

# University of Kelaniya - Sri Lanka

Center for Distance and Continuing Education

Bachelor of Arts (General) Degree

First Examination (Eternal) - 2024 November

(Repeat Exam)

Faculty of Science

Computer Literacy-COMP-E-1014 Part II

Number of Questions: 06

Number of Pages 04

Time: 02 Hours

Answer five questions including the first question.

(01) (i) Name the three input modes of the mouse.


(ii) Provide the number of bytes in 1 kB in Octal

(iii) Prove the following De Morgan Laws using truth tables.

(a)  $(A \cdot B)' = A' + B'$

(b)  $(A + B)' = A' \cdot B'$

(iv) List two steps that can be taken to ensure the security of computer systems.

(v)  Identify the port represented by the following symbol and List two devices you can connect to this port.

(vi) Give two advantages of laser printers over dot matrix printers.

(vii) State the functions of a modem.

(viii) Give two reasons for using UPS for a computer system.

(ix) Write the two main differences between LCD and CRT monitors.

(x) Describe RAM and list two characteristics of RAM.

(2 Marks x 10)

(02) (i) Compare and contrast two differences between **data** and **information**.

(ii) Explain "the golden rule of the information" and draw the relevant Graph.

(iii) Draw a truth table and circuit diagram for the following Boolean algebra.

$$E = (A + B) \cdot C + (B + A) \cdot A$$

- (iv) Describe half-duplex data transfer mode and provide three examples.
- (v) Explain the CLI and GUI in operating systems. Provide two an examples for each.
- (vi) Explain the memory hierarchy using relevant facts.

(10 Marks)

- (03) (i) What is the reason for adding the recipient's email address in the Bcc field instead of the To field?
- (ii) What is meant by "http" and briefly explain its functions.
- (iii) List two drawbacks of using fax for communication.
- (iv) Write three differences between storing data on a DVD and a Hard Disc.
- (v) Write two precautions that can be taken to prevent eye strain caused by prolonged computer use.
- (vi) List two differences between compilers and interpreters.

(10 Marks)

(04) A. Clarify the following words.

- (i) Cell
- (ii) Cell address

B. The following spreadsheet segment shown below describes the revenue generated by Digital Centre, a software development company".

Software Title	Price	Jan Quantity Sold	Feb Quantity Sold	March Quantity Sold	Total Sales for Q1
Business Express	Rs. 150,000.00	43	34	32	
Duckless Enterprises	Rs. 45,000.00	132	142	151	
Ayubowan System	Rs. 20,000.00	542	754	823	
cricket Weerayo	Rs. 15,000.00	32	55	21	
		749	985	1027	

Study the above spreadsheet segment and answer the questions below.

- (i) Which formula should be entered into cell G6 to show the total amount of revenue made from the sale of "Business Express" from January to software?
- (ii) Write down the necessary steps to display the work completed in G6 in cells G7 to G9.
- (iii) Change the number format of G6- G9 cells to currency and format them with "Rs."
- (iv) Write the formula in cell D12 to calculate the average of the software quantity sold in January.
- (v) Write the function to find the maximum value in the range of G6 to G9 cells.

(10 Marks)

- (05) (i) Give a brief explanation of how **fibre optics** are used in data transmission.
- (ii) Compare the terms, **intranet** and **internet**.
- (iii) Provide a brief explanation of **firewalls** in relation to information communication.
- (iv) "Amila need an internet connection to his personal computer."
- a. Write two basic requirements for this purpose.
  - b. List down two main functions of the Internet.
  - c. State two advantages of having an internet connection.
  - d. Write two drawbacks of having an internet connection.
- (v) Explain the concept of telemedicine. List two advantages of using it. List two challenges involved in practising it.

(10 Marks)

(06) Write short notes on the following.

- (i) Name three types of malware and briefly describe three ways they can be infected.
- (ii) Name and explain three benefits of using computers in banking .
- (iii) Write about the significance of introducing Information and Communication Technology as a subject for undergraduate study programmes in faculties of Humanities and Social sciences.
- (iv) What is e-waste? List three potential environmental impact associated with e-waste.

(10 Marks)