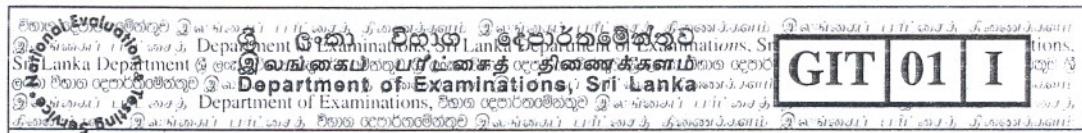


GIT-01-I

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Important : * Answer all questions on the Answer Sheet provided.

* Write your Index Number in the space provided on the answer sheet.

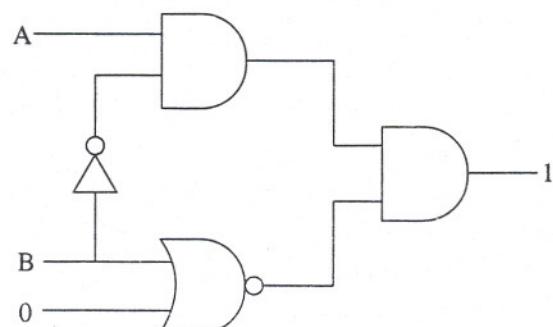
* Instructions are given on the back of the answer sheet. Follow them carefully.

* In each of the questions 1 to 40, pick one of the alternatives (1), (2), (3), (4) which is correct or most appropriate and mark your response on the answer sheet in accordance with the instructions given therein.

- The binary equivalent of the decimal number 41 is
(1) 100101 (2) 101001 (3) 101011 (4) 100111
- The octal equivalent of the binary number 1101110 is
(1) 156 (2) 6E (3) 1232 (4) 670
- The base of the hexadecimal number system is
(1) 6 (2) 8 (3) 10 (4) 16
- Sum of the two binary numbers 1001 and 101 is
(1) 1110 (2) 1011 (3) 1010 (4) 1100
- The logical expression $X \cdot (X+Y)$ is equivalent to
(1) X (2) Y (3) X+Y (4) X.Y
- Select the logical operation corresponding to the following truth table:

Input 1	Input 2	Output
0	0	0
0	1	1
1	0	1
1	1	0

- (1) NOR (2) NAND (3) XOR (4) XNOR
- Find values of the two inputs A and B such that the output is 1.



- (1) 0 and 0 (2) 0 and 1 (3) 1 and 0 (4) 1 and 1

Cell	Value
A1	25
B1	35
C1	65

(1) 2.00 (2) -34.07 (3) 26.17 (4) -9.46

General Information Technology - II

Two hours

* Answer any four questions.

1. (a) Find the octal equivalent of the hexadecimal number 3DE.
 (b) (i) Using the following truth table find a Boolean expression for the output X in terms of the three inputs A, B and C.

A	B	C	X
0	0	0	0
0	0	1	1
0	1	0	0
1	0	0	1
1	1	0	1
1	0	1	1
0	1	1	1
1	1	1	1

(ii) Simplify the above Boolean expression of X using laws in Boolean algebra.

(iii) Design a logic circuit corresponding to the Boolean expression obtained in part (ii) above.

2. (a) Explain the difference between Utility Software and Application Software.

(b) Give two examples each for Utility Software and Application Software.

(c) Write down three different types of communication media.

(d) List two types of secondary storage media. List two characteristics by which they differ from each other.

3. (a) (i) Write a Pascal variable declaration to declare three variables X, Y and Z of types *char*, *real* and *integer* respectively.

(ii) Write a Pascal statement to assign the value 20 to the 10th component of an array variable *intarr* of element type *integer*.

(b) Write down the output of each of the following code segments:

(i) *Age* := 21;
if *Age* >= 65 then
 writeln('Senior citizen')
else if *Age* >= 40 then
 writeln('Middle aged')
else if *Age* >= 20 then
 writeln('Young adult')
else if *Age* >= 13 then
 writeln('Teenager')
else
 writeln('Child')

(ii) *s* := 1;
for *i* := 1 to 5 do *s* := *s* * *i*;
write(*s*);

(c) Write a Pascal program to read in three real numbers and output the average of them. You may assume that the average of three numbers x, y, z is given by $\frac{1}{3}(x+y+z)$.

4. Members of the Mihindu College Computer Club created the following poster using MS Word. Observe the poster and answer the questions given below.

ICT Club Mihindu College



The Computer Club is an educational and fun group, which meets after school about every week. Mr. Sirimal, our computer instructor, manages this group. Our membership grows day by day, as it has become quite popular within the school. Mainly, it is up to the students to decide what they wish to accomplish.

D

C

There are many things to choose from. Some of the most popular activities are :

E

- Using education software
- Making web pages
- Creating 2D/3D animations
- Playing games
- Programming in various languages

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www.mihinducollege.edu.lk **F**

- (i) What is the tool that can be used to create the title of the poster (shown as A)?
- (ii) What tool has been used to insert the picture in the poster (shown as B)?
- (iii) What type of alignment has been used for the text shown as C?
- (iv) What is the tool that can be used to set the appearance of the words "Mr. Sirimal" shown as D in the text?
- (v) Write down the steps needed to make the text as a bulleted list (shown as E).
- (vi) The text shown at F appears as a hyperlink. Write down the steps needed to remove this hyperlink.

(See page three)

5. The following MS-Excel spreadsheet shows price comparisons of some items sold by four grocery shops.

Microsoft Excel - gitquestion-blank.xls

	A	B	C	D	E	F	G	H	I
1		Shop 1	Shop 2	Shop 3	Shop 4	Average Price	Lowest Price	Highest Price	
2	Milk Powder 450g	LKR 140.00	LKR 138.00	LKR 145.00	LKR 143.00				
3	Sugar 1Kg	LKR 72.00	LKR 70.00	LKR 75.00	LKR 78.00				
4	Thoothpaste 35g	LKR 40.00	LKR 38.00	LKR 42.00	LKR 41.00				
5	Dhal 1Kg	LKR 90.00	LKR 92.00	LKR 85.00	LKR 88.00				
6	Loaf of Bread	LKR 25.00	LKR 20.00	LKR 28.00	LKR 24.00				
7	Total cost								
8									
9									
10									
11									

Study the spreadsheet and answer the following questions.

- (i) What is the formula that should be written in cell B7 to get the total cost for Shop 1?
- (ii) Write down the steps to get values of 'Total cost' in cell range C7:E7 for the other three shops.
- (iii) What is the formula that should be written in cell F2, to get the average price for Milk Powder?
- (iv) Write down the steps needed to get the average prices of the other items in cell range F3:F6.
- (v) What is the formula that should be written in cell G2 to find the lowest price of Milk Powder?
- (vi) What is the formula that should be written in cell H2 to find the highest price of Milk Powder?
- (vii) Write down the steps needed to convert cell range F2:H6 to currency format with LKR symbol and two decimal places.

6. (a) (i) Describe the difference between data and information.

(ii) What is a Transaction Processing System? Identify the level of management that makes use of a Transaction Processing System.

(iii) What type of Information System is most useful for top level managers of an organization such as the Managing Director or the Chairman?

(b) Discuss five factors that affect the penetration of Information and Communication Technology into the rural areas of Sri Lanka.

* * *