

Student Name: _____

Unit No. **15****Part I.** Place the letter of the key term next to the correct definition.

Term	Definition
	This is the simplest movable linkage. It consists of four rigid bodies (called bars or links), each attached to two others by single joints or pivots to form a closed loop. They are simple mechanisms common in mechanical engineering machine design and fall under the study of kinematics.
	A link between two rigid components, such as parts or subassemblies. This applies force from the first component on the second component.
	This is designed to convert some input motion into a different output motion. It typically consists of a series of rigid links. Each link has one or more joints that rotate freely connecting the links together. Typically one link is fixed and cannot move and one link is driven in some input motion.
	An assembly with one or more degrees of freedom in specific components. This is also called a dynamic assembly.
	A process by which the mathematical relationships between various parts of mechanisms are used to emulate or predict physical relationships and their effects.
	A graphical representation of the path followed by a point on a mechanism.

A. Trace **B.** Linkage **C.** Simulation **D.** Four Bar Linkage **E.** Mechanism
F. Joint

Part II. Fill in the blanks.

_____ are designed to convert input motion into a different _____ motion. They typically consists of a series of rigid links. Each link has one or more joints which rotate freely, connecting the links together. Typically, one link is _____ and cannot move and one link is driven in some input motion. Linkages are a fundamental part of machine design because of their ability to create such a wide variety of output motions and their ability to alter the path, velocity, and acceleration of the input.

The simplest and one of the most common linkage types is the _____-bar linkage. This is a closed-_____ linkage system that can provide a wide variety of motion types.

Part III. Place the letter of the Inventor technical term next to the correct definition.

Term	Description
	Is the environment for modifying your model.
	Displays graphs and numerical values of all the input and output variables during and after a simulation. This contains a toolbar, a browser, a time steps pane, and a graph window. There are also shortcut menus with content based on the location of the cursor when you right-click.
	Creates a graphical representation of the path followed by a point on a mechanism.
	Outputs your simulation in either a realistic or an illustrative style of animation.
	Uses assembly constraints and parameters as animation input. You can animate the same mechanistic movement you are designing in your product.

A. Trace **B.** Render Animation **C.** Create Studio Animation
D. Construction Mode **E.** Output Grapher