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University of Kelaniya - Sri Lanka
Centre for Distance and Continuing Education
Faculty of Commerce & Management Studies

Bachelor of Business Management (General) Degree First Examination (External) – 2022

April - 2024

BMGT E 1065 – Information Technology

Time: 03 Hours

Instructions:

- This paper consists of two parts: Part I and Part II.
- Part I contains 20 multiple choice questions that are compulsory, and the answers should be **underlined** on the paper itself. Taking the Part I paper out of the examination hall is strictly prohibited.
- Part II contains five (05) Essay-Type questions. Select any **three (03) questions** and answer them in the booklet provided.
- Using mobile phones or any other digital device is not allowed.
- Total 100 marks.

Part I

- 1) What is the purpose of the IF-THEN-ELSE construct in pseudocode?
 - a) To execute a loop until a condition is met
 - b) To perform an action repeatedly across a data set
 - c) To execute one of two paths based on a condition
 - d) To check multiple conditions at once

- 2) Which statement best describes high-level programming languages?
 - a) They require detailed management of hardware parts like memory.
 - b) They are primarily used for programming microprocessors.
 - c) They are user-friendly and abstract away from the specifics of the computer hardware.
 - d) They consist of binary codes directly understood by the computer.

- 3) What is the primary purpose of a system flowchart?
 - a) Depicting the physical movement of items in manufacturing
 - b) Showing information flow within a system
 - c) Displaying decision points within a business process
 - d) Documenting the steps involved in product creation

- 4) Which logic gates are considered universal gates?
 - a) NAND and NOR
 - b) XOR and XNOR
 - c) AND and OR
 - d) NOT and OR

- 5) What is the output of an XOR gate when both inputs are the same?
 - a) 0
 - b) 1
 - c) The output is unpredictable
 - d) The output alternates between 0 and 1

- 6) Which type of virtual reality is characterized by the complete immersion of the user in a 3D digital environment, engaging multiple senses?
 - a) Non-immersive
 - b) Semi-immersive
 - c) Augmented reality
 - d) Fully immersive

- 7) What characterizes semi-immersive virtual reality?
- a) It uses a fully digital environment to replace the real world completely.
 - b) It uses a computer screen or headset to simulate a realistic environment but limits user interaction.
 - c) It requires specialized suits for sensory feedback like touch and smell.
 - d) It is primarily used for non-interactive digital experiences like watching movies
- 8) Which feature of databases helps to ensure data consistency by storing the same data in multiple tables?
- a) Data normalization
 - b) Data replication
 - c) Data Validation
 - d) Data encryption
- 9) What does the Data Manipulation Language (DML) allow you to do in a database?
- a) Define database schema and create tables.
 - b) Grant and revoke access to database users.
 - c) Insert, update, delete, and select data within the database.
 - d) Commit changes and handle transactions.
- 10) Which operating system that runs specifically on Mac hardware is known for its user-friendly interface?
- a) Windows
 - b) Linux
 - c) Chrome OS
 - d) Mac OS
- 11) Which of the following is not related to computer components?
- a) Hardware
 - b) Software
 - c) Netware
 - d) Firmware

- 12) Identify the attribute most relevant to the main memory of a computer?
- a) Volatile
 - b) Non-volatile
 - c) Offline Memory
 - d) Restricted Memory
- 13) _____ is a program embedded into a hardware device that takes responsibility of its control and operation.
- a) Liveware
 - b) Firmware
 - c) Control Unit
 - d) Server
- 14) Who of the following found the Internet technology?
- a) Vinton Cerf
 - b) Charles Babbage
 - c) John McCarthy
 - d) Joseph Carl Robnett Licklider
- 15) _____ is an integrated set of components for collecting, storing, and processing data and for providing information, knowledge, and digital products to interested parties.
- a) Enterprise Resource Planning System (ERP)
 - b) Network Computer System (NCS)
 - c) Human Resource Information System (HRIS)
 - d) Information System (IS)

- 16) Referring to following two statements, pick the most appropriate answer from the options given thereafter.

Statement 01: Microsoft Edge is a web browser and operating system software.

Statement 02: Antivirus software is a utility software and protects computers from malware and cybersecurity threats.

- a) Statement 01 is correct.
 - b) Statement 02 is correct.
 - c) Both statements 01 and 02 are correct.
 - d) Both statements 01 and 02 are incorrect.
- 17) Edge computing is a new technology service to be used in the 4th industrial revolution, that situates computing and storage closer to the edge of device where it is needed to _____.
- a) Clean the storage sources.
 - b) Increase network bandwidth
 - c) Reduce Response time.
 - d) Reduce Latency.
- 18) _____ is a hardware component of a computer that supplies backup electrical power for all other hardware components in case of a main power outage.
- a) Motherboard.
 - b) Power Supply Unit
 - c) Uninterruptible power supply
 - d) Power Bank
- 19) _____ is an address on a network used to find specific resources in it.
- a) IP
 - b) Domain Name
 - c) URL
 - d) Server Name

20) Identify the correct information security principle (CIA) considering below statement.

“Information system security principles and ethics are caused to ensure the accuracy and completeness of data.”

- a) Integrity.
- b) Confidentiality
- c) Availability.
- d) Authentication.

(02 Marks * 20 = Total 40 Marks)

Part II

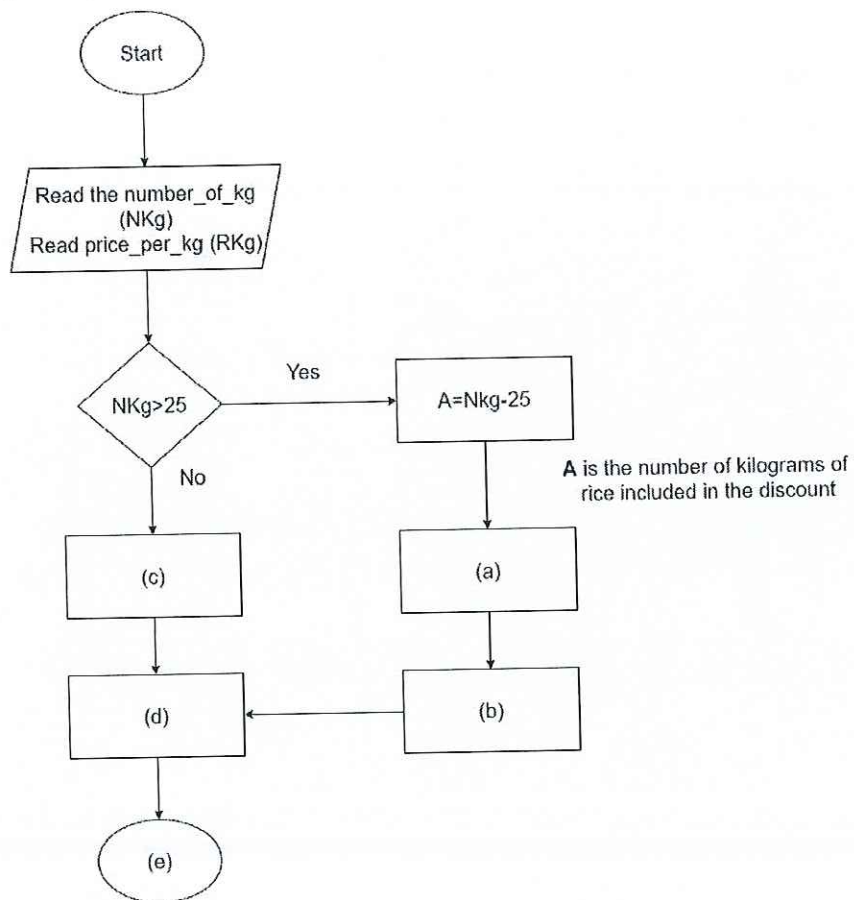
Question No. 01

a) Briefly explain three (03) benefits of flow chart.

(06 Marks)

b) Complete the flow chart ((a) – (e)) drawn based on the following scenario

In a grocery store, the price for rice is set at 200 rupees per kg. Should a purchase exceed 25 kg, the store offers a 25% discount on each kg thereafter. Compute and display the total price for the quantity of rice purchased under these conditions.



(05 Marks)

c) Draw a logic circuit for $\overline{A + B} + CD + \overline{E}$.

(09 Marks)

(Total 20 Marks)

Question No. 02

- a) Write two (02) advantages of simulation and explain two (02) examples of simulation. (06 Marks)
- b) "Virtual reality" describes a computer-generated simulation that constructs an immersive, three-dimensional environment, which both feels and functions akin to the real world. Explain what is meant by Virtual Reality Marketing. (06 Marks)
- c) VR offers a wealth of advantages, notably simplifying tasks and enriching everyday activities in today's world. Yet, it is subject to certain limitations. Describe and discuss four (04) significant limitations associated with the use of virtual reality technology. (08 Marks)
- (Total 20 Marks)**

Question No. 03

- a) Differentiate the application software and operating software by giving suitable examples. (06 Marks)
- b) Identify the components of the computer and explain the interaction of those to operate the computer. (07 Marks)
- c) The computer has become an inevitable electronic tool in different fields in society, elaborate your answer by highlighting the computer uses in the education sector. (07 Marks)
- (Total 20 Marks)**

Question No. 04

- a) Identify the functions of the central processing unit in computer operation. (06 Marks)

- b) Internet-related services make it easy to communicate in the community, identify the uses of Internet technology in business communication.

(06 Marks)

- c) "Despite the computer generates favorable impacts some users may experience negative outcomes"

Do you agree with the above statement, Justify your answer with examples.

(08 Marks)

(Total 20 Marks)

Question No. 05

Choose any five (05) of the following and explain their business application with short notes.

- a) Operating System
- b) Primary Key
- c) Relational model (DBMS)
- d) Pseudocode
- e) VR Technology
- f) Internet of Things
- g) Cybersecurity

(04 Marks * 05 =Total 20 Marks)