

System Overview

EVALUATION SHEET

1. Four items in the list below comprise the *basic functions* of a computer. Next to each item write a T if the item is a basic computer function. Write an F if it is not one of the four basic computer functions.

Function	T or F
Control	<u>F</u>
Schedule	<u>F</u>
Store	<u>T</u>
Calculate	<u>F</u>
Input	<u>T</u>
Process	<u>T</u>
Sequence	<u>F</u>
Output	<u>T</u>

2. Listed below are seven applications and advantages of computers. Next to each application, write the letter of the advantage that corresponds to the application.

Application	Advantage
Business	<u>f</u>
Recreation	<u>g</u>
Science	<u>b</u>
Education	<u>c</u>
Simulation	<u>a</u>
Mechanical Control	<u>d</u>
Engineering	<u>e</u>

Advantages

- a. Allows experiments to be conducted that are too expensive, too dangerous, or too difficult to control in real environments.
- b. Allows researchers to develop complex mathematical models to explain physical and sociological phenomena by providing a means for validating these models through successive calculations.
- c. Functions as a unique tool to present instruction by adapting to the needs of individual students.
- d. Can control complex mechanical systems with intricate interaction and feedback between parts.
- e. Performs complex calculations and data analyses.
- f. Speeds up accounting and allows for work with a large number of accounts while maintaining up-to-date information on operations.
- g. Provides a unique instrument for playing games with intricate rules, strategies, and computations.

3. Listed below are 12 characteristics of computers. Write A or D next to each to indicate whether it applies to an analog or a digital computer.

Characteristic	Analog or Digital
Makes use of a patch panel.	<u> A </u>
Controlled by stored programs.	<u> D </u>
Represents data by electrical voltages.	<u> A </u>
Works with data that changes in a smooth, continuous manner.	<u> A </u>
Can only store small quantities of data.	<u> A </u>
Easy to reprogram.	<u> D </u>
Calculates by counting digits.	<u> D </u>
Limited in precision.	<u> A </u>
Able to store large amounts of data.	<u> D </u>
Data presented by discrete units, 0 and 1, or ON and OFF.	<u> D </u>
Able to work with great precision.	<u> D </u>
Combines voltages in order to perform arithmetic.	<u> A </u>

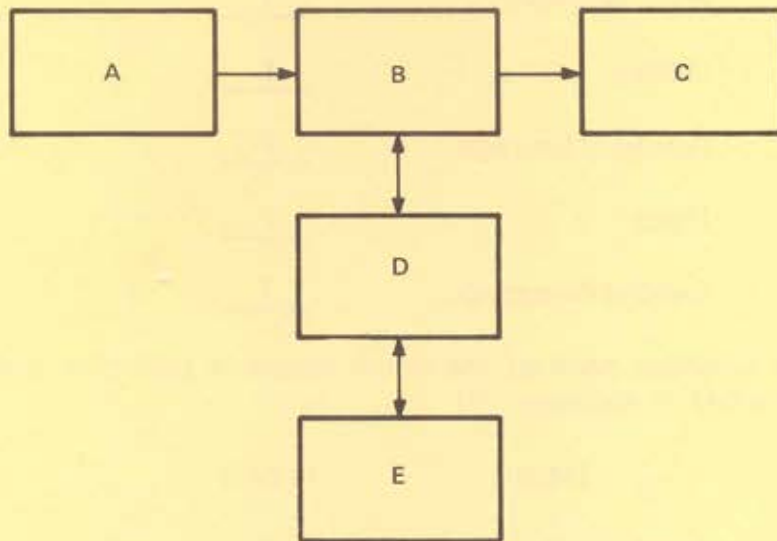
4. Examples of analog and digital devices are listed below. Write an A or D next to each to indicate whether it is an analog or a digital device.

Device	Analog or Digital
Odometer	<u>D</u>
Tachometer	<u>A</u>
Barometer	<u>A</u>
Taximeter	<u>D</u>
Traffic Light	<u>D</u>
Radio Tuner	<u>A</u>
Depth Gauge	<u>A</u>

5. Indicate that each of the following characteristics describes a dedicated (D), a special-purpose (S), or a general-purpose (G) computer by writing the correct letter in the blank space.

Characteristic	Type of Computer
Designed to solve a closely related group of tasks.	<u>S</u>
Built for one specific function	<u>D</u>
Most economical.	<u>D</u>
The most versatile type of computer.	<u>G</u>
Extremely efficient.	<u>D</u>
The computer with about medium speed.	<u>S</u>
Capable of performing whatever tasks it can be programmed to do.	<u>G</u>

6. Below is a simple block diagram of a computer system, and a list of the major units that comprise the computer system. Next to the name of each unit, write the letter that corresponds to the unit's position in the diagram.



Unit	Position in Diagram
Main Memory	<u> D </u>
Output	<u> C </u>
Auxiliary Storage	<u> E </u>
Input	<u> A </u>
Central Processor	<u> B </u>

7. Listed below are the five major units of a computer system. In the blank spaces, write a T if the unit is part of the computer mainframe. Write an F if the unit is not part of the computer mainframe.

Unit	Part of Mainframe
Main Memory	<u> T </u>
Output	<u> F </u>
Auxiliary Storage	<u> F </u>
Input	<u> F </u>
Central Processor	<u> T </u>

8. Indicate whether each of the items below is part of a computer's hardware (H) or software (S).

Item	H or S
Auxiliary Storage	<u> H </u>
Input Unit	<u> H </u>
Program	<u> S </u>
Central Processor	<u> H </u>
Instruction	<u> S </u>