

	UNIVERSITY OF RUHUNA FACULTY OF MANAGEMENT AND FINANCE	No. of Pages : 06 No. of Questions: 04 Total Marks : 70
	BACHELOR OF BUSINESS ADMINISTRATION HONOURS DEGREE 1000 LEVEL FIRST SEMESTER END EXAMINATION - AUGUST / SEP. 2022	Three Hours
BBA 11043 - Information and Communication Technology		Academic Year 2021/2022
Instructions ➡ Answer all the questions		

1.

- a. Write the number of the correct answer for the relevant question in the answer book.
- i. Which of the following hardware was used by the first generation of computers?
- Integrated Circuits
 - Vacuum tubes
 - Transistors
 - VLSI
- ii. Which of the following is NOT an example of a DBMS software?
- MySQL
 - Microsoft Access
 - MariaDB
 - NetLogo
- iii. Which of the following is a volatile memory?
- EEPROM
 - SRAM
 - Hard Disk
 - Flash Memory
- iv. What is the number of layers in the OSI model (Open System Interconnection Model)?
- 2
 - 9
 - 7
 - 4

- v. What is an operating system?
- Collection of programs that manages hardware resources
 - An interface between the hardware and application programs
 - System service provider to the application programs
 - All of the mentioned
- vi. Which of the following statement is FALSE regarding fiber optic cables?
- The plastic coating protects the fibers from heat, cold, electromagnetic interference from other types of wiring
 - Send the data by pulses of light
 - Provide faster data transmission than copper wires
 - Lesser Bandwidth compared to copper
- vii. Select the correct description for the operator " \geq " in logical operators.
- Checks if the value of the left operand is less than or equal to the value of the right operand, if yes then the condition becomes true
 - Checks if the value of the left operand is greater than the value of the right operand, if yes then the condition becomes true
 - Checks if the value of the left operand is less than the value of the right operand, if yes then the condition becomes true
 - Checks if the value of the left operand is greater than or equal to the value of the right operand, if yes then the condition becomes true
- viii. Which of the following layer isn't present in the TCP/IP model but is included in the OSI model?
- Network Layer
 - Application Layer
 - Session layer
 - Transport Layer
- ix. NOT an example for a High-Level Language:
- Procedural Language
 - Assembly Language
 - Object oriented Language
 - Non-Procedural Language
- x. Which element is used for styling HTML5 layout?
- PHP
 - JavaScript
 - CSS
 - JQuery

- xi. Which of the following usually observe each activity on the internet of the victim, gather all information in the background, and send it to someone else?
- Malware
 - Spyware
 - Adware
 - Virus

- xii. What will be the output of the following source code?

```
#include <stdio.h>

int main() {
    /* printf() function to write Hello, World! */
    printf( "Hello, World!" );
    printf( "Hello, World!" );
}
```

- "Hello, World!
Hello, World!"
- "Hello, World!Hello, World!"
- "Hello World!
Hello World!"
- "Hello World!Hello World!"

- xiii. What will be the output of the following source code?

```
#include <stdio.h>

int main() {
    int a = 1;
    int b = 0;

    if ( a && b ) {

        printf("This will never print because condition is false\n" );
    }
    if ( a || b ) {

        printf("This will be printed print because condition is true\n" );
    }
    if ( !(a && b) ) {

        printf("This will be printed print because condition is true\n" );
    }
}
```

- a. "This will never print because condition is false
This will be printed print because condition is true"
 - b. "This will be printed print because condition is true
This will be printed print because condition is true"
 - c. "This will never print because condition is false
This will never print because condition is false"
 - d. Syntax Error
- xiv. Which of the following is NOT a function of operating systems?
- a. Device management
 - b. Job Accounting
 - c. File management
 - d. Virus protection
- xv. How to create a hyperlink in HTML?
- a. ` Turnitin.com `
 - b. ``
 - c. ` Turnitin Tpoint.com `
 - d. `<a> www.turnitin.com< Turnitin.com /a>`

[15 Marks]

b. Write short answers for the following.

- i. List any two characteristics of a primary key. [02 Marks]
- ii. Why are biometrics more secure? Provide any two reasons. [02 Marks]
- iii. List any two major components of a database. [02 Marks]
- iv. Name two components of CPU (Central Processing Unit) with a simple diagram.

[04 Marks]

[Total: 25 Marks]

2.

- a. List any two types of transmission impairment that occur when transmitting signals. [02 Marks]
- b. Table three differences between UTP (Unshielded Twisted Pair) and STP (Shielded Twisted Pair) cables. [03 Marks]

- c. Briefly explain four types of networks categorized based on their size. [04 Marks]
- d. Explain how an effective website can be designed with the help of any two visual elements and four functional elements with examples. [06 Marks]

[Total: 15 Marks]

3.

- a. Perform the following calculations according to the conversions given.

- i. 156_{10} : Decimal to Binary
- ii. 11011011_2 : Binary to Decimal
- iii. 329_{16} : Hexa-decimal to Decimal
- iv. 10110_2 : Binary to Hexa-decimal
- v. $23A_{16}$: Hexa-decimal to Octal

[05 Marks]



- b. What is an Operating System? Briefly explain any three types of operating systems.

[05 Marks]

- c. A database application is a computer program whose primary purpose is entering and retrieving information from a computerized database.

You have to develop a database to manage the details of vehicle owners and the fuel consumption of vehicles in Sri Lanka.

- i. Propose suitable tables for the above database.
- ii. Identify suitable fields for each table.
- iii. Identify suitable primary key, foreign key (if any) for each table. Illustrate the relationships of the proposed table.

[05 Marks]

[Total: 15 Marks]

4.

- a. Briefly explain any two ways to protect data in an organization from unauthorized access, unauthorized use, and cyber-attacks. [02 Marks]

- b. Arogya Hospital Limited is a medical center that offers diagnostic, therapeutic and intensive care facilities to patients. It consists of an Outpatient department, Emergency unit, Mother and Baby care unit, Intensive Care Unit, Pharmacy, and Laboratory.

Create a simple flow chart for the receptionists in the medical center to route incoming phone calls to handle the above process efficiently.

[05 Marks]

c. Briefly explain any **four** of the following concepts/terms used in information technology.

- i. ASCII (American Standard Code for Information Interchange)
- ii. RAM vs. ROM
- iii. BCD (Binary Coded Decimal)
- iv. Adware
- v. HTTP vs. HTTPS
- vi. SMTP (Simple Mail Transfer Protocol)
- vii. Internet Services
- viii. Guided Transmission Media

[08 Marks]

[Total: 15 Marks]
