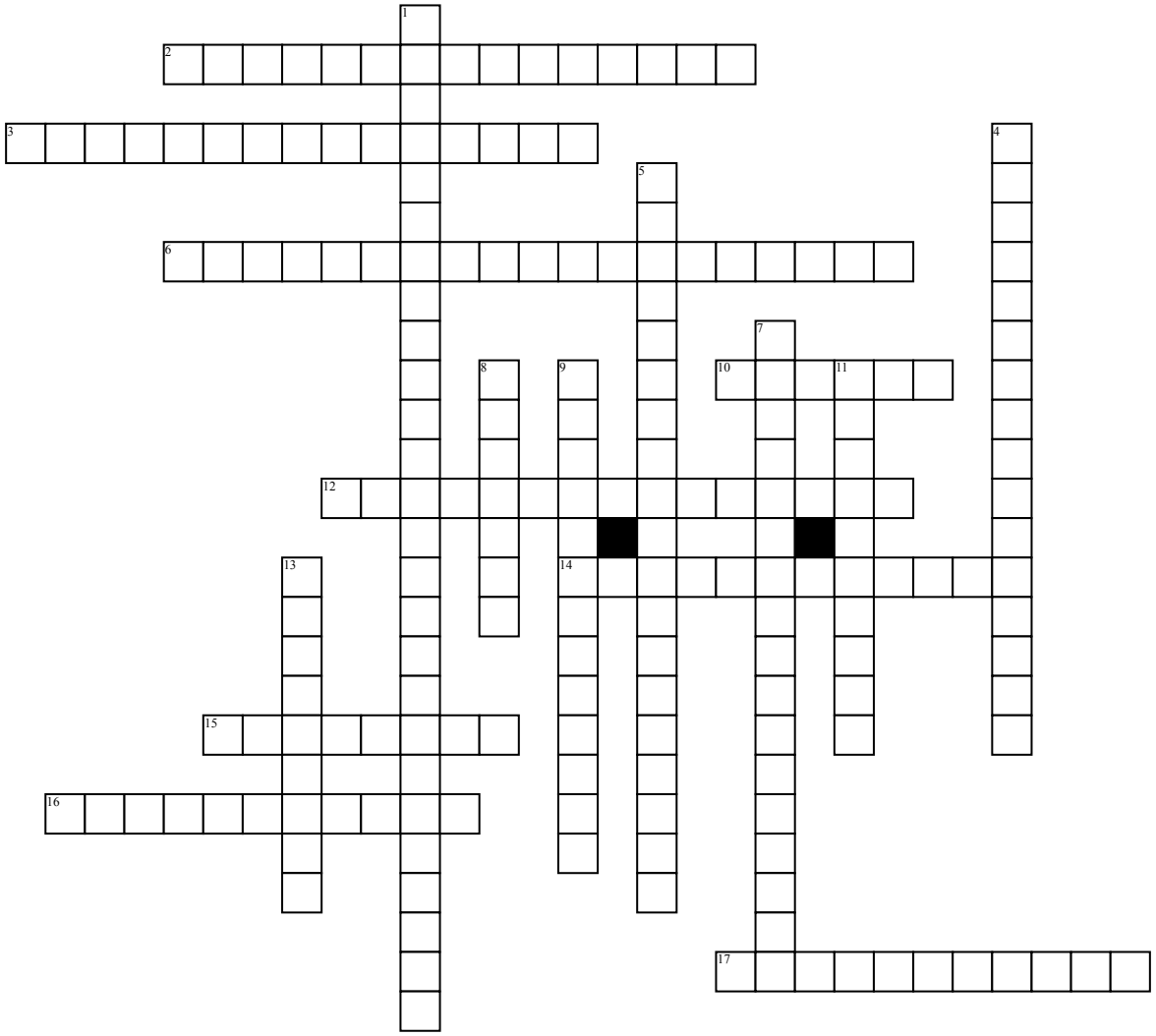
Name: _____ Date: _____ Period: _____

Basics of robotics



Across

2. A possible dangerous or harmful motion.

3. The system of using binary code that is most commonly used as digits for calculations or operations by modern computers and robotics systems.

6. (CAD) Computer software is used to develop and/or alter all aspects of design such as the end product, the system, machinery used etc.

10. A possible dangerous or harmful situation.

12. A manipulator that is designed to perform various programmed tasks during manufacturing. Industrial robots are automated by a program that controls its duties that tend to be dangerous or difficult for humans.

14. Energy is provided by conversion of various types of sources such as chemical, thermal, mechanical etc.

15. A signal from the robot equipment (sensors) about conditions as they actually exist, rather than as the computer has directed them to exist.

16. The diverse jobs that a robot is capable of executing.

17. Any object attached to the robot flange (wrist) that serves a function. This would include robotic grippers, robotic tool changers, robotic crash protection, robotic rotary joint, robotic press tooling, robotic paint gun, robotic arc welding gun, End effector is also known as robotic peripheral, robotic accessory, robot or robotic tool. End effector may also be hyphenated as "end-effector."

Down

1. (CAM) Computer software is used to design and/or alter the manufacturing process.

4. The amount of values in a system possible of variation. A robotic joint is equal to one degree of freedom. Degrees of Freedom -

5. Machinery capable of executing industrial operations.

7. The process of integrating industrial machinery with the help of control software. This integration increases efficiency, productivity and quality while decreasing costs.

8. The parts making up a machine not including the body or casing. In the case of an automobile this would include parts such as the frame and engine but not the body surrounding these parts.

9. This control immediately stops motion and tasks of the system by cutting off the drive power.

11. Operating without pre-programmed behaviors and without supervision from humans.

13. The measure of the robot's skill of completing specific difficult paths.