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Provincial Department of Education - NWP

80 E I

පළමු වාර පරීක්ෂණය - 11 ශ්‍රේණිය - 2018
First Term Test - Grade 11 - 2018

Index No **Information & Communication Technology - I** Time : One Hour

Note:

- answer all question
- In each of the question 1 to 40 pick one of the alternatives (1). (2). (3), (4) which is correct of most appropriate.
- 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 ii. ABACUS
iii. ENIAC iv. Mark I- 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 iii. 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 iii. B and C only iv. All A, B and C

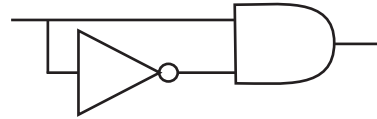
7. A **disadvantage** of computer networking is,
i. Sharing resources
ii. Ability to connect anywhere at any time
iii. Ability to spread computer viruses to other computers
iv. Less storage space to store data.

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.

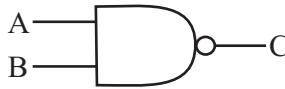
9. Firewall is,
i. A device used to store information on a computer network.
ii. A software or hardware that work as a security barrier between internet and a computer network.
iii. A device that prevent the entry of computer viruses
iv. A device used to connect computer in a network.

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_{two} and the 1011_{two} is,
 i. 22 ii. 16_{sixteen} iii. 25_{eight} iv. 10011_{two}
12. Which of the following is a BCD number?
 i. 1010 0001 ii. 1001 0000 iii. 1000 1010 iv. 1001 1011

13. If the inputs to the logic gate given in the diagram are 1 and 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. 0 1 1 0
 ii. 0 1 1 1
 iii. 1 1 1 0
 iv. 0 0 0 1



ಉದಾಹರಣೆ	
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 ii. Memory Registers
 iii. Cache Memory 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 - Ctrl + C is used to copy a text or object.
 B - Ctrl + 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 /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?



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	10A
45508	Kasun	10A
45509	Mala	10C
45510	Vimala	10D

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. A1 and B2 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. 12 34
 - 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

	A	B
1	24	0
2	45	
3	abc	25
4		

32. If '=AVERAGE(A1:A3,B1)' Is included in a cell in spread sheet given in the figure 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. 3.33333333333E+000

39. What is the output of the Pascal statement, Writeln (234.56); ?
- i. 2.345600000000000E+002
 - ii. 234.56
 - iii. 234
 - iv. 2.345000000000000E-002

```
Program abc; Var n:InTeGeR;
Begin
    n:=0;
    While 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

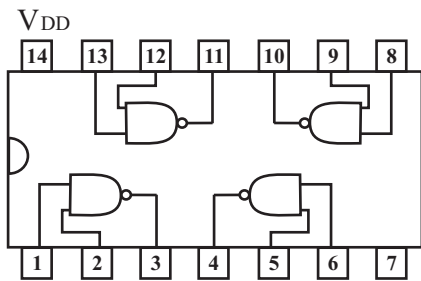
Note:

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

1. Give short and **exact** answers.
 1. 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. Output device
 that the Vikum can use to perform this task.
 2. Write two major differences between the QR code and the bar code which use to get information about the consumer goods.
 3. 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 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 X=10010 two and Y=1111 two, find the hexadecimal equivalent of X+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, 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.

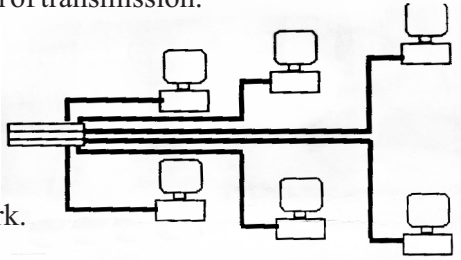
10. Find the output of the Pascal program given below.

```

Program exercise;
var
  a,b:integer;
begin
  a:=0;
  for b:=1 to 7 do
  begin
    a:=a+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.

Sri Lanka

Geographic Distribution A

Distribution of majority ethnicity by DS division according 2012 census within Sri Lanka the majority of the Sinhalese reside in the South, Central, Sabaragamuwa and western part of the country. This coincides with the largest Sinhalese populations areas in Sri Lanka. Cities with a >90% population include.

- Hambanthota
- Galle
- Gampaha
- Kurunagala
- Monaragala
- Anuradhapura
- Polonnaruwa

Distribution of Sinhalese in Sri Lanka (2012)

Province	Sinhalese People	% Province	% Sinhalese People
Central	1,687,199	66.00%	11.11%
Eastern	359,136	23.15%	2.36%
Northern	32,331	3.05%	0.21%
North Central	1,143,607	90.90%	7.53%
North Western	2,030,370	85.70%	13.38%
Sabaragamuwa	1,657,969	86.40%	10.92%

Source: http://en.wikipedia.org/wiki/sinhalese_peopole

- 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 table C?
- iv. Write the steps in the order to insert the image shown in the table D?
- v. What is the tool used to format the text to connect to another website shown in the table E?
- vi. What is the shortcut key used to get the tool given in part (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 Laknidu 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
1	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: Integer;
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 A,B and C taken as inputs. Draw the flow chart for this pseudo code.

```

Begin
    Input (A, B, C)
    Min = A
    If B< Min then
        Min = B
    Endif
    If C< Min then
        Min = C
    Endif
    Print (Min)
End.

```

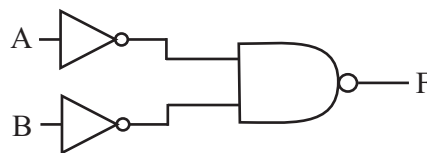

6. Several tables in relational database of a school database have given below. Answer the questions asked about it.

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	10B
S3523	Piyal	10A

- 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 separate 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 100 0001 is used in an operating system to represent the letter "A"
- i. What is the acronym (Short form of the name) used for that coding system?
 - ii. What is the decimal number represented from this binary number 100 0001?
 - iii. What is the binary code used to represented the letter "C" provided the letter "A" is represented by the binary code 100 0001 ?

First Term Test - 2018
Information & Communication Technology - Grade 11
Answer Sheet
Part I

1	iii	11	iii	21	iv	31	ii
2	iv	12	ii	22	ii	32	ii
3	ii	13	iii	23	I	33	iv
4	iii	14	iii	24	iii	34	i
5	i	15	iv	25	iii	35	I
6	ii	16	iv	26	iii	36	iv
7	iii	17	ii	27	i	37	ii
8	i	18	i	28	iv	38	ii
9	ii	19	iv	29	iii	39	i
10	iv	20	iii	30	ii	40	i

(1 x 40 = 40 marks)

paper II

1) 02 marks for each part of the first question and total of 20 marks.

- i. a. keyboard b. printer
- ii. Web address has been coded with a QR code / A code number has been coded with a bar code.
- iii. A - Q B - S C - P D - R
- iv. Connection is established only between the relevant two computers in the switch whereas the data is directed towards all the ports from a hub and only the relevant port is opened to accept the data.
- v. 21
- vi. There is large number of char actors to be represented in lots of languages in the world. Therefore more codes are required.
- vii. 3 - 1, 4 - 0, 10 - 1, 11 - 1
- viii. Ability to keep User accounts of different access levels. Ability to use passwords.
Ability to hide some files and folders.
Not allowed to delete some files.
- ix. input :- length, width
Process :- solution space
Solution 1 - perimeter = (length + width + length + width)
Solution 2 - perimeter = (length + width) x 2
Solution 3 - perimeter = (length x 2) + (width x 2)
output :- perimeter of a rectangle
(02 marks for two correct solutions including solution 2)
- x. 1, 3, 6, 10, 15, 21

- 2) i. Data :- musical notes, different lines and colours (01 mark)
information :- A music, A picture (01 mark)
- ii. PS/2 :- keyboard or mouse
- HDMI :- multimedia projector, Television, digital speakers
- USB :- any suitable device
- Serial Port :- modem, CDMA phone, old mouse, computer gaming devices
- Parallel :- printers, old scanners (02 marks)
- iii. simplex, half duplex, full duplex (for three answers) (01 marks)
- iv. A. star topology
- B. Advantages :- Damage of one computer does not affect to others. Easy to maintain (connect and disconnect computers without any effect to the network.
Disadvantages :- whole network is failed due to any fault of switch/hub, lots of wires are required to connect computers. (02 mark)
- C. network switch (01 mark)
- D. Local Area Network (01 mark)
- E. Twisted pairs, coaxial cables (01 mark)

- 3) A) i. Bold, Italic, Underline, Center (02 marks)
 ii. Bulleted List (01 marks)
 iii. Cell Merge (01 marks)
 iv. Insert Picture Select Picture (02 marks)
 v. Link (01 mark)
 vi. Ctrl+K (01 mark)
- B) Easy to use multimedia, easy to present, easy to edit (02 marks)
4. i. $= C4 * D\$2$ (02 marks)
 ii. Select D4 cell ® use fill handle from the mouse pointer drag it up to the relevant cell range. (04 marks)
 iii. $= B4 + D4$ (02 marks)
 iv. column, bar, Pie, line like any graph type (02 marks)
- 5) A) 1, 4, 9, 16, 25, 36 (04 marks)
 B) Nothing should be in the No root of two decision boxes. (06 marks)
- 6) i. Book_Table :- Book_ID
 Student_Table :- Std_ID for both (01 marks)
 ii. a. Book_Table (01 marks)
 b. Book_Table (B5005, Ambayaluwo, No) (02 marks)
 iii. a. Book_Table
 Student_Table
 Borrowing_Table (03 marks)
 b. Book_Table (B5002, Hathpana, Yes)
 Student_Table(S3524, Ranil, 10A)
 Borrowing_Table(B5002, S3524, 2017/06/06) (03 marks)
- 7) A) i. NOT, NAND (02 marks)
 ii. (A'B')' (02 marks)
 iii. Output 0, 1, 1, 1 (should be in the order) (02 marks)
 iv. OR (01 mark)
 B) i. ASCII (01mark)
 ii. 65 (01 mark)
 iii. 100 0011 (01 mark)