

## 2.13 30292 AUTO DRAWING & C.A.D.

### UNIT-1 WORKING DRAWING (USING CODE IS: 919):

- 1.1 Piston
- 1.2 Connecting rod
- 1.3 Crank shaft
- 1.4 Cylinder, dry and wet liner
- 1.5 Bush bearing, ball and roller bearing

### UNIT-2 ASSEMBLY DRAWING:

- 2.1 Spark plug
- 2.2 Fuel injector
- 2.3 Valve and valve box
- 2.4 Simple jet carburetor
- 2.5 Rotary gear pump

### UNIT-3 EXPLODED DRAWING: NEED AND MEANING OF EXPLODED VIEWS, FREE HAND SKETCHING OF

- 3.1 Traffic symbols, colour codes, number plates
- 3.2 Electric symbols
- 3.3 Circuit diagrams
  - 3.3.1 Fuel gauge
  - 3.3.2 Temperature gauge
  - 3.3.3 Oil pressure gauge
  - 3.3.4 Speedometer
  - 3.3.5 Odometer
- 3.4 wiring diagrams:
  - 3.4.1 Two wheel vehicles
  - 3.4.2 Four wheel vehicles
- 3.5 lubrication charts
- 3.6 valve operating mechanisms

### UNIT-4 GEAR TOOTH PROFILES (SPUR AND BEVEL GEARS):

- 4.1 Approximate method
- 4.2 Prof. Unwin's method Cam:

### UNIT-5 COMPUTER AIDED DRAWING (LATEST VERSION OF AUTO CAD AVAILABLE IN THE INSTITUTION SHOULD BE USED):

- 5.1 Concept of auto cad
- 5.2 Creating and editing
- 5.3 Dimensioning and using text
- 5.4 Plotting in auto cad

- 5.5 Using coordinate system of specify points, using direct distance entry shifting and rotating the Coordinate system
- 5.6 Different line commands – p-line, x-ling, m-line, ray, hidden, centre line, dash, zig-zag line.
- 5.7 Types of different editing commands – scale, erase, copy, stretch, lengthen, and explode
- 5.8 Types of object, snap setting options – ortho mode, snap, grid, geometric snap mode
- 5.9 Principle of drawing curved objects; create point objects, changing drawing order of objects crating solid filled areas and regions
- 5.10 Modifying of curved objects
- 5.11 Drawing to scale, dimensioning and text, tolerance, modifying dimensions and tolerances
- 5.12 Command for hatching and sectioning
- 5.13 Draw isometric views of simple objects.

**Reference books:**

1. Machine drawing Laxminaryan & Mathur
2. Mastering AutoCAD 2000 b.p.b.publishers
3. Machine drawing P.S. Gill
4. Auto cad 14 for Engineers P. Nageshwararao (tmh)

