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மாகாணக் கல்வித் திணைக்களம் - வட மத்திய மாகாணம்  
DEPARTMENT OF EDUCATION - NORTH CENTRAL PROVINCE



Grade

11

THIRD TERM TEST - 2016

Information & Communication Technology I, II

School : .....

Name of the Student/ Index No : .....

Time : 3 hrs.

Information And Communication Technology - I

Answer all the questions

- 1) What is the special indicated code in some books ( buying or borrowing ) to gain information about the book?
  - i. Bar Code
  - ii. ISBN code
  - iii. QR code
  - iv. Book No. code
- 2) Which of the following can be classified as data in comparison with information?
  - i. A time table.
  - ii. Last four digits of a residential telephone number.
  - iii. The Ordinary Level examination results will be released to internet at 12 midnight.
  - iv. The maximum mark obtained for English by grade 11 students.
- 3) What is the incorrect statement regarding Learning Management System (LMS) ?
  - i. Ability to connect with co-curricular activities via videos.
  - ii. Ability to connect with the system at anytime and anywhere (or other convenient place)
  - iii. Discussion on educational problems through Forums.
  - iv. Monitor the progress of their students by parents without connecting to the system.
- 4) The main technologies used in fourth computer generation is,
  - i. SSIC , MSIC , IC
  - ii. LSIC , VLSIC, Microprocessor
  - iii. SSIC, Microprocessor
  - iv. LSIC , VLSIC, ULSI
- 5) Which one of the following computers is most suitable to use as a server computer?
  - i. Analog computers
  - ii. Hybrid computers
  - iii. Digital computers
  - iv. Mainframe computers
- 6) Choose the correct statement which indicates only volatile memories?
  - i. Main memory, Read Only Memory, Cache memory
  - ii. Random Access Memory, Cache memory, Memory Registers
  - iii. Cache memory, Memory Registers, Read Only Memory
  - iv. Main memory, Memory Registers, Secondary memory

7) Select the most suitable devices from column 'B' which can be connected through the ports in column 'A'

A

1. USB port
2. RJ – 45 port
3. HDMI port
4. PS/2 port

B

- A –Multimedia Projector
- B –Network Router
- C – Printer
- D – Key Board

i. 1-B, 2-A, 3-D, 4-C

ii. 1-C, 2-B, 3-A, 4-D

iii. 1-B, 2-C, 3-D, 4-A

iv. 1-C, 2-D, 3-A, 4-B

8) Consider the following statements regarding the a data communication media,

- Very flexible and low in price
- Suitable to transmit data for maximum 100 meters
- Used for telephone communications.

The communication medium with the above characteristics is,

i. Shielded Twisted pair

ii. Un-shielded Twisted Pair

iii. Co-axial cables

iv. Radio waves

9) What is the incorrect statement regarding Ring topology?

- i. Ability to use all the devices in communication
- ii. Less interference in communication
- iii. Communication speed is high
- iv. High cost for establishment and maintain

10) In 20 overs cricket match of Sri Lanka vs. Australia, the Sri Lankan team who bat first and scored 142 runs at the end of 20 overs. What is the total runs that Australian team should gain to win the match?

i.  $10001111_2$

ii.  $10101101_2$

iii.  $11100111_2$

iv.  $10000111_2$

11) The maximum value of decimal that can be represented by 8 bits is,

i. 128

ii. 256

iii. 255

iv. 1024

12) The most significant Bit (MSB) and Least Significant Bit (LSB) for the binary number 0111.10 respectively are,

i. 1 and 0

ii. 0 and 1

iii. 0 and 0

iv. 1 and 1

13) How many video files of 950 MB capacity can be stored in 1TB External Hard disk approximately?

i. 500

ii. 300

iii. 1000

iv. 2000

14) The binary ASCII value for 'D' is 1000100. So what is the decimal value for 'H'?

i. 68

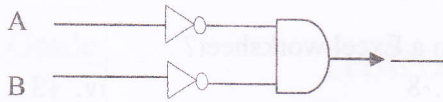
ii. 70

iii. 71

iv. 72



15) The following logic gate that equivalent to the given logic circuit is,

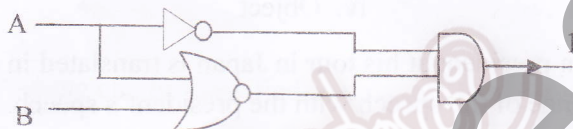


- i. NAND                      ii. NOR                      iii. AND                      iv. OR

16) The correct representation of NOT (A OR NOT(B AND C)) Boolean Expression is,

- i.  $\overline{A + (B.C)}$                       iii.  $\overline{A + (B.C)}$   
 ii.  $\overline{A} + \overline{(B.C)}$                       iv.  $\overline{A.(B + C)}$

17) The output from the following logic circuit is '1', what are the values that should be given to 'A' and 'B' respectively?



- i. 0 and 0                      iii. 0 and 1  
 ii. 1 and 1                      iv. 1 and 0

18) Select an operating System software for single user at a time.

- i. DOS                      iii. Windows Server  
 ii. LINUX                      iv. Mac OS

19) Which one of the following is not considered as Utility software?

- i. Scan disk                      iii. Disk defragmentation  
 ii. Backup,software                      iv. Text Editors

20) Which statement is relevant to word processing softwares only?,

- i. Microsoft Office Word, iwork pages, Lotus 123  
 ii. Openoffice Writer, Frame Marker, Kingsoft Office Writer  
 iii. Libre Office Writer, Google Docs, Vuisicalc  
 iv. Microsoft Office Word,Abi word, Lotus 123

21) What is the keyboard shortcut combination to insert Find & Replace tool into a word processing software.

- i. Ctrl+N                      iii. Ctrl +H  
 ii. Ctrl + O                      iv. Ctrl + P

• Use the given Excel worksheet to provide answers to the question no 23 and 24

22) What is the function you have to write in B5 to get total value.

- i. =SUM (A1:A3)  
 ii. =SUM (A2,A3:B3,B4:C1,C2,C3)  
 iii. = SUM (A1:C4)  
 iv. = SUM (A2:B3:C2)

	A	B	C	D
1				28
2	45			45
3	34	47		67
4		55		
5		321		

- 23) If we enter the function = COUNT (A1:C4) to D5 what is the calculated answer?  
 i. 4                                      ii. 7                                      iii. 12                                      iv. 5
- 24) What is the calculated answer for =4+2^3+ (6-4)/2 formula in a Excel worksheet?  
 i. 12                                      ii. 7                                      iii. 8                                      iv. 13
- 25) Which of the following is used to display a selected slide on the screen (whole) in electronic presentation?  
 i. Normal view                                      iii. Reading view  
 ii. Slide Sorter view                                      iv. Slide Show view
- 26) Which of the following is referred to the collection of data which relevant to a same data type in a Database?  
 i. Field                                      iii. Relation  
 ii. Record                                      iv. Primary Key
- 27) Which data type is used to store electronic presentations, images and spread sheets in an electronic database,  
 i. Memo                                      iii. OLE Object  
 ii. Picture                                      iv. Object
- 28) The special speech done by the Sri Lankan president at his tour in Japan is translated in to Japan by a translator. He translates sentence by sentence of the speech with the president's speech. This translation method can be considered as,  
 i. Compiler                                      iii. Assembler  
 ii. Interpreter                                      iv. Language Translator
- 29) The output of the following pascal formula is,  
 NOT (7 MOD 2 > 0) AND (3 <> 2)  
 i. FALSE                                      iii. 1  
 ii. TRUE                                      iv. 2
- 30) Select the correct Pascal program according to the syntax in Pascal programming
- |      |   |     |   |
|------|---|-----|---|
| I)   | Program first;<br>Begin<br>Write('My school');<br>Writeln('first');<br>End. | II) | Program first;<br>Begin<br>Write('My school');<br>Writeln('first');<br>End. |
| III) | Program first<br>Begin;<br>Write('My school');<br>Writeln('first');<br>End; | IV) | Program first;<br>Begin<br>Write('My school');<br>Writeln('first');<br>End; |
- 31) Which one of the following is not an activity done at the System Designing stage of SDLC?  
 i. Identification of main hardware systems and its components.  
 ii. Designing infrastructure for software  
 iii. Collecting data using different methodologies  
 iv. Designing user interface and preparation for data storage



- 32) Which one of the following is the correct statement regarding waterfall model?
- i. Most suitable for short-period projects (systems)
  - ii. Most suitable for the systems which identified the requirements completely
  - iii. Can continue several stages parallel simultaneously
  - iv. It frequently provides the chance to the user to check the required results from the system

- 33) Which one of the following is the main service of cloud computing?
- i. Infrastructure as a Service (IaaS).
  - ii. Platform as a Service (PaaS).
  - iii. Software as a Service (SaaS).
  - iv. All the above.

- 34) What is represented by the Top Level Domain (TLD) of the web address [www.asianhelp.org](http://www.asianhelp.org)?
- i. Public government
  - ii. Commercial purpose
  - iii. Organization in a country
  - iv. Non profitable organization

35) Consider the following statements,

- A – TCP/IP is the main protocol use to control the operations in Internet
- B - SMTP, POP protocols are used in electronic mail exchange
- C – HTTP is used in HTML document exchange

Which of the following is correct regarding the above statements on Internet Protocols?

- i. A only
- ii. A and C only
- iii. A and B only
- iv. All A, B and C

36) Which one of the following is correct statement regarding Digital graphics?

- i. Pixel, Resolution, Size and Colour are the basic elements of a digital graphic.
- ii. A digital graphic is an array of circular pixels.
- iii. It can display 8 colours if a pixel has 4 bits.
- iv. The logical dimension of a digital graphic is considered as the image resolution.

37) Which one of the following is not a feature of a well organized website?

- i. Attracts the user quickly
- ii. Easy to update
- iii. User can enter to many pages to find their required information
- iv. Has room to add new features later.

38) Consider the following HTML tag

```
<h2><font face="Times New Roman" color="Black">Sacred Places in Sri Lanka</font></h2>
```

Which one of the following is the output of the above tag?

- i. Font face and color
- ii. Arial and Red
- iii. Sacred Places in Sri Lanka
- iv. Face and Red

39) What is the methodology that cannot be used for logical security of a computer system?

- i. Software firewall
- ii. Backups
- iii. Passwords
- iv. Surge protector

40) Select the correct statement regarding Malicious software

- i. Computer viruses are capable of acting and spreading alone.
- ii. Computer worms enter to the computer through a computer program and spread rapidly
- iii. In phishing attacks it is deceiving users to collect information about bank accounts or electronic accounts
- iv. Trojan Horse spreads through computer viruses and worms.

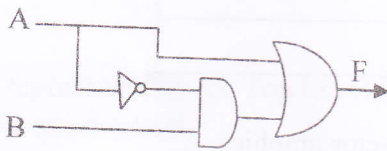
icthnotes.org



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

1) Write answers for all questions.

- i. Write two characteristics of Distance Education
- ii. Write the Octal equivalent for Hexa-decimal 12B<sub>16</sub>
- iii. Copy the given Truth Table to your answer script and complete the Truth Table relevant to the given logic circuit below.



A	B	NOT A..... B	F= A.....(NOT A.....B)

iv. Write the most suitable communication mode as Simplex, Half duplex and Full duplex for each occasion given below. (It is enough to indicate your answer with the relevant label)

- A – Short Message Service (SMS)
- B – Surf information through the internet
- C – Telecast news on television
- D – Do a video chat through Skype

v.

Consider the following Pascal program and answer the followings.

- a. What is the name of the program?
- b. Write 2 names of declared variables.
- c. Write 2 Reserved words used in this program.
- d. The output of the programme is not given when it is executed. Correct the appropriate line to get the correct answer in your answer sheet.

```

program FindArea(input,output);
USES crt;
var length, width, area:integer;
Begin
    clrscr;
    write('Enter Length: ');
    Readln(length);
    write('Enter Width: ');
    Readln(width);
    area=length*width;
    clrscr;
    writeln('The area is: ,area);
    Readln
End.
    
```

vi. Copy the following table to your answer script and complete the column 'B' using the words given in the list which are suitable to the software mention in column 'A'

Word List : (Apple keynote, workbooks, Documents To Go, Open Office Impress, Libre Office Calc, Documents, Reports, Oracle)

A	B
Word Processing Software	
Spreadsheet software	
Presentation software	
Database software	

vii. Write two differences that can be seen in Raster graphics and Vector graphics

viii. Say whether the following statements are True or False. (It is enough to indicate your answer with the relevant label)

A – Cache memory can be situated inside the CPU or on the motherboard

B – In computer networking the Network Operating System is installed to the Server computer

C – At present we use IP addresses of IPV6

D – In Incremental Model changes are done to the system planning every iteration.

ix. Complete the following pseudo code in order to display multiplication of two from 2 to 20

```

BEGIN
X=.....
WHILE (X <= ..... ) DO
PRINT .....
X=.....
END WHILE
END

```

x. Name two computer virus preventing softwares that can be installed to the computer to protect from malware.

2) A new computer Laboratory is established in a school. The Information Technology teacher suggests to establish a computer network in the laboratory to work more efficiently. There is a main computer for teacher and 20 more computers for students in this computer lab.

i. Mention four element needs to establish a computer network in this computer laboratory

ii. What is the best network model that can be used in this computer laboratory?

iii. What is the most suitable network topology which can be used to connect the devices in this lab ?

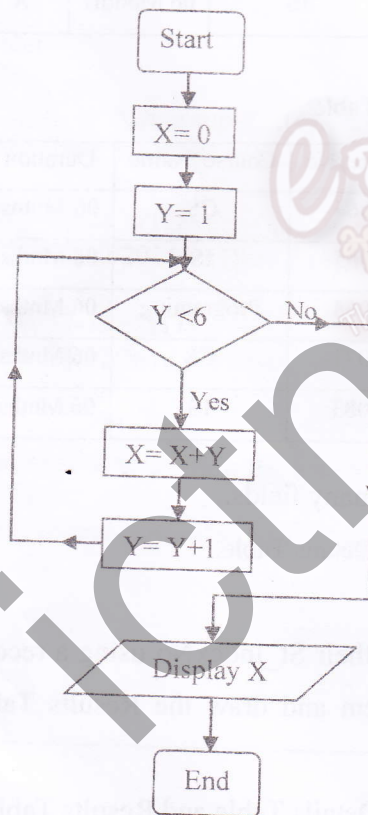
iv. If they hope to connect this network with the School network (School net) what is the device that they want to make this connection?



v.

- a) If they hope to connect this network with the internet name two main requirements that they want.
  - b) What is the main task of DNS (Domain Name System) server?
- 3) A fire detection circuit consists with three sensors is place in a hospital to protect the hospital against fire. This is consisting with,
- a flame detector
  - a smoke detector
  - a temperature detector to identify more than 90 °C heat.
- If the flame detector activates with any one of other detectors together, the fire alarm is triggered
- i. Considering the above condition, draw a suitable logic circuit.
  - ii. Build up a Boolean Expression for your drawn logic circuit.
  - iii. Draw the Truth Table for the built Boolean Expression

4) Consider the following Flow chart



- i) Write the pseudo code for this flow chart.
- ii) What is the output of this Flow chart?
- iii) Using Pascal programming language write a program for your written pseudo code .

5) Vimukthi who is a student of Thissa MahaVidyalaya has faced many problems when he goes to the school library. Spend much time to find a book , to find the library card and unable to check whether there is an anotherbook is available are some of them. So he decides to create a Computer Based Information System to the school library to overcome these problems.

- i. Write three main considerations he should consider relevant to the system

- ii. What is the methodology he has to follow to develop this system?
  - iii. Mention four methodologies that he can use to collect required data to create the new system
  - iv. Name four methodologies he can use to check the performance of the created system
  - v. Mention two occasions that he has to change the established new library system
- 6) If there are many fields in a table various problems will be arised. We can use Relational Database model to overcome these problems. The following indicates how an educational institute has divided a database table with many fields into two Relational Database tables

Students\_Performance Table

St_RegNo	Name	DOB	Gender	St_IndexNo	Course_Name	Duration	Grade
12008	A.C.Anumi	2/3/1994	F	12064	CS	06 Months	A
12009	D.V.Vinod	7/6/1997	M	12065	IS	06 Months	C
12010	A.G. Pamudii	3/6/1995	F	12068	Programing	06 Months	B
12011	D.M.C.Bandara	6/10/1995	M	12071	CS	06 Months	B
12012	A.G.U.Fernando	8/9/1994	M	12083	IS	06 Months	A

Students\_Details Table

St_RegNo	Name	DOB	Gender
12008	A.C.Anumi	2/3/1994	F
12009	D.V.Vinod	7/6/1997	M
12010	A.G.Pamudii	3/6/1995	F
12011	D.M.C.Bandara	6/10/1995	M
12012	A.G.U.Fernando	8/9/1994	M

Results Table

St_IndexNo	Course_Name	Duration	Grade
12064	CS	06 Mnths	A
12065	IS	06 Mnths	C
12068	Programing	06 Mnths	B
12071	CS	06 Mnths	B
12083	IS	06 Mnths	A

- i. Mention two problems of storing data in a Database table with many fields.
  - ii. Write the most suitable data types for the each field in Students Details Table.
  - iii. Define the 'Composite Primary Key' in a Database table
  - iv. It is unable to find the students who faced for the exam from their St\_IndexNo using a record in the Results Table. Mention the solution to overcome this problem and draw the Results Table again correctly.
  - v. What is the relationship type can be built among the Students\_Details Table and Results Table?
- 7) i) Mention two methods to organize the web contents in a web site if it contains a large amount of various types of audio – visual information.
- ii. Name two types of software which can be used as a Content Management Systems (CMS) in web site creating.
  - iii. Write two requirements that a web publisher should fulfill when publishing a website.



- iv. Consider the HTML source code and its corresponding output given below. The code has eight HTML tags indicated by labels (1) to (8). Select the suitable tags from the list given below. You are only required to write down the label number and the corresponding HTML tag.

List: [BR, TR, TH, IMG SRC, TABLE, HEAD, A HREF, A, ict help competitions]

```

<HTML>
<... (1) ...>
<TITLE> ICT help </TITLE>
</... (1) ...>
<BODY>
<H1> IT Quiz Programme -2016 </H1>
<... (2) ... = "Quizz.jpg" width="200" height="200">
</... (3) ...>
</... (3) ...>
<P> The IT Quiz Programme - 2016 scheduled as follows
</P>
<Table border =2'>
<TR>
  <... (4) ...> Age group</... (4) ...>
  <TH> Date </TH></... (5) ...>
<TR>
  <TD> 14-16 </TD>
  <TD> 12/12/2016</TD></... (5) ...>
<TR>
  <TD> 17-18 </TD>
  <TD> 14/12/2016 </TD></... (5) ...>
</... (6) ...>
</BR>
<P><B> for more details follow the link below </B></P>
<... (7) ... = "http://
www.icthelp.lk/competitions">... (8) ...</a>
</BODY>
</HTML>

```

ICT help

file:///E:/My works/Grade 11 ICT 2015/Grade 11 - 2016/html/quizz.html

## IT Quiz Programme -2016

**QUIZ CONTEST**

The IT Quiz Programme - 2016 scheduled as follows

Age group	Date
14-16	12/12/2016
17-18	14/12/2016

for more details follow the link below

[icthelp competitions](http://www.icthelp.lk/competitions)