Midterm Exam Questions

Section A: Multiple Choice Questions (10 marks, Each = 1 mark)

- A computer can be defined as: a) A mechanical device for simple calculations b) An electronic device that processes and stores data c) A machine for playing games d) None of the above

- Which of the following is an input device? a) Printer b) Mouse c) Projector d) Speaker

- The main function of the CPU is to: a) Store data permanently b) Perform arithmetic and logic operations c) Display output on screen d) Manage printers

- The motherboard primarily: a) Displays results b) Connects and communicates between hardware components c) Runs antivirus software d) Stores user data

- Which of the following is a type of storage device? a) Monitor b) USB Flash Drive c) Keyboard d) Speaker

- The Arithmetic Logic Unit (ALU) performs: a) Only data storage b) Arithmetic and logical operations c) Internet connections d) Sound recording

- The Von Neumann principle is based on: a) Hardware duplication b) Separate storage for data and instructions c) Shared storage for data and instructions d) Parallel computing

- Which of the following is system software? a) MS Excel b) VLC Media Player c) Windows 11 d) Photoshop

- In binary arithmetic, 1 + 1 +1 equals: a) 0 b) 10 c) 11 d) 1

- The function used in Excel to count cells meeting a condition is: a) SUMIF b) COUNTIF c) AVERAGE d) ROUND

_____ Section B: Short Answer / Problem Solving (10 marks, Each = 2 marks)

- List and briefly explain two main types of computer memory.

- Explain the difference between hardware and software with one example each.

- Describe the four basic components of a computer system as shown in the block diagram.

- Define the microprocessor and list its four main steps in instruction execution.

- What is a bus in computer architecture? Mention its three types.

- Differentiate between compiler and interpreter.

- Explain the five main functions of an Operating System.

- Convert the following binary number to decimal: $(11010)_2$ = ?

- Perform binary addition: 1011 + 1101 = ?

- In Microsoft Excel: a) Write a formula to find the average of cells A1 through A5. b) Write a SUMIF formula that adds values in B2:B10 where A2:A10 equals “Apples”.