Mastercam 2025 Vocabulary Study Guide

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1. Key Vocabulary Words & Definitions

General Terms

- **Machining (Mecanizado)** – The process of cutting or shaping materials using machines.
- **Toolpath (Trayectoria de herramienta)** – The programmed route that a cutting tool follows to shape a part.
- **Enhancements (Mejoras)** – Improvements or upgrades to the software.
- **Simulation (Simulación)** – A virtual test run of the machining process.
- **Setup (Configuración)** – Preparing machines, tools, and software for operation.

Milling (Fresado)

- **2D Toolpath (Trayectoria 2D)** – A simple cutting path for two-dimensional machining.
- **3D Toolpath (Trayectoria 3D)** – A more complex cutting path for three-dimensional machining.
- **Multiaxis (Multieje)** – A machining method using multiple angles and directions.
- **Deburr (Desbarbar)** – Removing sharp edges or rough surfaces from a machined part.

Turning (Torneado)

- **Lathe (Torno)** – A machine tool that rotates a workpiece to shape it.
- **Spindle Speed (Velocidad del husillo)** – The speed at which the cutting tool or workpiece rotates.
- **Feed Rate (Velocidad de avance)** – The speed at which the tool moves through the material.
- **Contour (Contorno)** – A machining method that follows the shape of an object.

Design & File Management

- **CAD Files (Archivos CAD)** – Digital design files used for creating parts.
- **Import/Export (Importar/Exportar)** – Moving files between different software or formats.
- **Mesh Geometry (Geometría de malla)** – A type of 3D modeling using a network of points.

Simulation & Machine Setup

- **Workpiece (Pieza de trabajo)** – The raw material being machined.
- **Fixture (Fijación/Sujeción)** – A device that holds a part in place during machining.

- **Stock (Material en bruto)** – The material before machining begins.
- **Safety Zone (Zona de seguridad)** – A predefined safe area for machining.

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2. Vocabulary Exercises

Exercise 1: Match the Words

Match the vocabulary words with their definitions.

1. ___ Workpiece
2. ___ Deburr
3. ___ CAD Files
4. ___ Feed Rate
5. ___ Spindle Speed
6. ___ Contour
7. ___ Toolpath
8. ___ Fixture

A. The speed at which a cutting tool moves through material.
B. A machine tool that rotates a workpiece for shaping.
C. The digital files used for designing parts in software.
D. A device used to hold a workpiece in place.
E. The raw material before machining begins.
F. The programmed route a tool follows to cut a part.
G. A method of machining that follows the shape of an object.
H. Removing sharp edges or rough surfaces from a part.

Exercise 2: Fill in the Blanks

Use the correct vocabulary word to complete the sentences.

1. Before starting the machine, we need to set up the correct _____ to avoid mistakes.
2. The _____ of the lathe determines how fast the tool rotates.
3. A good machinist always checks the _____ to ensure smooth edges after cutting.
4. The _____ is the material that will be cut and shaped during machining.
5. When exporting files, always make sure the _____ are in the correct format for the software.

Exercise 3: True or False

Mark **T** for True or **F** for False.

1. ___ A safety zone is a dangerous area where the machine moves faster.
2. ___ Toolpaths tell the machine where and how to cut.
3. ___ CAD files are not used in Mastercam software.
4. ___ Spindle speed controls how fast the tool rotates.
5. ___ A fixture holds the workpiece in place during machining.

Exercise 4: Translate the Words

Translate the following words from English to Spanish.

1. Machining → _____
2. Toolpath → _____
3. Workpiece → _____
4. Spindle Speed → _____
5. Fixture → _____
6. Contour → _____
7. Deburr → _____
8. CAD Files → _____
9. Safety Zone → _____
10. Import/Export → _____

Exercise 5: Multiple Choice

Choose the best answer for each question.

1. What is the purpose of a toolpath?
   a) To hold the material in place
   b) To remove burrs from a part
   c) To guide the machine on how to cut
   d) To increase the spindle speed
2. What does a fixture do?
   a) Rotates the cutting tool
   b) Holds the workpiece in place

c) Controls the speed of the machine
d) Imports CAD files

3. Which term refers to digital design files used for machining?
   a) Workpiece
   b) Toolpath
   c) CAD Files
   d) Contour

4. What does the feed rate control?
   a) The amount of material left on the workpiece
   b) The speed at which the tool moves through the material
   c) The type of tool used in machining
   d) The simulation process

5. What does "deburr" mean?
   a) To make a hole in the workpiece
   b) To remove sharp edges and rough surfaces
   c) To increase the spindle speed
   d) To create a CAD file
