

## First Term Examination - 2015

### Information and Communication Technology - I

Grade 11

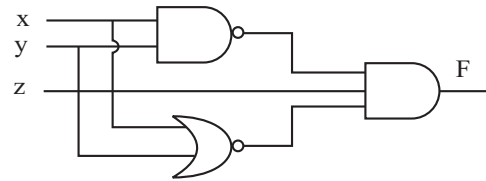
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Time : 1 hour

Name/ Index No. :

- Answer all questions.
  - In each of the 1 to 40, pick one of the alternatives (1), (2), (3), (4) which you consider as correct or appropriate.
01. .... can be considered as raw data
- (1) Marks obtained by a student in a Grade 11 classes for the Third Term Test
  - (2) Maximum marks obtained by students in Grade 11 classes
  - (3) The Average Marks of students of Grade 11 classes
  - (4) The list of TOP Ten in Grade 11 classes
02. According to the Question number 01..... can be considered as information
- (1) Only (1)
  - (2) Only (1), (2) and (3)
  - (3) Only (2), (3) and (4)
  - (4) All of the above
03. Which of the following option displays a pair of devices which are useful to input characters and draw objects respectively?
- (1) Mouse, Keyboard
  - (2) Keyboard, Joystick
  - (3) Keyboard, mouse
  - (4) Keyboard, Scanner
04. According to the design technology, computers can be classified as
- (1) Laptop computers, palmtop computers, notebook computers
  - (2) Digital computers, Analog computers, Hybrid Computers
  - (3) Palmtop computers, Digital computers, Server computers
  - (4) Laptop computers, Server computers, Special purpose computers
05. Which of the following is example for first generation computer?
- (1) Apple II
  - (2) IBM PC
  - (3) ENIAC
  - (4) IBM 7030
06. A printer can be connected to the computer using
- a. Serial Port
  - b. Parallel Port
  - c. USB port
  - d. PS/2 port
- The true statement from above is,
- (1) Only - a
  - (2) Only - b
  - (3) Only c and d
  - (4) Only b and c
07. One of the teachers asked her student to bring the soft copy of his Class project. So what will the student hand over to the teacher?
- (1) The printed Class project
  - (2) The CD which contains the class project
  - (3) The rough sketch of the class project
  - (4) The cover page of the class project.
08. Video conferencing can be considered as
- (1) Simplex
  - (2) Half Duplex
  - (3) Full Duplex
  - (4) Complex
09. There are mathematical symbols for the operations of basic logic gates. Which statement is incorrect regarding the AND, OR and NOT logical operations.
- (1) A AND B should be written as AB or A . B
  - (2) A OR B should be written as A + B
  - (3) A OR B should be written as A - B
  - (4) NOT A should be written as A'

10. X, Y and Z be the inputs and F be the output of the following logic circuit. What would be the output Q of the logic circuit?



- (1)  $x + y + z$
- (2)  $(x \cdot y)' \cdot (x + y)' \cdot z$
- (3)  $(x \cdot y) + z'$
- (4)  $(x' + y') \cdot (x' + y') \cdot z$

11. Simplification of the Boolean expression  $AB + ABC + ABCD$  is equivalent to

- (1)  $AB + CD$
- (2)  $CD$
- (3)  $AB$
- (4)  $AB + C$

12. Mr. Perera got a loan of 50/= from a friend and paid it in 3 installments as below. Which of the following is correct of his payment in 3 installments?

- (1)  $A = 11001$     $B = 01010$     $C = 1111$
- (2)  $A = 11100$     $B = 11111$     $C = 11111$
- (3)  $A = 00111$     $B = 11000$     $C = 101010$
- (4)  $A = 11111$     $B = 1111$     $C = 00001$

13. If  $M = 101_2$  and  $N = 1010_2$  then  $M + N$  is.....

- (1)  $1111_2$
- (2)  $E_{16}$
- (3)  $F_{16}$
- (4) both (1) and (2)

14. The binary equivalent of the hexadecimal number  $F2A_{16}$  is

- (1)  $111100100111_2$
- (2)  $111100100011_2$
- (3)  $111100101010_2$
- (4)  $11110101000_2$

15. The decimal equivalent of the binary number  $1110111_2$

- (1) 120
- (2) 119
- (3) 122
- (4) 219

16. The Octal equivalent of binary number  $110111110_2$  is

- (1)  $676_8$
- (2)  $666_8$
- (3)  $576_8$
- (4)  $137_8$

17. The Octal equivalent of the decimal number 808 is

- (1)  $145_8$
- (2)  $1450_8$
- (3)  $1145_8$
- (4)  $0145_8$

18. The hexadecimal equivalent of the decimal number 3692

- (1)  $14612_{16}$
- (2)  $D6B_{16}$
- (3)  $E6C_{16}$
- (4)  $E6E_{16}$

19. An operating system is

- (1) Application Software
- (2) System Software
- (3) Utility Software
- (4) Firmware

20. Consider the sentences and their text alignments within the box given below.

(A) American Standard Code for Information Interchange (B) American Standard Code for Information Interchange (C) American Standard Code for Information Interchange
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The text alignment used in each of the above sentences A, B and C respectively is,

- (1) Right, Left and Center
- (2) Left, Right and Center
- (3) Left, Center and Right
- (4) Right, Center and Left

21. In Microsoft Word, which of the following keyboard shortcuts are used to find and replace respectively.

- (1) Ctrl +P and Ctrl +V
- (2) Ctrl +A and Ctrl +T
- (3) Ctrl +U and Ctrl +K
- (4) Ctrl +F and Ctrl +H

22. Which feature of electronic software can be used to view all the sides or a few slides on the screen?

- (1) Reading view
- (2) Slide sorter
- (3) Slide show
- (4) Normal

23. If you press the Esc key of the keyboard during a slide show.
- (1) Displays slide 1 (2) Displays the previous slide  
 (3) Ends the slide show (4) Displays the last slide
- Questions 24 to 26 are based on the Royal sports club. The personal details of the members are shown as in the table below.

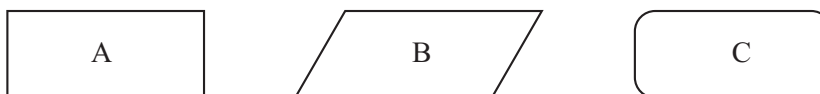
Member No.	Name	Tel. Number	Join date	Membership type
20001	Sahan	011 234564	12 / 04 / 2013	E
20002	Nalaka	071 1234444	23 / 05 / 2014	E
20003	Pahan	072 567890	15 / 03 / 2014	W
20006	Sumudu	077 234444	01 / 01 / 2015	W

24. How many fields and records of information shows in the above database?
- (1) 5 fields, 3 records (2) 5 fields, 4 records  
 (3) 4 fields, 4 records (4) 4 fields, 5 records
25. To find all the people with membership type "E" requires a search for,
- (1) Membership - type > "E" (2) Membership - type < "E"  
 (3) Membership - type = "E" (4) Membership type <> "E"
26. Most suitable primary key for the above database is
- (1) Tel\_Number (2) Join\_data (3) Member\_No (4) Membership\_type

- Consider the following worksheet.

	A	B	C	D
1		5	10	50
2			15	50
3			20	50
4				

27. What is the formula should be entered into the cell D1 to obtain the result in cell range D1:D3,
- (1) =B1\*\$C\$1 (2) =\$B\$1\*C1 (3) =B1\*C1 (4) =\$B\$1\*\$C\$1
28. Which of the following is an absolute cell reference in spreadsheet software?
- (1) -!A!2 (2) =\$A\$2 (3) =#A#2 (4) =A2
29. Which of the following are examples for spreadsheet packages?
- A Microsoft Excel B Open Office org Calc  
 C Fedora
- (1) A and B only (2) B and C only  
 (3) A and C only (4) All A, B and C
30. Which of the following statement returns False in a cell of an electronic worksheet?
- (1) =(1>=2) (2) =b<>(0-1+2+3+4)  
 (3) =NOT(1+2+3=6) (4) =AND(1+1=2, 1-1=0)
31. Consider the following symbols used in a flow chart.



A, B and C are respectively.

- (1) Process, Input, Start (2) Process, Start, Input  
 (3) Data flow, End, Output (4) End, Process, Input

32. The translator program used in assembly language and high level languages are called respectively:
- (1) Interpreter and compiler (2) Translator and compiler  
 (3) Compiler and assembler (4) Assembler and compiler
33. Which of the following group contains only arithmetic operators?
- (1) +, >, \* (2) +, /, ^ (3) /, mod, < (4) &, >, -
34. What is the output of  $3^2 + 4 \times 2$  in a computer program?
- (1) 17 (2) 15 (3) 74 (4) 16
35. Consider the following statements about language translators
- A - Interpreters convert the entire source program into object program at once.  
 B - Compilers convert the entire source program into object program at once.  
 C - Programs written in high level languages need language translators
- Which of the above statements is/are correct?
- (1) A only (2) B only (3) B and C only (4) A and B only
36. Which one of the following is not considered as a fast finding technique in a software development?
- (1) Testing (2) Interview (3) Observation (4) Questionnaire
37. Which of the following are the basic features of a closed system?
- A Existing lonely in a certain limited area  
 B Getting information connected with different systems  
 C Not connected with external variables  
 D impermeable  
 E Though it gets the inputs from the environment, no output for the environment
- (1) Only A and B (2) Only A, C and D  
 (3) Only B, D and E (4) Only C, D and E
38. Which of the following is a functional requirement of a bicycle when it is taken as a system?
- (1) The comfort ability of the bicycle seat.  
 (2) Proper functioning of the break  
 (3) Ability to use of bicycle in transportaiton  
 (4) Finished appearance of the bicycle.
39. There is an operating system that can be freely downloading the internet and no license is required to use it. Source code is also opened. This operating system can be.
- (1) MS Dos (2) Ubuntu (3) Windows (4) Mac OS
40. Sharing a single microprocessor among number of application programs using context switching is known as
- (1) Multi Processing  
 (2) Multi Tasking  
 (3) Multi User  
 (4) Online Processing

(1 x 40 = 40)

## First Term Examination - 2015

### Information and Communication Technology - II

Grade 11

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Time : 2 hours

Name/ Index No. :

- Answer five questions only, including question No. 1 and 4 other questions.
- First question carries 20 marks and each of the other questions carries 10 marks.

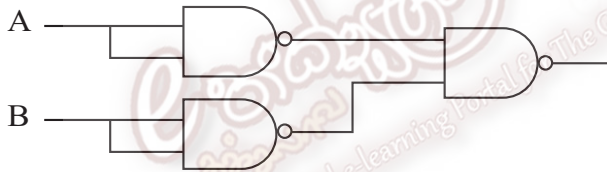
01. (1) Which ports are used to connect the following devices?

(1) Mouse                      (2) Printer                      (3) Monitor                      (4) Keyboard

(2) Your ICT teacher said that, better to buy a LCD monitor unless getting a CRT monitor, Give two reasons based for the above statement.

(3) Using UPS is compulsory to use a computer. Give two suggestions to prove the statement.

(4) Write the Boolean expression to represent the following logic circuit. Simplify your answer to get a single logic gate.



(5) State the decimal equivalent of the sum of the following two numbers. Show your computations.

$$AC_{16} + 426_8$$

(6) Write two differences between first generation programming languages and second generation programming languages.

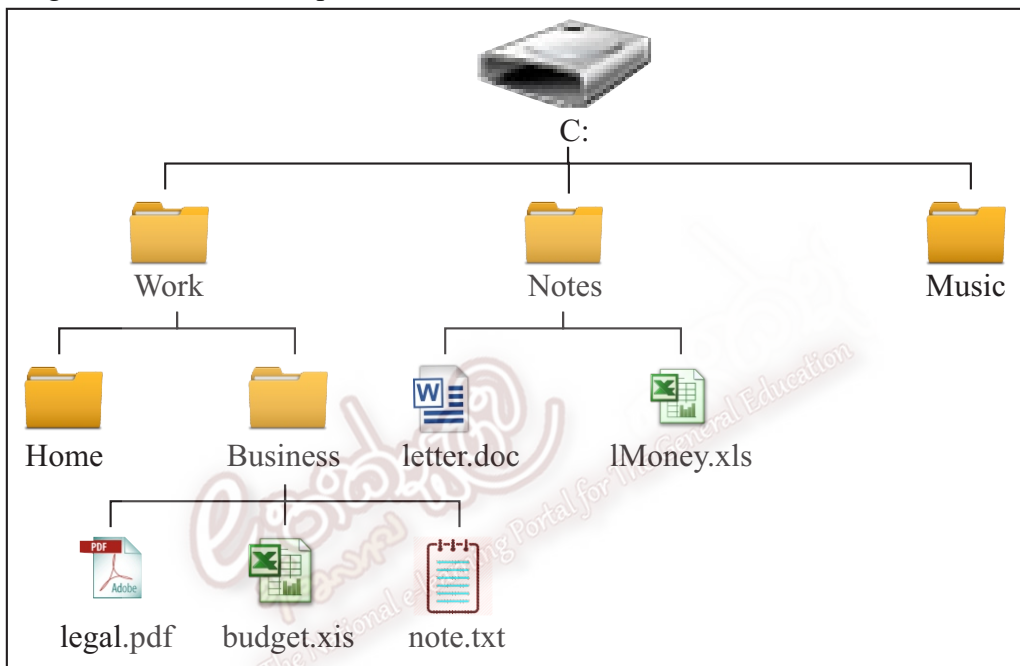
(7) Each item in **Table A** can be matched with an item in **Table B**. Write down the tables of the matching pairs on your answer script.

Table A	
A	Name
B	Course Fee
C	Date of Birth
D	Number of Items

Table B	
P	Number
Q	Date and Time
R	Text
S	Currency

- (8) Write two advantages of distance learning education.
- (9) Write down the difference between internet and intranet.
- (10) When preparing a computer programme, designing an algorithm is an essential factor.
  - (a) What is an algorithm?
  - (b) Name two main methods to build an algorithm.

02. Kusal has the folder (directory) structure shown below on his computer. Study the diagram and answer the questions below.



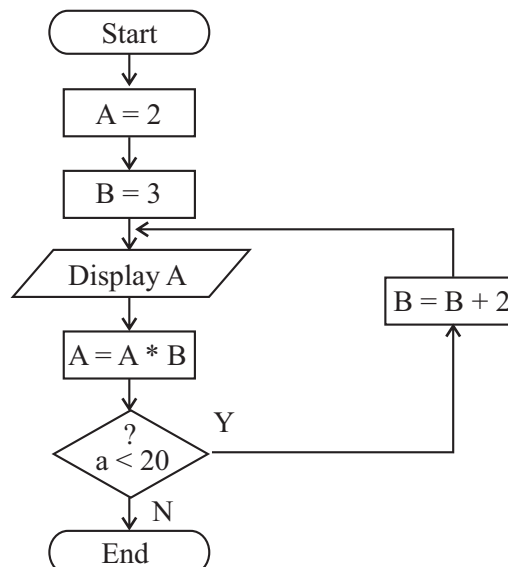
- (1) How many **folders** and **subfolders** are shown above?.....
- (2) How many **files** are visible above?.....
- (3) In which drive are the files and folders above stored?.....
- (4) Write the path of the file money. xls.....
- (5) What is the type of application software was used to create the file **budget.xls**? .....  
.....
- (6) What is the type of application software to create the file **letter.doc**? .....  
.....
- (7) The folder Business is a subfolder of the ..... folder
- (8) Describe how you can **change the name** of the file **note. txt** to **mynote. txt**.

03. Following is a part of work sheet of spreadsheet software that school teachers use to work out results of the students in the school. Refer it to answer the questions given below.

	A	B	C	D	E	F	G
1	Name	Maths	Science	English	Total Marks	Average	Rank
2	Saman Perera	25	80	75	180	60	4
3	Kamal Silva	AB	90	AB	90	90	1
4	Nimal Herath	AB	75	65	140	70	2
5	Amal Gamini	65	45	75	185	61.66667	3
6	Namal Adhikari	75	80	25	180	60	4

- (1) State the types of data in the D1 and D2 cells?
  - (2) What is the type of data that we use after using "=" in a cell in excel work sheet?
  - (3) Write the formulae to get the above results as given in the table for the followings.
    - (a) Total .....
    - (b) Average .....
    - (c) Rank .....
  - (4) Number of decimals in the average column, better to be maximum of two, how do you modify the above formula to correct that error? State the modified formula.
  - (5) Kamal has got the highest average marks even though he has absent for two subjects. This is also an error of using formula in the average column. Correct the above formula and write it removing both errors.
  - (6) List two advantages of using spread sheet package for such a calculation rather than using a calculator and a paper.
04. The past pupil association of "Giragama Maha Vidyalaya" plans to network their school computer lab. Assume that you are the network engineer who has been given this task and answer the following questions.
- (1) Write 2 advantages of implementing a computer network.
  - (2) Write 2 disadvantages of a computer network.
  - (3) What is a network topology and write four network topologies.
  - (4) And also they have decided to develop a website for the school. Write two advantages of having a website for a school.

05



- (1) Write the output of the above flow chart
- (2) Modify the given flow chart to print the number sequence 2, 6, 36
- (3) Consider the pseudo code below.

Begin

Input Name, Marks for subject 1, Marks for Subject 2

Average = 0

Average = (Marks for subject 1 + Marks for subject 2) / 2

If Average >= 60 then

Display Name "Pass"

Else

Display Name "fail"

End if

End.

The names and the marks for the subjects are as follows.

Name	Subject 1	Subject 2
Arthur	70	50
Berty	30	50
Charlie	60	70
David	40	60

If we input the above giving data to a program written using the given pseudo code writes the expected output.

06. Supun is a small scale businessman and expert in computer. He decided to implement a computerize system of his business by himself.
  - (1) Write one advantage and disadvantage of implementing a computerize system.
  - (2) Name a sub system and an external system that connect to his business.
  - (3) Name the stages of system development life cycle.
  - (4) Write three things that should be considered in feasibility study while Supun designing a system.