Syllabus for the subject

of

ENGINEERING DRAWING

(For 3rd &4th semester)

Under

CRAFTSMEN TRAINING SCHEME (CTS)

(For Mechanic Mechatronics)

Re-Designed

in

2015

By

Government of India

Ministry of Skill Development & Entrepreneurship

Directorate General of Training

CENTRAL STAFF TRAINING AND RESEARCH INSTITUTE

Block - EN - 81 SECTOR - V, SALT LAKE CITY, KOLKATA - 700 091

SYLLABUS OF ENGINEERING DRAWING FOR 3rd SEMESTER

Mechanic Mechatronics

Sl. No.	Topics	Hrs.
1.	Drawing of Hydraulic &Pneumatic symbols. Block diagram of hydraulic & pneumatic power pack.	63
2.	Geometrical constructions polygons in circles	
3.	Geometrical constructions of in scribed circles in polygons. Geometrical constructions circumscribed circles in polygons. Geometrical constructions of tangential arcs and circles.	
4.	Preparation of templates by using tangential arc method. Engineering curves – parabola and hyperbola.	
5.	Ellipse 4 types of constructions@ 2 sheets.	
6.	Exercise on sectional views.	
7.	Exercise on Orthographic views, dimensioning and sectioning	
8.	Projection of lines, planes and solids@3/4 sheets.	
9.	Practice on Basic electrical symbols. Wiring diagram of speed control of AC/DC Motors. Connection diagram of control of AC/DC Motors. Connection diagram of megger.	
10.	Representation of seals, bearings, threads and screw joints	
11.	Introduction to Auto CAD- 2D drafting (Component drawing & electrical circuits)	

SYLLABUS OF ENGINEERING DRAWING FOR 4TH SEMESTER

Mechanic Mechatronics

Sl. No.	Topics	Hrs.
1.	Block diagram by LVDT, Block diagram OCR, Block diagram TC. Basic Block Diagram of PLC Simplifying Diagram. Timer circuit, Thermocouple, Opto-Electronic Devices like photodiode, Photo Transistor.	63
2.	Symbols of Pressure and flow sensors. Block diagram of servo motor.	
3.	Concept of coordinate axe in CNC, axe designation. X,Y,Z,A,B,C & U,V,W. Application of coordinate axis in CNC	
4.	Block diagram of computer, Input devices & output devices.	
5.	Practice on secondary, auxiliary projections. Concept of co-ordianate axis in CNC.	
6.	Interpenetrating Curves of solids, Lines of intersection of plain surface to plain surface, @2 sheets). Lines of intersection of plain surface to curved surface@ 2 sheets). Lines of intersection of curved surface to curves surface) @ 2 sheets).	
7.	Blue print reading conventions. Welding Symbols, surface roughness Symbols and their application. Tolerance of forms and positions and their applications (@ 4 sheets)	
8.	Introduction of 3D modelling	