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**MEE 538 ASSIGNMENT**

1. What is an integrated CAM/ CAD

**ANSWER: Integrated circuit (IC)** is also called **microelectronic circuit**, **microchip**, or **chip**, an assembly of electronic components, fabricated as a single unit, in which miniaturized active devices (e.g., transistors and diodes) and passive devices (e.g., capacitors and resistors) and their interconnections are built up on a thin substrate of semiconductor material (typically silicon). The resulting circuit is thus a small monolithic “chip,” which may be as small as a few square centimetres or only a few square millimetres. The individual circuit components are generally microscopic in size.An integrated CAD/CAM system provides one model supporting both design and manufacturing functions instead of having various file formats, numerous data translations/conversions, and different CAD and CAM models.

**QUESTION 2**

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

**ANSWER:**

**QUESTION 3**

Explain (7) characteristics of a good CAD software

**ANSWER:**

**A)** Efficiency: An Efficient software is that which can use less resources such as CPU in terms of time and usage to give a better output.

**B)** Simplicity: A software must be simple to use and easy to understand and must be user friendly.

**C)** Flexibility: The software must be able to incorporate the design modification without much of difficulty.

**D)** Readability: This provides the capability within the software to help the user as and when required.

**E)** Portability: The software must have the capacity to get transferred from one system to other.

**F)** Reliability: To avoid causality the software must be able to avoid unwanted operation.

**G)** Recover ability: A Good software must be able to give warnings before getting crashed and must be able to recover.

**QUESTION 4**

Explain the (3) divisions of software components

**ANSWER:**

1. **Application software:** Which is software that uses the computer system to perform special functions or provide entertainment functions beyond the basic operation of the computer itself. There are many different types of application software, because the range of tasks that can be performed with a modern computer is so large.
2. **System software**: Which is software for managing computer hardware behavior, as to provide basic functionalities that are required by users, or for other software to run properly, if at all. System software is also designed for providing a platform for running application software,and it includes the following:

* Operating systems
* Device drivers
* Utilities

1. **Malicious software or malware:** Which is software that is developed to harm and disrupt computers. As such, malware is undesirable. Malware is closely associated with computer-related crimes, though some malicious programs may have been designed as prsactical jokes.