PANIPAT INSTITUTE OF ENGINEERING AND TECHNOLOGY PANIPAT

DEPARTMENT OF MECHANICAL ENGINEERING

LESSON PLAN

Subject Name: - CAD

Branch/Semester: -Mechanical (7th Sem.) **Subject Code: -MEP-401A**

Sr. No.	Lecture No.	Topics To Be Covered	Planned On	Mode
UNIT-1				
1	L1	Introduction to CAD/CAM and subject overview		WHITE BOARD/PPT
2	L2	Traditional product cycle, CAD/CAM product cycle		WHITE BOARD/PPT
3	L3	Prototyping, Rapid prototyping		WHITE BOARD/PPT
4	L4	Design for everything, Computer aided engineering		WHITE BOARD/PPT
5	L5	Customer relationship management, product lifecycle management		WHITE BOARD/PPT
6	L6	Introduction, basic structure of computer, Input, storage, processing, output		WHITE BOARD/PPT
7	L7	control, microcomputer, minicomputer, mainframes		WHITE BOARD/PPT
8	L8	Supercomputer, Input out device, LAN, MAN, WAN		WHITE BOARD/PPT
9	L9	Revision/Test		
UNIT-2				
9	L9	Introduction, System software, application software		WHITE BOARD/PPT

10	L10	General CAD Process Selection of CAD system		WHITE BOARD/PPT
11	L11	Database management system, Data structure Database types		WHITE BOARD/PPT
12	L12	Function of database management system (DBMS),		WHITE BOARD/PPT
13	L13	Advantages of DBMS, Database coordinate system 2-D rotation, Reflection, Scaling		WHITE BOARD/PPT
14	L14	Introduction, 2D transformation, translation		WHITE BOARD/PPT
15	L15	Homogeneous coordinates, Reflection transformation, Shear transformation		WHITE BOARD/PPT
16	L13	Inverse transformation for reflection and translation		WHITE BOARD/PPT
17	L14	Composite transformations and its examples		WHITE BOARD/PPT
18	L18	Geometric transformations in engineering design, Solved examples		WHITE BOARD/PPT
19	L19	Revision/Test		
UNIT-3				
20	L20	Geometric transformations, Solved examples		WHITE BOARD/PPT
21	L21	Need of geometric modeling, requirements of geometric modeling		WHITE BOARD/PPT
22	L22	Wire frame , surface and solid modeling,		WHITE BOARD/PPT
23	L23	Diff b/w wire frame, surface and solid modeling		WHITE BOARD/PPT
24	L24	Introduction to solid modeling ,Set theory		WHITE BOARD/PPT
25	L25	Representation schemes for solid models, boundary representation		WHITE BOARD/PPT
26	L26	Cellular decomposition, feature based modeling		WHITE BOARD/PPT

27	L27	Euler theory, Mass property calculation		WHITE BOARD/PPT
28	L28	Introduction, Parametric representation of analytic curves		WHITE BOARD/PPT
29	L29	line ,circle Conic section		WHITE BOARD/PPT
30	L30	ellipse, parabola		WHITE BOARD/PPT
31	L31	Parametric representation of synthetic curve		WHITE BOARD/PPT
32	L32	Hermite cubic spline curve B-spline curve		WHITE BOARD/PPT
33	L33	non-uniform rational, B-spline curves and their manipulation		WHITE BOARD/PPT
34	L34	Revision/Test		
UNIT-4				
28	L28	Introduction, Surface entities		WHITE BOARD/PPT
29	L29	Analytic surface, Plane surface.		WHITE BOARD/PPT
30	L30	Tabulated surface, Ruled surface		WHITE BOARD/PPT
31	L31	Surface of revolution, Sweep surface,		WHITE BOARD/PPT
32	L32	Synthetic surface, Hermite bicubic surface,		WHITE BOARD/PPT
33	L33	Bazier surface, Bilinear surface		WHITE BOARD/PPT
34	L34	Coons surface		WHITE BOARD/PPT
36	L35	Introduction, CAD/CAM data exchange		WHITE BOARD/PPT
37	L36	Neutral file formats, Data exchange format		WHITE BOARD/PPT
38	L38	Initial graphics exchange specification		WHITE BOARD/PPT
39	L39	Special triangular language		WHITE BOARD/PPT
40	L40	Standard for exchange of product data		WHITE BOARD/PPT
41	L41	Revision/Test		
		Onwards– Problem solution/Revision/Test		

(COURSE INCHARGE)