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**COURSE: MEE 586\_MACHINE DESIGN III ASSIGNMENT**

**SOLUTION TO ASSIGNMENT**

1. What is an integrated CAD/CAM

**ANSWER:**

An integrated CAD/CAM system provides one model supporting both design and manufacturing functions instead of having various file formats, numerous data translation/conversions, and different CAD/CAM models working with the same data is analogous to speaking the same language.

1. Draw a product cycle to describe the scope of CAD/CAM in the operation of manufacturing firm.

**ANSWER:**

1. Explain seven (7) characteristics of a good CAD software

**ANSWER:**

1. **Efficiency:** An efficient software uses less resources such as CPU in terms of time and usage in order to produce a better output.
2. **Simplicity:** A software must be simple to use, easy to understand and must be user friendly
3. **Readability:** This provides the capability within the software to help the user as and when required
4. **Flexibility:** The software must be able to incorporate the design modifications without much difficulty
5. **Reliability:** To avoid casualties the software must be able to avoid unwanted operations
6. **Portability:** The software must have the capacity to get transferred from one system to another
7. **Recover ability:** A good software must be able to give warnings before getting crashed and must be able to recover
8. Explain the divisions of software components

**ANSWER:**

**System Software:** System software includes the programs that are dedicated to managing the computer itself, such as the operating system, file management utility, and disk operating system (or DOS). The operating system manages the computer hardware resources in addition to applications data. Without the system software installed in our computers we would have to type the instructions for everything we want the computer to do.

The system software comprises of:

* Operating software
* Utilities

**Application software:** The application software are often called productivity programs or end-user programs because they enable the user to complete tasks, such as creating documents, spreadsheets, databases and publications, doing online researches, sending email, designing graphics, running businesses, and even playing games. Application software is specific to task it is designed for and can be as simple as a calculator application or as complex as a word processing application.

The application software comprises of:

* Packaged (off-the-shelf)
* Suites
* Custom