

# Sterling Educational Systems

Factory ; 11, Suvarna Laghu Udyog Yojana MIDC,Hingna,Nagpur 440016,  
 Telefax : 0712-2540527, mobile :09373102277, email : [sterling\\_sys@yahoo.com](mailto:sterling_sys@yahoo.com)

## STEAM SECTION

1) Babcock and Wilcox Boiler	S-1
2) Loeffler Boiler	S-2
3) Velox Boiler	S-3
4) Green's Economiser	S-4
5) Jet Condensers	S-5
6) Surface Condensers	S-6
7) Separating Calorimeter	S-7
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4) General Layout of Ice Factory	R-3
5) Ref. and Air Cond. Controls-I	R-4
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3) Seam Welding	W-3
4) Flash Welding, Projection Welding, Percussion Welding	W-4
5) Electroslag Welding	W-5
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7) Welding Torches	W-7
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12) Electron & Laser Beam Welding	W-12
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3)Single Cylinder Engine	AE-3
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6)Coil System of Ignition	AE-6
7)Electronic Ignition System	AE-7
8)Spark Plugs	AE-8
9)Layout of Simple Fuel Injection system	AE-9
10)In-line Plunger tyoe Fuel Injection Pump	AE-10
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12)Mechanical Petrol Pump / Electrical Petrol Pump	AE-12
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14) Various Types of Fuel Filters	AE-14
15) Full Pressure engine Lubricating System	AE-15
16) Circulating Splash Lubricating System	AE-16
17) Engine Cooling System	AE-17
18) Starter Motor	AE-18
19) Constant Mesh Gear Box	AE-19
20) Four Speed Sliding Mesh Gear Box	AE-20
21) Synchromesh Gear Box	AE-21
22) Action of Differential	AE-22
23) Single Plate Clutch	AE-23
24) Hydraulic Brake System	AE-24
25) Wankel Engine	AE-25
26) The Car (Showing Carburettor, Gear Box, Steering Mechanism,Suspension Unit and Disc Brake Assembly)	AE-26
27) Lubricating Oils	AE-27

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## ENGINEERING DRAWING – I

1) Conventional Representation of Lines /Materials	ED-1
2) Methods of Projection	ED-2
3) Dimensioning - I	ED-3
4) Dimensioning - II	ED-4
5) Orthographic Projection - I	ED-5
6) Orthographic Projection - II	ED-6
7) Section Planes	ED-7
8) Rivets and Riveted Joints	ED-8
9) Main Thread Forms	ED-9
10) Types of Gears	ED-10
11) Couplings-I	ED-11
12) Couplings-II	ED-12

## ENGINEERING DRAWING – II

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14) Types of Keys	ED-14
15) Pulleys-I	ED-15
16) Pulleys-II	ED-16
17) Bearings	ED-17
18) Bolts and Washers	ED-18
19) Types of Nut	ED-19
20) Types of Screw	ED-20
21) Intersection of two Prisms	ED-21
22) Intersection of a Prism and a Cone	ED-22
23) Development of Surfaces of Solids	ED-23

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3)Carpentry saws	C-3
4)Carpentry Chisels	C-4
5)Carpentry Planes	C-5
6)Carpentry Braces	C-6
7)Carpentry Holding Tools	C-7
8)Hand Tools used in Carpentry	C-8
9)Carpentry Joints-I	C-9
10)Carpentry Joints-II	C-10
11)Types of Patterns-I	C-11
12)Types of Patterns-II	C-12

## HYDRAULICS –I

1)Hydro-Electric Power Plant	H-1
2)Pelton Wheel	H-2
3)Francis Turbine	H-3
4)Kaplan turbin	H-4
5)Centrifugal Pumps	H-5
6)Impellers of centrifugal Pumps	H-6

## HYDRAULICS –II

7)External gear Pump	H-7
8)Internal Gear Pump	H-8
9)Lobe Pump	H-9
10)Generated Robe Pump	H-10
11)Screw Pump	H-11
12)Unbalanced type Vane Pump	H-12
13)Balancedv type Vane Pump	H-13
14)straight axis piston Pump	H-14
15)Bent axis piston Pump	H-15
16)stationary cylinder type radial piston Pump	H-16
17)Rotating Cylinder type radial piston pump	H-17

## FITTING-I

1)Pipe Vice / Bench Vice	F-1
2)Types of Hammer	F-2
3)Fitting Of chisels	F-3
4)Kinds of Chisels	F-4
5)scrapers	F-5
6)Hacksaws	F-6
7)Try Square / Vee Block / angel Plate	F-7
8)sawing / Filling / chiselling	F-8
9)Taps and Dies	F-9

## FITTING-II

10)Reamers	F-10
11)Pipe fittings	F-11
12)Wrenches	F-12
13)Hand tools Used in fitting Shop	F-13
14)Tapping a blind Hole	F-14
15)Cutting a Thread with Die and stock	F-16
16)Methods of Filling	F-16
17)Tapping Through Holes	F-17

## FOUNDRY TECHNOLOGY

1)Cupola furnance	FT-1
2)Blast furnanace	FT-2
3)Electric Arc furnanace	FT-3
4)Foundry Hand Tools-I	FT-4
5)Foundry Hand Tools-II	FT-5
6)centrifugal casting	FT-6

## PRODUCTION - I

1)Milling Cutters-I	P-1
2)Milling Cutters-II	P-2
3)elements of Jigs and Fixtures(Locating Devices)	P-3
4)elements of Jigs and Fixtures (Clamping Devices)	P-4
5)elements of Jigs and Fixtures (Indexing Devices)	P-5
6)Elements of Jigs(Drill bushes)	P-6
7)sheet Metal tools-I	P-7
8)Sheet Metel Tools-II	P-8
9)Lathe Parts	P-9
10)Screw Cutting in the Lathe	P-10
11)Taper Turning	P-11

## PRODUCTION - II

12)Universal Dividing Head	P-12
13)Turret Lathe	P-13
14)Capstan Lathe	P-14
15)Parts of standard Shaper	P-15
16)Vertical Milling Machine	P-16
17)Column and Knee type Milling Machine	P-17
18)Grinding Machine	P-18
19)Grinding Wheels	P-19
20)Sensitive Drilling Machine Vertical Drilling Machine	P-20
21)Redial Drilling Machine	P-21

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## (ELECTRONICS)

### BASIC ELECTRONICS

1) Electronic Components (Active)	E-1
2) Electronic Components (Passive)	E-2
3) Diode as a Rectifier	E-3
4) Integrated Circuit Components	E-4
5) Junction Transistors	E-5
6) Transistor as an Amplifier	E-6
7) Push-pull Amplifier	E-7
8) Loudspeakers & Audio Power Amplifier	E-8
9) LC Oscillators	E-9
10) JFET / MOSFET	E-10

### COMMUNICATION ELECTRONICS

11) Radio Receivers	E-11
12) Facsimile Transmission - I (Facsimile Sender)	E-12
13) Facsimile Transmission - II (Facsimile Receiver)	E-13
14) Television Cameras	E-14
15) B / W Television Receiver	E-15
16) Colour Television Receiver	E-16
17) B/ W Television Transmitter	E-17
18) A Colour - Television Transmitter	E-18
19) Picture Tube	E-19
20) MODEM	E-20

### INSTRUMENTATION -I

1) Analog Transducers	I-1
2) Digital Transducers	I-2
3) Instrumentation Amplifiers	I-3
4) A-D and D-A converters	I-4
5) Data Transmission Elements-I	I-5
6) Data Transmission Elements-II	I-6
7) Motion Measurement	I-7
8) Force Measurement	I-8

### INSTRUMENTATION -II

9) Pressure Measurement	I-9
10) Temperature Measurement-I	I-10
11) Temperature Measurement-II	I-11
12) Speed Measurement	I-12
13) Liquid Level Measurement-I	I-13
14) Liquid Level Measurement-II	I-14
15) Flow Measurements-I	I-15
16) Flow Measurements-II	I-16

## (ELECTRICAL)

### ELECTRICAL TECHNOLOGY – I

1) Electric Cells	ET-1
2) Permanent Magnet Moving Coil Instruments	ET-2
3) Moving Iron Instruments	ET-3
4) Watt-Hour Meter	ET-4
5) Hydro-Electric Power Plant	ET-5
6) Thermo-Electric Power Plant	ET-6
7) Solar Power Plant	ET-7
8) Nuclear Power Plant	ET-8
9) Steam-Electric Power Plant	ET-9
10) Working of an Electric Motor	ET-10

### ELECTRICAL TECHNOLOGY - II

11) Direct Current Motor	ET-11
12) Alternating Current Motor	ET-12
13) Cutaway of a Single Phase Induction Motor	ET-13
14) D. C. Generator	ET-14
15) Alternating Current Generator	ET-15
16) Transformers	ET-16
17) Electric Stove / Electric Iron	ET-17
18) Soldering Iron / Immersion Heater / Geyser	ET-18
19) Electric Bell	ET-19
20) Treatment Against Shock	ET-20

### ELECTRICAL TECHNOLOGY – III

21) Wireman's tools-I	ET-21
22) Wireman's tools-II	ET-22
23) Wireman's tools-III	ET-23
24) Type of cable / conductor termination	ET-24
25) Procedure of making a joint Telegraph joint	ET-25
26) Britannia joint / Belhanger's joint	ET-26
27) Western union joint / T-joint between 1/18"	ET-27
28) T-joint between 3/22" wires / PVC insulated wires	ET-28
29) Types of fuses	ET-29
30) Earthing	ET-30

### ELECTRICAL TECHNOLOGY – IV

31) Electrical accessories -I	ET-31
32) Electrical accessories -II	ET-32
33) Electrical accessories -III	ET-33
34) Types of electric poles	ET-34
35) Methods of supporting roles	ET-35
36) Types of insulators / Brackets	ET-36
37) Filament Lamps	ET-37
38) Fluorescent tube	ET-38
39) Mercury Vapour Lamp	ET-39
40) Sodium Vapour Lamp	ET-40

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## COMPUTER ENGINEERING - I

1)Use of Computers	COM-1
2)Basic computer system	COM-2
3)Keyboard	COM-3
4)Central Processing Unit	COM-4
5)Laser Printer	COM-5
6)Dot Matrix / Ink -jet Pinter	COM-6
7)Floppy Disk & Disk Drive	COM-7
8)Hard Disk Drive	COM-8
9)Motherboard	COM-9
10)Computer Memory	COM-10
11)Physical Devices Used to Construct Memories	COM-11

## COMPUTER ENGINEERING - II

12)Magnetic surface Recording Methods-I	COM-12
13)Magnetic surface Recording Methods-II	COM-13
14)Interconnection of Computer Units	COM-14
15)Cache Memory / Memory Interleaving	COM-15
16)Processor to I-O and Input to Memory Communication	COM-16
17)Understanding D. O. S	COM-17
18)D. O. S. commands-I	COM-18
19)D. O. S. commands-II	COM-19
20)Basic of MS Word -I	COM-20
21)Basic of MS Word -II	COM-21