

GIT-01-I

සියලු ම හිමිකම් ඇවිරිණි]
முழுப் பதிப்புரிமையுடையது]
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විභාග ඇගයීමේදී මෙය බලන්න. පත්‍රයෙන් පිටතට මෙය බලන්න. විභාග ඇගයීමේදී මෙය බලන්න. විභාග ඇගයීමේදී මෙය බලන්න. இவ்வகைப்பலகையைப் பார்த்துக் கொள்ளவும். இவ்வகைப்பலகையைப் பார்த்துக் கொள்ளவும். இவ்வகைப்பலகையைப் பார்த்துக் கொள்ளவும். இவ்வகைப்பலகையைப் பார்த்துக் கொள்ளவும். Department of Examinations, Sri Lanka இலங்கைப் பரீட்சைத் திணைக்களம் Department of Examinations, Sri Lanka විභාග ඇගයීමේදී මෙය බලන්න. පත්‍රයෙන් පිටතට මෙය බලන්න. විභාග ඇගයීමේදී මෙය බලන්න. විභාග ඇගයීමේදී මෙය බලන්න.	GIT 01 I
General Information Technology Examination, August 2006	
General Information Technology - I	One hour

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

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

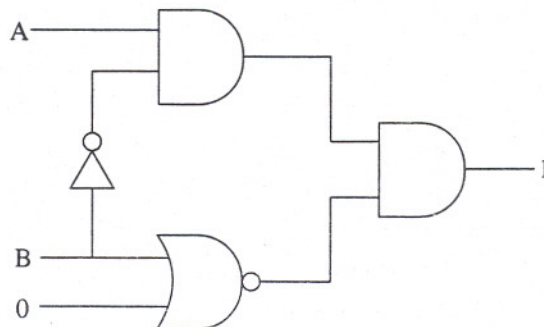
* Instructions are given on the back of the answer sheet. Follow them carefully.

* 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 $X.(X+Y)$ 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

8. The number of bits used by the EBCDIC coding scheme is
 (1) 6 (2) 7 (3) 8 (4) 9
9. Which one of the following is **not** an element of a system?
 (1) Boundary (2) Input (3) Output (4) Data Structure
10. Which of the following statements is **not** correct?
 (1) A closed system does not interact with the environment.
 (2) A closed system can send output to the environment but cannot receive input from the environment.
 (3) An open system may receive input from the environment.
 (4) An open system may have control and feedback mechanisms.
11. Any business related exchange such as payments to employees, sales to customers or payments to suppliers is known as
 (1) data. (2) transaction.
 (3) input. (4) e-commerce.
12. The system that consists of organized collection of people, procedures, software, databases, and devices used to provide routine information to managers and decision makers is called
 (1) Management Information System. (2) Artificial Intelligence System.
 (3) Decision Support System. (4) Transaction Processing System.
13. Identify the three successive phases of the System Development Life Cycle (SDLC) that appear in the correct order.
 (1) Analysis, Design, Testing (2) Design, Software Development, Testing
 (3) Design, Maintenance, Testing (4) Maintenance, Design, Analysis
14. What is the last phase of the System Development Life Cycle (SDLC)?
 (1) System specification (2) Problem definition
 (3) System testing (4) System maintenance
15. Which one of the following is **not** an operation that is associated with data?
 (1) Capturing (2) Validation (3) Storing (4) Execution
16. In MS Word, what is the tool that can be used to check the correctness of language used in the text of a document?
 (1) Word Count (2) Speech
 (3) Spelling and Grammar (4) Auto Correct Options
17. The shortcut CTRL+I in MS-Word converts selected text into
 (1) boldfaced text. (2) italicized text.
 (3) underlined text. (4) bulleted list.
18. Which one is **not** a valid Uniform Resource Locator (URL)?
 (1) <http://www.google.com> (2) <http://www.doenets.lk>
 (3) <ftp://ftp.bio.umaine.edu> (4) exams@doenets.lk
19. The place where a row and a column meet in an electronic spreadsheet, is called a
 (1) formula. (2) cell.
 (3) value. (4) chart.
20. The formula $(A1+B1)/(C1-B1)$ is stored in the cell B8 in an Excel worksheet. What will be the value displayed in B8 if the values in A1, B1, C1 are as shown in the following table:

Cell	Value
A1	25
B1	35
C1	65

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

21. Which one is **not** a valid cell address in a MS-Excel spreadsheet?
 (1) M6 (2) \$M6 (3) 6M (4) M\$6
22. The object that can be used to produce various printed outputs from data in a database created with Access is called a
 (1) Table. (2) Query. (3) Report. (4) Form.
23. Collection of records in a database is called a
 (1) Field. (2) File. (3) Layout. (4) Clipboard.
24. A Pascal program is terminated with a
 (1) colon. (2) semi-colon. (3) full-stop. (4) comma.
25. Which of the following is **not** a valid type identifier in Pascal?
 (1) int (2) real (3) char (4) boolean
26. Choose the correct constant declaration that defines a constant called *LENGTH* with a value 100.
 (1) type *LENGTH* = 100; (2) const *LENGTH* = 100;
 (3) constant *LENGTH* = 100; (4) var *LENGTH* = 100;
27. Which of the following is an **invalid** operator in Pascal?
 (1) = (2) := (3) < > (4) = <
28. Select the correct type definition that defines an array type called DATA with 10 components of type real.
 (1) type DATA = array(1..10) of real; (2) type DATA := array(1..10) of real;
 (3) type DATA = array[1..10] of real; (4) type DATA := array[1..10] of real;
29. If the value of the variable S is initially 0 (zero), what will be the value of the variable S after the execution of the loop
 for *count* := 1 to 5 do S := S + *count* ;
 (1) 0 (2) 10 (3) 21 (4) 15
30. Which Pascal statement will correctly display the text string "Excellent" if the variable *average* is greater than 80 and the variable *attendance* is greater than or equal to 40?
 (1) if (*average* > 80) AND (*attendance* >= 40) then write("Excellent");
 (2) if (*average* > 80) AND (*attendance* >= 40) then write('Excellent');
 (3) if (*average* > 80) OR (*attendance* >= 40) then write("Excellent");
 (4) if (*average* > 80) OR (*attendance* >= 40) then write('Excellent');
31. Select the correct statement that describes the action of the following output statement.
writeln(X);
 (1) Write the value of the variable *X* on the current output line and move the cursor to the first position of the next line.
 (2) Write the value of the variable *X* on the current output line and move the cursor to the next position on the same line.
 (3) Move the cursor to the next new line and write the value of the variable *X* on the first position on the new line.
 (4) Write the value of the variable *X* on the current output line and move the cursor to the first position of the same line.
32. Select the operator that has the least priority in the list of operators {=, OR, AND, NOT}.
 (1) = (2) OR (3) AND (4) NOT
33. Which one of the following devices functions only as an Input Device?
 (1) Hard disk drive (2) Floppy disk drive
 (3) Computer monitor (4) Keyboard

34. Which one of the following statements is most correct?
- (1) System utilities are generic applications used by users of computers to assist in their everyday work.
 - (2) Word processors and spreadsheets are two examples of system utilities.
 - (3) A program to format a floppy disk is not a system utility.
 - (4) A program to check the correctness of a disk is a system utility.
35. Which one of the following ports is generally **not** used to connect a mouse to the computer?
- (1) USB
 - (2) PS/2
 - (3) Serial
 - (4) Parallel
36. Which of the following statements most correctly describes a firewall?
- (1) It is a Virus.
 - (2) It is a Trojan Horse.
 - (3) It is a device that is placed between an external network and an internal network.
 - (4) A physical wall that acts as a buffer in the case of an accidental fire.
37. Select the item that is **least useful** in connecting a home computer to the Internet.
- (1) IP Address
 - (2) Modem
 - (3) Telephone Line
 - (4) Parallel Port
38. Which of the following options correctly arranges the given items from the smallest capacity to the largest capacity?
- (1) Floppy disk, CD ROM, DVD ROM, Hard disk
 - (2) DVD ROM, Floppy disk, CD ROM, Hard disk
 - (3) Hard disk, Floppy disk, CD ROM, DVD ROM
 - (4) DVD ROM, CD ROM, Floppy disk, Hard disk
39. Which one of the following is **not** an essential component of a computer network?
- (1) Server
 - (2) Communication Media
 - (3) Network Operating System
 - (4) Network Printer
40. Which one of the following statements best describes the term "Digital Divide"?
- (1) It is the division of information requirements according to geographical locations.
 - (2) It is the division of digital data into smaller packets for its distribution over computer networks.
 - (3) It is the categorization of digital data into different media such as audio, video, images, text and animations.
 - (4) It is the division created between those who have access to digital information and those who do not have such access.

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GIT-01-II

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முழுப் பதிப்புரிமையுடையது]

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විභාග Department of Examinations, Sri Lanka இலங்கைப் பரீட்சைத் திணைக்களம் Department of Examinations, Sri Lanka இலங்கைப் பரீட்சைத் திணைக்களம்	GIT 01 II
General Information Technology Examination, August 2006	
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 A



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. 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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- (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.

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

Microsoft Excel - gitquestion-blank.xls

File Edit View Insert Format Tools Data Window Help

Σ 21 100%

Arial 10 B I U

	A	B	C	D	E	F	G	H	I
		Shop 1	Shop 2	Shop 3	Shop 4	Average Price	Lowest Price	Highest Price	
1									
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.
