

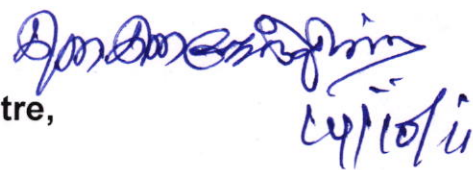


LIST OF COMMITTEE MEMBERS FOR THE

TRADE PRINTING MACHINE OPERATOR

Sl.No.	Members and Experts	Signature
1.	K. Panneerselvam, Regional Joint Director of Training Chennai Region Guindy, Chennai	
2.	S. Valsakumar, Principal, Govt. Industrial Training Institute, Guindy, Chennai 600 032	
3.	R. Rajendiran Asst. Trg. Officer, Govt. Related Instruction Centre, North Chennai.	
4.	J. Manogaran, Junior Training Officer, Govt. Industrial Training Institute, Guindy, Chennai 600 032	J. Manogaran 14/10/14

COURSE DETAILS

Name of the trade	Printing Machine Operator
Qualification	VIII pass
Age	14-40 yrs
Duration	1 Year
No. of Trainees	20
No. of Practical Hours	32 Hours Per week
No. of Theory Hours	12 Hours per week
Space Required	
Workshop	450 Sq.ft
Theory	200 Sq.ft
Power required in Kilo watt	4 KW

COURSE DETAILS

Name of Trade : PRINTING MACHINE OPERATOR

Qualification : VIII Pass

Age : 14-40 Years

Duration : 1Year

Number of Trainees : 20

Number of Practical hours : 32 hrs. per week

Number of Theory Hours : 12 hrs. per week

Space Required

Workshop : 450 sq. feet

ClassRoom : 200 sq. feet

Power Required in KW : 4 k.w.

PRINTING MACHINE OPERATOR.

PRACTICAL.

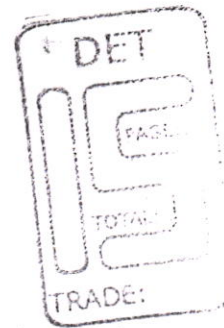
Course content.

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1. Handling and care of Tools, Equipments and Machine room materials - Correct working posture - Safety measures - Preventive measures.
2. Cleaning, Lubrication and General Maintenance of Machinery and Equipment.
3. Imposing schemes - with relation of Folding Schemes - with Type set matter and blocks.
4. Forms - Preparation - with Types Block and Plates upto 8 pages for platen and cylinder machines.
5. Preparation of Platen Machine for Printing - Loading and Locking up - Dressing - Inking - Lay setting for single colour, Double Colour - Roller setting - control of supply.
6. Preparation of Cylinder machines for Printing - Loading and Locking up - Dressing - Inking Lay setting - Feeder & Delivery setting - Roller setting - control of supply - Single & Multi colour.
7. Premake ready - underlay - overlay - Lining up Table - Gauges.
8. Make ready - For Type set matter, Blocks (Line & Halftone) - On platen machines.
9. Make ready - Type set matter, Blocks (Line and Halftone) on Cylinder machines.
10. Ink mixing - Primary secondary and Tertiary colours - Different driers.
11. Machine operation - Platen and cylinder machines - Hand fed machines - Automatic feeder (if available) - Running problems - causes & Remedies.
12. Extra operations - Cutting & Creasing, Perforating, Numbering machine - Special attachments - Anti setoff sprayers.

Revisions.

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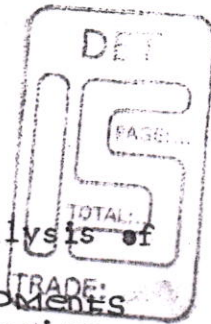


RELATED INSTRUCTIONS (THEORY)

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1. History of Printing - Comparative analysis of different Printing Processes.
2. Tools and Equipments - ancillary, including composing Materials - Point system.
3. Hand presses - Platern machines - Cylinder machines - kinds - Operational features - Mechanical features.
4. Forms preparation - Type matters, Blocks and Plates Handling - cleaning and storage - Type of mounts.
5. Paper - Standard sizes - Sub Divisions - Kinds of paper and Beards.
6. Imposition schemes - Principles - Imposition relating to Folding schemes.
7. Premaker ready and make ready procedures - Platern - Cylinder presses - Dressing Line - Half-tone Jobs - Colour works - running problem - causes and Remedies.
8. Inking systems - Roller setting - control of supply.
9. Feeders - kinds - Simple mechanism - setting - Loading paper.
10. Delivery systems - kinds - Advantages over each other - set-off causes and remedies - Anti set off sprays.
11. Ink-kind-manufacturing-Qualities-Driers-Reducers.
12. Rollers - composition - Rubber - Synthetic - out line of manufacture storage - cleaning agents - seasoning - Handling.
13. Colour-Theory/Principals - Additive and subtractive.
14. Driving - power Transmission - Impression - Simple Mechanisms.
15. Calculations - Paper - Ink - Casting off.
16. Modern developments - in the Industry.

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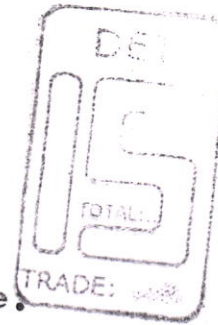


PRINTING MACHINE OPERATOR.

Graded Exercises.

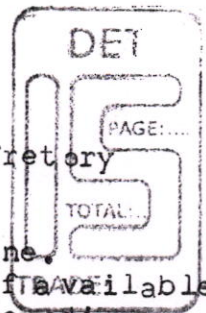
Weekwise Practical Syllabus.

32 Hours per Week.



Week No.	Practical Exercise.
1	Specifications, Handling, Usage of Printing Machine.
2	Correct working procedure, safety measures and preventive measures.
3 - 4	<ol style="list-style-type: none">1. Cleaning, Lubrication.2. General Maintenance of Printing Machines and their equipments.
5 - 8	<ol style="list-style-type: none">1. Imposition scheme Definition - Upright oblong methods.2. Half sheet work3. Sheet work.4. Quirewise.
9 - 12	<p>PLATEN MACHINE</p> <ol style="list-style-type: none">1. Forms preparation with type in upright methods.2. Forms preparation in type with Blocks in upright methods.3. Forms preparation with type in Oblong methods.4. Form preparation in type with Blocks in oblong methods.
13 to 16	Same Ex. in cylinder Machine.
17 & 18	Preparation of Platen Machine for Printing Leading and Locking Up - Dressing - Inking.
19 & 20	Layssetting for Single colour - Double Colour Roller setting - control of Supply.
21 - 24	Preparation of cylinder machine for Printing Dressing - Inking - Feeder & Delivery.
25 - 26	Roller setting for Printing in Single colour and Multi colour job.
27 - 28	Pre make ready - Under lay - Over Lay - Lining up Table - Gauges.
29 - 32	<p>Make ready for Type set matter in Platen Machine.</p> <p>Make ready for Type set with Halftone and Line Blocks matter.</p>
33 - 36	<p>Make ready for Type set matter in Cylinder Machine.</p> <p>Make ready for Type set with Half Tone and Line Blocks matter.</p>

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- 37 - 40 Ink mixing - Primary, secondary Tertiary colours - Different Driers.
- 41 - 44 Machine operation in Platen machine. Hand feeding, Automatic Feeder (if available) Operating - Problems - causes - Remedies.
- 45 - 48 Machine operation in Cylinder machine. Hand Feeding, Automatic Feeder - Operating Problems - Causes - Remedies.
- 49 & 50 Extra operations - Cutting - creasing - Perforating - Numbering machines. Special attachment - Anti set off sprayers.
- 51 & 52 Revisions.

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PRINTING MACHINE OPERATOR.

THEORY:

GRADED EXERCISES.

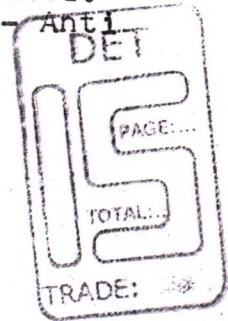
RELATED INSTRUCTIONS.

(THEORY) 8 Hours per week.



Week No.	CHAPTER HEADING.
1 - 2	1. Trade Introduction. 2. History of Printing - Comparative analysis of Different kinds of Printing - Printing Processes.
3 - 4	1. Tools and Equipments of Printing section. 2. Point system and its usage.
5-8	1. Hand presses and their varieties and usage. 2. Platen Machines. a. Light Platen. b. Heavy Platen.
9 - 12	Cylinder Machines. a. Hand feeding - Cylinder machine. b. Semi Automatic - Cylinder Machine. c. Fully Automatic Cylinder Machine.
13 - 16	1. Various kinds of papers and their usage. 2. Standard sizes. 3. Sub Division of papers. 4. Various kinds of Boards and their utilization.
17 - 20	Imposition scheme : Principles. 1. Upright Methods: a. Sheet work methods. b. Half sheet works methods. 2. Oblong Methods. a. Sheet work. b. Half sheet work.
21 - 24	1. Pre Make Ready and Make Ready Procedures in Platen machine - Dressing - Line & Half tone Blocks - Colour works. 2. Pre make Ready and Make Ready Procedures in Cylinder machine - Dressing - Line & Half tone Blocks - Colour works - Running Problems. Causes and Remedies.
25-26	1. Inking system. 2. Setting of Rollers. Control of Ink Supply in platen Machine and cylinder machine.
27 - 28	1. Various kinds of Feeders. 2. Simple Mechanism - setting. 3. Loading of papers - Problems - Causes - Remedies.

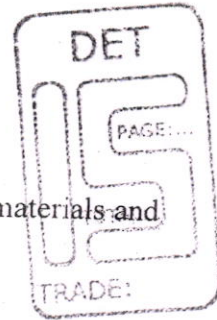
- 29 - 32
1. Various kinds of Delivery systems.
 2. Their Advantages over each other.
 3. Set-off - causes - Remedies - Anti set off - Sprays.
- 33 - 36
- INK and its KINDS.
1. Manufacturing Methods.
 2. Qualities and usage.
 3. Driers and Reducers.
- 37 - 40
- Various kinds of Rollers.
1. Composition of Rollers.
 2. Varieties of Rollers and their usages.
 3. Rollers - Storage - Cleaning - Seasoning - Handling.
- 41 - 44
- Colour - Theory
1. Principles.
 2. Additive
 3. Substrative.
- 45 - 48
- Driving
1. Power Transmission
 2. Impression. Simple Mechanism.
- 49 - 50
- Calculations - Paper - Ink - Casting off.
- 51 - 52
1. Modern Developments in Printing Industries.
 2. Revisions.



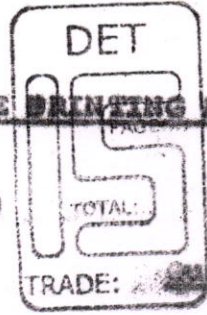
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ACHIEVEMENTS

PRINTING MACHINE OPERATOR



1. To know the method of handling and care of Tools, Equipments, materials and machineries used in machine room and composing room.
2. To know the procedure of imposing and form preparation.
3. To know make ready and premake ready procedure.
4. To know the printing machine operation- Hand feed and automatic feed machines - platen and Cylinder machines.
5. To know the process of Roller manufacture - Handling and care - kinds and qualities.
6. To know the process of Ink manufacture-colour mixing- storage - qualities of printing ink.



LIST OF TOOLS AND EQUIPMENTS FOR THE TRADE PRINTING MACHINE OPERATOR

(For a batch of 20 Trainees)

<u>Sl. No.</u>	<u>Description of item</u>	<u>Quantity</u>
1	Hand-fed cylinder complete with accessories	1 No.
2	Automatic cylinder, complete with accessories	1 No.
3	Hand fed platens(size 30 x 45 cm) with accessories)	2 Nos.
4	a) Imposing surfaces, with table, with provision for keeping chases and locking materials: size 50x75cm	2 Nos.
	b) Imposing surfaces, with table with provision for keeping chases and locking material size 50 x 75	2 Nos.
5	Extra chases - 2 for each machine	8 Nos.
6	Quions	
	a) Hempie with keys, assorted sizes	150 Nos.
	b) Mechanical with keys, assorted sizes	50 Nos.
7	Mallets	10 Nos.
8	Planners	10 Nos.
9	Shooting stick	20 Nos.
10.	Furniture:	
	a) Metals: 6cms to 44 cms depth	100 Nos.
	b) Wooden: 1 cm to 8 cms	200 Nos.
11	Roller stand(One for each machine)	4 Nos.
12	Table for paper with under cabinet for waste paper- 1 for each machine	4 Nos.
13	Roller casting unit	1 No.
14	Block gauges/roller setting gauges	10 each
15	Em scales	20 Nos.
16	Overlay knives/pins	10 Nos.
17	Overlay tables	2 Nos.
18	Lining up table(Graduated for pre-make ready)	1 No.
19	Patch up table	1 No.
20	Mounting quotations- assorted sizes	
21	Honey comb mounts	400 Sq. Cm.
22	Punches(pointed) for nailing and (Flat) mounting of blocks)	10 Nos. each
23	Plate lifter	2 Nos.
24	Small drill(with drill bits)	1 No.
25	Engraving tools	1 set