



**GOVERNMENT OF TAMILNADU**  
**DIRECTORATE OF TECHNICAL EDUCATION, CHENNAI**  
**STATE PROJECT COORDINATION UNIT**  
*(Established under Canada India Institutional Cooperation Project)*

**CURRICULUM**

Course Name	<b>Screen Printing</b>
Course Code	PT/2020/001
Course Duration	40 Hours
Minimum Eligibility Criteria and Pre-requisites (if any)	8th Std & above
Course Objectives	Training module has been designed to provide the participants <ul style="list-style-type: none"> <li>• Understanding of the basics of Screen Printing</li> <li>• Understanding the advantages of Screen Printing</li> <li>• Learning of main sections of Screen printing</li> <li>• Understanding of Screen image carrier preparation</li> <li>• Understanding the material selection for screen print</li> <li>• Learning of different machines available for screen printing</li> <li>• Knowledge of different screen print application</li> <li>• Developing Competency skills required for screen printing single &amp; two color</li> </ul>
Course Outcomes	At the end of training, the participants will be able to <ul style="list-style-type: none"> <li>• Prepare and develop a frame for screen printing</li> <li>• Carry screen printing of single &amp; two color Printing</li> <li>• Knowledge to operate different screen print machines</li> <li>• Printing on different objects</li> </ul>
Expected Job Roles	Screen Printer

TEACHING AND SCHEME OF EXAMINATION						
Course Code	Course Name	Hours		Assessment Marks		Duration of Examination
				Min	Max	
PT/2020/001	Screen Printing	Theory	12	10	20	3 Hours
		Practical	28	40	80	
		Total	40	50	100	

**DETAILED SYLLABUS**

Unit No	Modules	No.of.Hours	
		Theory	Practical
I	Basics of Screen Printing	07 Hours	
1.1	Principles of Screen Printing Process	03	-
1.2	Advantages of Screen Printing Process		
1.3	Main Sections of Flat Bed Screen Printing Machine		
1.4	Advantage and Limitation of Screen Printing	-	04
1.5	Application of screen Printing		
II	Screen printing Image carrier preparation	12 Hours	
2.1	Screen preparation by Direct Method	03	-
2.2	Screen preparation by Indirect Method		
2.3	Screen preparation by Direct / Indirect method		
2.4	Direct method of stencil preparation		09
2.5	Direct and Indirect method of stencil preparation		
III	Material Selection for screen printing	10 Hours	
3.1	Materials used for Screen Printing Fabrics	03	-
3.2	Selection of Squeegee and Mesh		
3.3	Screen Pretreatment		
3.4	Screen Tensioning / Stretching		
3.5	Screen printing by single color/ Two color		07
IV	Types of Screen printing machines and inks	11 Hours	
4.1	Types of Screen Printing Machines - Container Screen Printing machine, Flat bed Hinged frame, Rotary Screen Printing Press and Carousal Screen Printing Machines.	03	-
4.2	Types of Screen Printing Inks		
4.3	Printing on various substrates	-	08
Total Theory and Practical Hours		12	28
Total Hours		40	

### HARDWARE REQUIREMENT

S.NO	LIST OF TOOLS /EQUIPMENTS
1.	Semi automatic Machine / Working table
2.	Exposing Frame
3.	Wooden Fame, & Mesh
4.	Squeegee
5.	Drying rack
6.	Drier Fan
7.	Magnifier
8.	Metal clamps for manual operation

### SOFTWARE REQUIREMENT

NIL
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### REFERENCE BOOKS

S.NO	NAME OF THE BOOK	AUTHOR	PUBLISHER
1.	Guide to professional Screen printing	Sarvdeep sing	Repro Books
2.	Printing Materials – Science and Technology	Thompson, Bob	Pira International
3.	The Print Production Manual	J. Peacock, C. Berril and M. Barnard	Pira International
4.	The Printing Ink Manual	R.H. Leach and R.J. Pierce.	Springer
5.	Hand Book of Print Media	Helmut Kipphan	Springer

## ASSESSMENT AND CERTIFICATION

S.No	Criteria for assessment
1.	A trainee will be assessed based on the performance in End Examination for Theory and Practical conducted internally in the Project Polytechnic College for a duration of 3 hours
2.	A trainee must have 75% of attendance to appear for End examination in Theory and Practical.
3.	The assessment for theory part will be based on the marks scored in the end examination on the knowledge bank of questions (1 word/objective type questions)
4.	The assessment for practical part will be based on the marks scored in the end examination conducted by the Project Polytechnic and assessed by the Examiners approved by Strategic Plan Implementation Committee (SPIC) of the project polytechnic.
5.	The criteria for successful completion of training is every trainee should score 50% of marks in theory and practical examination.
6.	On successful completion of training , Certificate will be issued to the participants by the Directorate of Technical Education through the Project Polytechnic.

## END EXAMINATION

### ALLOCATION OF MARKS

S.No	Description	Max.Marks
1.	Theory	20
2.	Practical Examination	
	a)Procedure – 10 Marks b)Exercise – 50 Marks c) Record – 20 Marks	80
Total Marks		100

# **THEORY MODEL QUESTION PAPER**

## **PT/2020/001 - SCREEN PRINTING**

**Maximum Marks: 20**

**(N.B.: Answer any Twenty question)**

**20 X 1 = 20 Marks**

1. What is mesh?
2. What is the main function of squeegee?
3. What are the different meshes used for screen printing?
4. Mention any two kinds of screen printing inks.
5. Write any two application of screen printing.
6. What are the parts of automatic screen printing machine?
7. What is the earlier name of screen printing machine?
8. Write the basic principles of screen printing process.
9. What are the different fabric materials used in screen printing?
10. What are the various frame materials used for screen printing?
11. What is photo stencil?
12. What is direct stencil?
13. What is indirect film or transfer film?
14. What is emulsion?
15. What is serigraphy?
16. What is tension meter?
17. What is scoop coater?
18. What is Mesh Count?
19. What is monofilament?
20. What is multifilament?
21. Name the device used to measure the squeegee hardness.
22. What is the main limitation of screen printing?
23. What is screen pretreatment?
24. Where rotary screen printing presses are used?
25. What is the application of carousel screen printing machine?