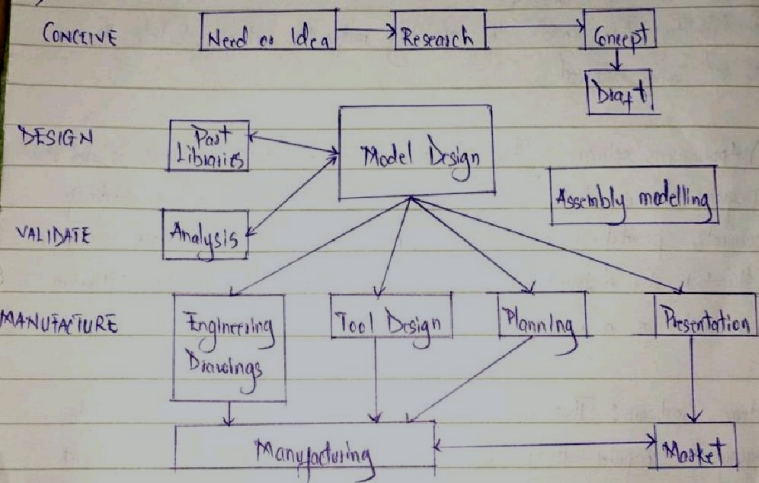EKINDU DIVINE

15/ENG06/026

MECHANICAL ENGINEERING

MEE 586

ASSIGNMENT

1) What is an Integrated CAD/CAM?

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. Integrated CAD/CAM systems are employed to achieve computer-aided integration.

2)

CONCEIVE | Need or Idea → Research → Concept → Draft

DESIGN | Part Libraries ← Model Design → Assembly modelling

VALIDATE | Analysis ←

MANUFACTURE | Engineering Drawings | Tool Design | Planning | Presentation | Manufacturing ← → Market

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

ii) **Reliability**: To avoid casualties the software must be able to avoid unwanted operation

iii) **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.

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

v) **Recoverability**: A good software must be able to give warnings before getting crashed and must be able to recover.

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

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

4) i) **Applications Software**: They 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. Application software is specific to the task it is designed for and can be as simple as a calculator application or as complex as a word processing application.

ii) **Systems Software**: These includes the programs that are dedicated to managing the computer itself, such as the operating system, file management

abilities, and disk operating system. The operating system manages the computer hardware resources in addition to applications and data. Without systems software installed in our computers we would have to type the instructions for everything we wanted the computer to do.

iii) User Interface : It is designed in such a way that it is expected to provide the user insight of the software. UI provides fundamental platform for human-computer interaction. UI can be graphical, text-based, audio-video based, depending upon the underlying hardware and software combination.