 38 | Rs. 3,800.00 | Rs. 7,650.00 |
| 8 | Indiraj | Rs. 6,200.00 | 32 | Rs. 3,200.00 | Rs. 9,400.00 |
| 9 | Total Expenditure for paying Salaries |  |  |  | Rs. 42,350.00 |

i. What is the formula that should be in D2 cell to calculate the commission of Sachintha?

It should be able to copy this formula from D5 to D8 to get correct values of them.
(Commission = No of sales units * Commission per unit)
ii. Write the steps to complete the commission column?
iii. State the formula that should be in E2 cell to calculate the total salary of sachintha?
(Total Salary $=$ Basic salary + Commission)
iv. what is the suitable chart type to show the commission of each employee?
5. A) State the output generated from the Pascal Programme given below

```
Program Exercise5;
Var P,Q: Interger;
Begin
    P:=1;
    Q:=1;
    While P<40 Do
    Begin
        Writeln (P);
        Q:= Q+2;
        P:=P+Q;
    End;
    Readln;
    End.
```

B. The pseudo code given below is to output the smallest number from the three numbers $\mathrm{A}, \mathrm{B}$ and C taken as inputs. Draw the flow chart for this pseudo code.

| Begin |  |
| :--- | :--- |
|  | Input (A, B , C) |
|  | Min $=\mathrm{A}$ |
|  | If $\mathrm{B}<$ Min then |
|  | Min $=\mathrm{B}$ |
|  | Endif |
|  | If $\mathrm{C}<$ Min then |
|  | Min = C |
|  | Endif |
|  | Print (Min) |
| End. |  |

6. Several tables in relational database of a school database have given below. Answer the questions asked about it.

| Book Table |  |  |
| :--- | :--- | :--- |
| Book ID | Name | Borrowed |
| B5001 | Sirimath | Yes |
| B5002 | Hathpana | No |
| B5003 | Metigedara | Yes |
| B5004 | Heesnsaraya | Yes |


| Borrowing Table |  |  |
| :--- | :---: | :---: |
| Book_ID | Std_ID | Borrowed Date |
| B5001 | S3521 | $2017 / 05 / 03$ |
| B5003 | S3523 | $2017 / 05 / 12$ |
| B5004 | S3521 | $2017 / 05 / 16$ |


| Student Table |  |  |
| :--- | :---: | :---: |
| Std_ID | Name | Grade |
| S3521 | Seetha | 10A |
| S3522 | Amal | 10 B |
| S3523 | Piyal | 10 A |

i. Give two primary key fields with the relevant table from the above tables.
ii. The book " Ambayaluwo" has been added to the school library under the book number B5005 on 2017/06/06
a. Which tables are updated, when that data is added?
b. State those updated records with relevant tables (It's adequate to the seperate data included in the table from commas)
iii. New membership has been taken by the "Ranil" under the number S3524 on 2017/07/03. He has borrowed the book" Hathpana" on the same day
a. What are the tables updated when entering that data?
b. State those updated records with relevant tables. (It's adequate to separate the data included in the table from commas)
7. A) A logic circuit of logic gates has given in the following diagram. Answer the questions about it.

i. Name the two types of logic gates in the circuit diagram.
ii. Find the Boolean logic expression for the output "F" in terms of inputs.
iii. Draw a truth table for the Boolean logic expression taken in the above (part ii)\}
iv. What is the basic logic gate represented from the above logic circuit?
B) A seven bit code 1000001 is used in an operating system to represent the letter "A"
i. What is the acronym (Short from of the name) used for that coding system?
ii. What is the decimal number represented from this binary number 1000001 ?
iii. What is the binary code used to represented the letter "C" provided the letter "A" is represented by the binary code 1000001 ?

