

**MAHARASHTRA STATE BOARD OF VOCATIONAL EDUCATION EXAMINATION, MUMBAI - 51**

1	Name of Course	<b>Certificate Course in Offset (sheet fed) (406102)</b>																																			
2	Max.Nos. of Student	25 Students																																			
3	Duration	6 Month																																			
4	Type	Part Time																																			
5	Nos Of Days / Week	6 Days																																			
6	Nos Of Hours /Days	4 Hrs																																			
7	Space Required	Theory Class Room – 200 sqft Workshop – 1000 sqft																																			
8	Entry Qualification	S.S.C. Appeared																																			
9	Objective Of Syllabus/ introduction	To get knowledge of Sheet fed																																			
10	Employment Opportunity	The trainee will be able to take jobs in related enterprise or with working experience will be in a position to work in his own venture.																																			
11	Teacher's Qualification	Diploma in Printing or S.S.C. with Certificate Course in Printing or NCTVT Certificate holder with 3 years experience.																																			
12	Training System	<b>Training System Per Week</b> <table border="1" style="margin-left: auto; margin-right: auto;"> <tr> <td>Theory</td> <td>Practical</td> <td>Total</td> </tr> <tr> <td>6 Hours</td> <td>18 Hours</td> <td>24 Hours</td> </tr> </table>	Theory	Practical	Total	6 Hours	18 Hours	24 Hours																													
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13	Exam. System	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Sr. No.</th> <th>Paper Code</th> <th>Name of Subject</th> <th>TH/PR</th> <th>Hours</th> <th>Max. Marks</th> <th>Min. Marks</th> </tr> </thead> <tbody> <tr> <td align="center">1</td> <td align="center">40610211</td> <td align="center">Introduction of Sheet Fed Offset Print</td> <td align="center">TH-I</td> <td align="center">3 hrs</td> <td align="center">100</td> <td align="center">35</td> </tr> <tr> <td align="center">2</td> <td align="center">40610221</td> <td align="center">Sheet Fed Offset Printing Technique</td> <td align="center">PR-I</td> <td align="center">6 hrs</td> <td align="center">200</td> <td align="center">100</td> </tr> <tr> <td align="center">3</td> <td align="center">40610222</td> <td align="center">Sheet Fed Offset Machine Operation</td> <td align="center">PR-II</td> <td align="center">3 hrs</td> <td align="center">100</td> <td align="center">50</td> </tr> <tr> <td></td> <td></td> <td align="right">Total</td> <td></td> <td></td> <td align="center">400</td> <td align="center">185</td> </tr> </tbody> </table>	Sr. No.	Paper Code	Name of Subject	TH/PR	Hours	Max. Marks	Min. Marks	1	40610211	Introduction of Sheet Fed Offset Print	TH-I	3 hrs	100	35	2	40610221	Sheet Fed Offset Printing Technique	PR-I	6 hrs	200	100	3	40610222	Sheet Fed Offset Machine Operation	PR-II	3 hrs	100	50			Total			400	185
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### Theory

#### Sheet fed Offset

1. Introduction to offset printing process and comparison with other printing process.
2. Printing surfaces – outline of preparation for all process.
3. Equipment and material use for offset and plate making.
4. Printing machines for sheet fed offset printing-kinds, mechanicals and operational features.
5. Rollers-kinds, setting cleaning, preparation, treatment handling and storage.
6. Cylinders- plate cylinder, blanket cylinder, impression cylinder – adjustments – feeders - setting and operation.
7. Paper- raw materials used, classification, properties selection of paper for printing
8. Ink-raw material used, classification, properties selection of ink for printing.
9. Machine operation, running problems causes and remedies, register, single and multi color printing.
10. General care and maintenance of machine and other equipment-cleaning, lubrication and overhauling.
11. Modern development in offset printing machinery, brief outline of development in printing machinery and other process.
12. Safety precaution- safety hazards-preventive measures.

### Practical - I

#### Sheet fed offset Printing Technique

1. Introduction of offset machine.
2. Handling and care of equipments and material for sheet fed offset machine.
3. Cleaning: Lubrication and general maintenance of machinery equipments.
4. Offset printing machines – single of multicolor machine- fixing the plate, lays delivery, inking & dampening system setting, feeder setting, plate-blanket fixing.
5. Setting of feeder and deliver unit for different stock.
6. Setting of inking unit for different job.
7. Printing of single color & multi color with alteration of color sequence.

## Practical - II

### Sheet fed offset Machine Operation

1. Handling and care of equipments and material for sheet fed offset machine.
2. Offset printing machines – single of multicolor machine- fixing the plate, lays delivery, inking & dampening system setting, feeder setting, plate-blanket fixing.
3. Setting of feeder and deliver unit for different stock.
4. Setting of inking unit for different job.
5. Printing of single color & multi color with alteration of color sequence.
6. Rollers-kinds, setting, cleaning preparation, treatment handling and storage and wash-up rollers.
8. Premakeready – make-ready
9. Outline of running problems, causes of remedies.
10. Safety precaution-safety hazards-preventive measures.

#### List of Tools and Equipment for Offset Machine Operation – Sheet fed (Single & multi colour)

Sr. No.	Description of items
1.	Single colour offset printing machine with automatic feeder and accessories.
2.	Multi colour offset printing machine with automatic feeder and accessories
3.	Machine Tools (Standard set)
4.	Roller cleaning machines, cleaning liquids.
5.	Roller racks
6.	Ink slab pallet knives
7.	Gloves
8.	Primary inks, cyan, magenta, yellow, white, black
9.	Reduce, drier, extender
10.	Lubricating oils, oil cane.
11.	Fountain solution, sponges, linen cloth
12.	Image remover
13.	Magnifying glass (+8)
14.	PH Tester – Electronics
15.	Work bench and table standard size.
Raw Materials	
1	Various types of Papers, Cards
2	Other printing material
3	Chemicals used on machines and rollers
4	Ph Strips

#### List of books:-

1	A hand book for printing and packaging technology (Biswanath Chakravarty)
2	Offset Striping blank & white, G.A.T.F.
3	Lithographers Manual