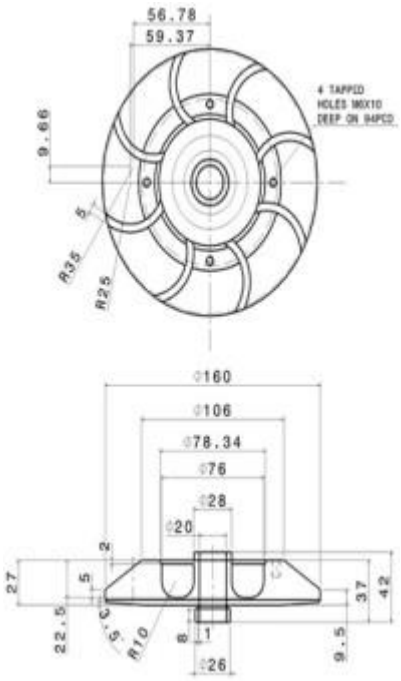
UNIT I

1.Best suited set of commands to draw this model

1 point



- 1)Revolve, hole and pocket
- 2)Revolve, pocket and pattern
- 3)both of above
- 4) none of above

2. It may involve stress-strain calculations, heat transfer computations, or the use of differential equations to describe the dynamic behavior of the system. also to perform mass properties and finite-element analysis (staticand dynamic analysis). 1 point

- [x] Engineering Analysis
- [ ] gemetric modeling
- [ ] computer aided drafting
- [ ] design review and evaluations

This module provides users with utility and system commands that deal with their accounts and file. Typical functions such as file manipulations (delete, copy, rename, etc.). Managing directories and sub-directories using text editors, programming and accounts setups are supported by this module. 1 point

- ○ Geometric / graphic module
- ● Operating system module
- ○ application module
- ○ Programming module

CAD phase supports the synthesis phase which is concerned with the computer compatible mathematical description of the geometry of an object. The basic functions is to generate geometric elements such as points, lines, circles, primitives such as cubes and functions such as scaling, rotation, transformation, joining, wire frame representation, and 1 point

- ○ Engineering Analysis
- ● geometric modeling
- ○ computer aided drafting
- ○ Design review and

A CAD modeler which gives only a geometrical description of the 3D object boundary without any topological information. ... 1 point

- ○ Solid model
- ○ surface model
- ● wireframe model
- ○ none of the above

It provides users with functions to perform geometric modeling and construction, editing and manipulation of existing geometry, drafting and documentation. 1 point

- ● Geometric / graphic module
- ○ Operating system module
- ○ application module
- ○ Programming module

It is the systematic process of developing a design including all information discovery, planning and communications. 1 point

- ○ Design modeling and simulation
- ○ Design conceptualization
- ● Design Analysis
- ○ Design evaluation and

The use of computers to design two-or three-dimensional models of physical objects is known as

1 point

- [x] computer aided design
- [ ] computer aided manufacturing
- [ ] computer aided inspections
- [ ] computer aided engineering

This module includes, mass property calculations, assembly analysis, Tolerance analysis and synthesis, sheet metal design, finite element modeling and analysis, Mechanisms analysis, animation techniques and simulation and analysis of plastic injection molding.

1 point

- [ ] Geometric / graphic module
- [ ] Operating system module
- [x] application module
- [ ] Programming module

Best suited modeling method to create nut bolt, pulley etc

1 point

- [ ] Wireframe modeling
- [ ] surface modeling
- [x] solid modeling
- [ ] None of the above

it deals with the way you are going to model your design project — 1 point

- [x] Modeling strategy
- [ ] Software modules
- [ ] Modeling approach
- [ ] None of the above

It is a computer software or system that is used to create 3-D and 2-D representations or models of various tangible objects such as bridges, buildings, or mechanical parts to aid in the creation, modification, analysis, or optimization of a design. it is used to increase the productivity of the designer, improve the quality of design, improve communications through documentation, and to create a database for manufacturing. — 1 point

- [ ] Engineering Analysis
- [ ] geometric modeling
- [x] computer aided drafting
- [ ] Design review and evaluations

The CAD System Requirements On basis of geometric modeling Capabilities includes — 1 point

- ○ Representation techniques (types of modeling schemes) Coordinate
- ○ systems and inputs (support to coordinate systems) Modeling
- ○ entities (verification and editing of command entities) Geometric
- ○ editing and manipulations (support to types of modeling)Graphics
- ○ standard support (support exchange standards)
- ● All

Identify the CAD phase which involve, Dimension, tolerances, bill of Materials, Numerical control — 1 point

- ○ Design modeling and simulation
- ○ Design conceptualization
- ○ Design Analysis and optimization
- ● Design evaluation

CAD model that do not have a uniform cross section and/or do not have constant thickness. Such models usually require more than one sketch in different sketch planes and use advanced commands such as sweep and loft.

- ○ two dimensional model
- ○ two and half dimensional model
- ● three dimensional model
- ○ none of the above

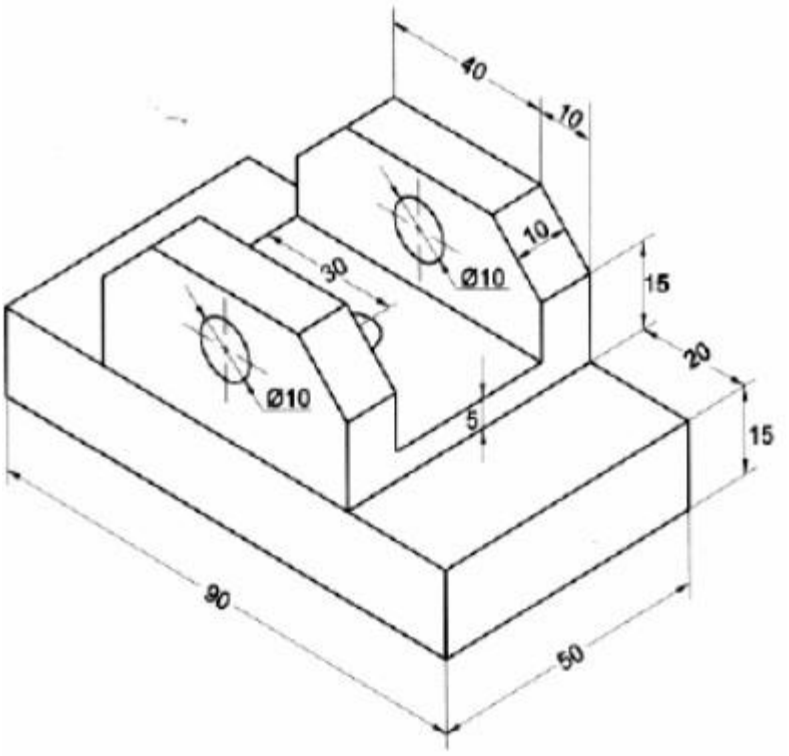
This PLM stage consists of peak sales, lowest cost per customer,high profit, mass market an stable no of competitors

1 point

- ○ Introduction
- ○ growth
- ● maturity
- ○ decline

Best suited set of commands to draw this model is

1 point



- ● 1)Extrusion, hole and pocket
- ○ 2)Extrusion and pocket
- ○ 3)Pocket and Sweep
- ○ 4) none of above

The process a product goes through from when it is first introduced into the market until it declines or is removed from the market. 1 point

- ○ Computer aided design
- ○ computer aided manufacturing
- ● Product life cycle
- ○ Computer aided engineering

This PLM stage consists of low sales, high cost per customers, financial losses, innovative customers. 1 point

- ● Introduction
- ○ growth
- ○ maturity
- ○ decline

This PLM stage consists of falling sales, fall in profit, cost per customer, no of competitors 1 point

- ○ Introduction
- ○ growth
- ○ maturity
- ● decline

Identify the area of CAD applications — 1 point

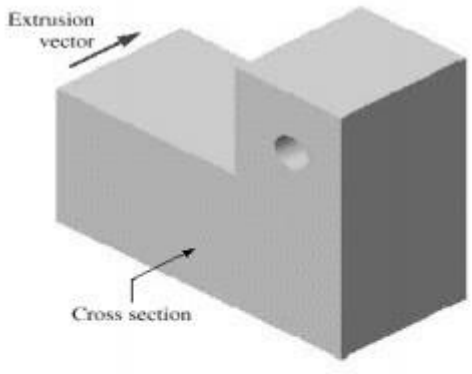
- ○ Automotive and Marine industries, Shipbuilding and piping design
- ○ Aerospace and nuclear industries, Industrial and architectural design
- ○ Medical Field and Prosthetics, Electrical and Electronic applications
- ○ computer animation and interior design
- ● All

In CAD, a technique for representing 3D objects, in which all surfaces are visibly outlined in lines, including the opposite sides and all internal components that are normally hidden from view. — 1 point

- ○ Solid model
- ○ surface model
- ● wireframe model
- ○ none of the above

The sketch showing the type of model

1 point



- ○ Two dimensional model
- ◉ Two and Half dimensional model
- ○ three dimensional model
- ○ none of the above

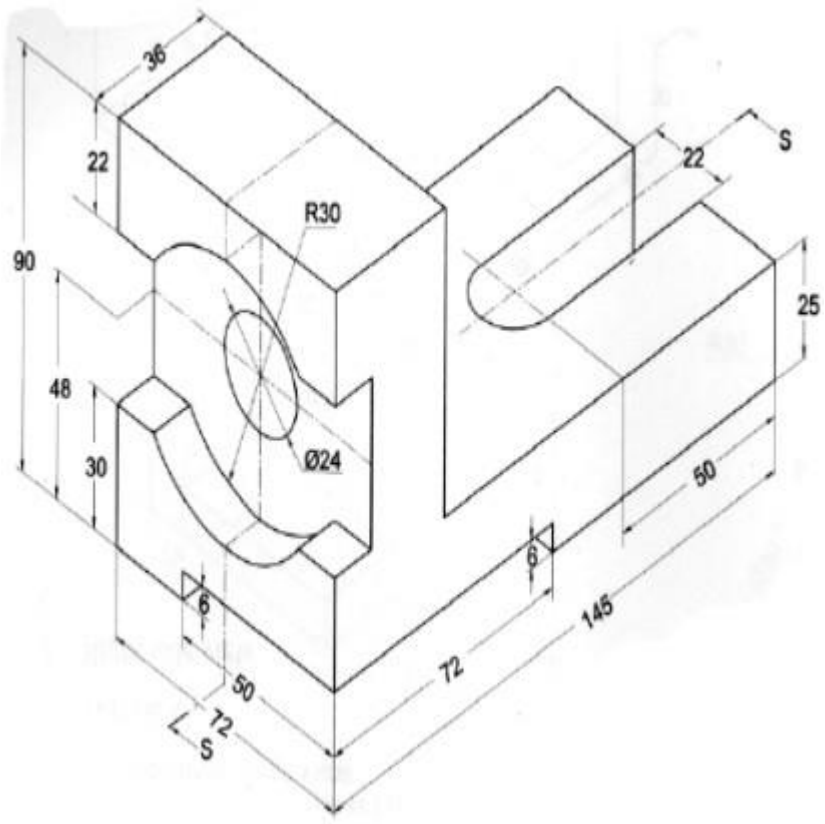
Best suited modeling method to create CAD model of given sketch is

1 point

- ○ Wireframe modeling
- ● surface modeling
- ○ solid modeling
- ○ none of the above

Best suited set of commands to draw this model is

1 point



1) Extrusion, hole and pocket

2)Extrusion and Sweep

3)both of above

4) none of above

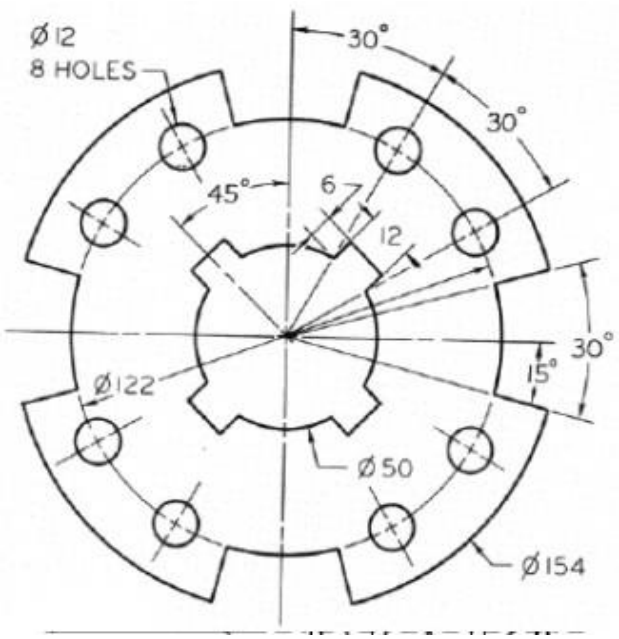
Identify the correct features of CAD — 1 point

- ○ Creation of engineering drawings from the solid models
- ○ Automated design of assemblies, which are collections of parts and/or other assemblies
- ○ Simulation of designs without building a physical prototype
- ○ Production of engineering documentation, such as manufacturing drawings, and Bills of Materials required building the product
- ● all

Identify the CAD phase which involve, Geometric modeling techniques, graphic aids, manipulations and visualization. — 1 point

- ○ Design modeling and simulation
- ● Design conceptualization
- ○ Design Analysis and optimization
- ○ Design evaluation and communication

Best suited set of commands to draw this sketch 1



1) Creating no of holes with different diameters as shown in figure

2) use of circle and pattern command

3) use of circle and mirror command

4) both 2 and 3

Identify the wrong statement related to product life cycle — 1 point

- [x] conversion of orthographic view of image into isometric view for complete visualization and applications.
- [ ] is a complete closed loop system of various phases from initial phase of its demand till it reach to end user.
- [ ] is associated with marketing and management decisions within businesses, and all products introduction, growth, maturity, and decline. go through four primary stages:
- [ ] The process of strategizing ways to continuously support and maintain a product is called product life cycle management.

Is it possible to view CAD models using Web browser without having the CAD systems that have created them up and running. — 1 point

- [x] Yes
- [ ] No
- [ ] Maybe
- [ ] none of the above

Best suited modeling method to create CAD model of given sketch is

1 point

- ○ Wireframe modeling
- ● surface modeling
- ○ solid modeling
- ○ none of the above

It is the use of models (e.g., physical, mathematical, or logical representation of a system, entity, phenomenon, or process) as a basis for study to develop data utilized for managerial or technical decision making. 1 point

- [x] Design modeling and simulation
- [ ] Design conceptualization
- [ ] Design Analysis and optimization
- [ ] Design evaluation

The CAD System Requirements On basis of system consideration includes, 1 point

- [ ] Hardware (I/P and O/P devices like mouse, keyboards, etc)
- [ ] Software support (familiar with various software for import and export)
- [ ] Maintenance (easy and quick service)
- [ ] Vendor support and service (training, filed services, technical support etc)
- [x] All

It is an engineering design methodology using a mathematical formulation of a design problem to support selection of the optimal design among many alternatives. 1 point

- ○ Design modeling and simulation
- ○ Design conceptualization
- ● Design optimization
- ○ Design evaluation and

Identify the odd parameter in scope of CAD from following 1 point

- ○ Geometric modeling
- ○ Computer graphics
- ○ Design
- ● Computer aided manufacturing

Among the 3D modeling approach which doesn't include use of boolean operations, 1 point

- ○ Primitive approach
- ○ feature approach
- ● sketching approach
- ○ none of the above

The CAD System Requirements on basis of Application based requirements includes 1 point

- ○ Assemblies or model merging (generation of assemblies)
- ○ Design applications (Mass property calculations, tolerance analysis, FEA)
- ○ Manufacturing applications (generation of tool path & verification in CAM, CIM, integration between CAD CAM etc.)
- ○ Support to programming languages (Support to various levels of programming languages)
- ● All

This module provides users with system dependent and standard computer languages for analysis and calculations which allows users to customize systems by automate them to fit certain design and manufacturing tasks 1 point

- ○ Geometric / graphic module
- ○ Operating system module
- ○ application module
- ● programming module

The process of generating ideas for an optimum solution to the design problem. These ideas should originate originally from the product concept and stated definitions of the design problem. 1 point

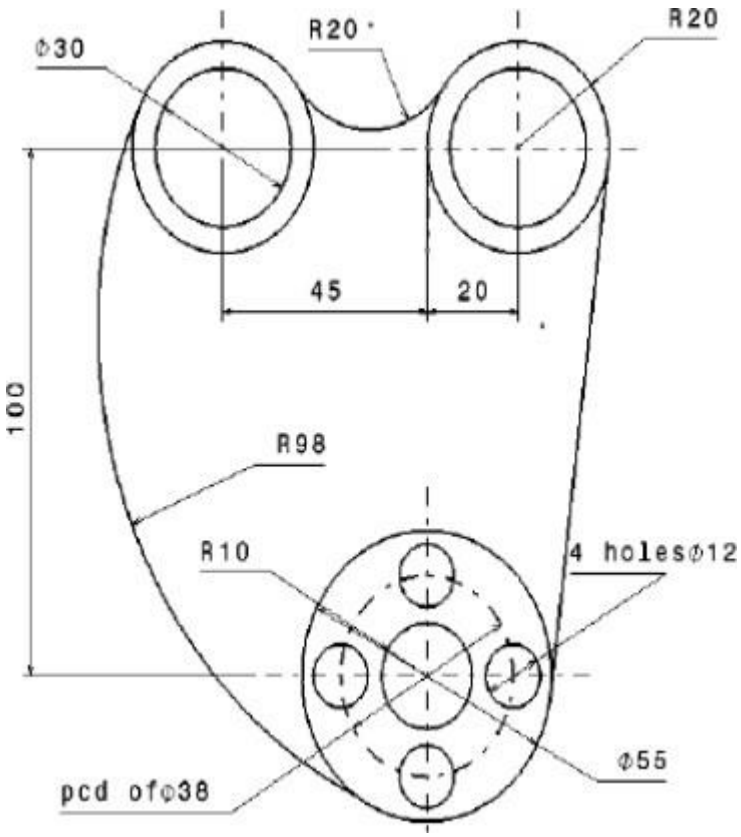
- ○ Design modeling and simulation
- ● Design conceptualization
- ○ Design Analysis and optimization
- ○ Design evaluation

The CAD System Requirements On basis of design documentations includes 1 point

- ○ Representation techniques (types of modeling schemes)
- ○ coordinate systems and inputs (support to coordinate systems)
- ○ Modeling entities (verification and editing of command entities)
- ○ Generation of engineering drawings (Layout and blueprint with all requirements)
- ○ Graphics standard support (support exchange standards)
- ● All

Best suited approach to draw this sketch is

1 point



- Primitive approch
- Feature based approch
- Sketching approch
- All
- none of the above

It is common to network the system to transfer the CAD database of a model for analysis purposes or to transfer its CAM database to the shop floor for production. This module also serves the purpose of translating databases between CAD/CAM systems using graphics standards such as IGES and STEP

1 point

- ○ Geometric / graphic module
- ● communication module
- ○ application module
- ○ programming module

This module provides Various design earns in different geographical locations can work concurrently on the same part, assembly, or drawing file in real time over the Web. One team can make changes that other teams can view and accept or reject.

1 point

- ○ Geometric / graphic module
- ○ communication module
- ○ application module
- ● Collaboration module

It is checking whether the designed part has been designed properly or not and if they will fail in practical situations. It includes features like zoom in/out, layering, checking interference, animation capabilities etc. 1 point

- ○ Engineering Analysis
- ○ geometric modeling
- ○ computer aided drafting
- ● Design review and evaluations

When we create the model cross section in a sketch plane and extrude the cross section with uniform thickness, or we revolve it to create an axisymmetric model gives, 1 point

- ○ two dimensional model
- ● two and half dimensional model
- ○ three dimensional model
- ○ none of the above

This PLM stage consists of increasing sales, fall in cost per customer, rise in profit, more competitors 1 point

- ○ Introduction
- ● growth
- ○ maturity
- ○ Decline

Identify the Elements for good modeling strategy — 1 point

- ○ Design intent
- ○ Feature based modeling
- ○ Modeling approach
- ○ Associatively
- ● All

Best suited modeling method to create sketches of intersecting, open profile sketches is — 1 point

- ○ Wireframe modeling
- ● surface modeling
- ○ solid modeling
- ○ none of the above

It involves Keeping track of decisions and design reviews and exchange of design in various standard formats, types of files and communications modes. 1 point

- ○ Design modeling and simulation
- ○ Design conceptualization
- ● Design documentation and communication
- ○ Design evaluation and optimization