

PRINTERS' COSTING & ESTIMATING

Name of the Course: Diploma in Printing Technology			
Course Code:		Semester: Fifth	
Duration: 16 Weeks		Maximum Marks: 100	
Teaching Scheme		Examination Scheme	
Theory: 3 hrs/week		Internal Examination: 20	
Tutorial: NIL		Assignment & Attendance: 10	
Practical: NIL		End Semester Exam: 70	
Credit: 2			
Aim:			
<p>Printing supervisors, owners of printing presses have to study costing for the purpose of cost recovery and cost control. The study of a scientific system of costing will give them proper guidance as to how the maximum utilization of the resources of the factory can be achieved and do away with waste of time and money.</p> <p>In an extremely competitive market, scientific estimating can guarantee the meaningful survival of a printing organization by enabling it to forecast correctly and judiciously the estimated cost of jobs, the overhead expenditure of a business, and the amount of profit to be made from each job.</p>			
Objective: The students will be able to			
<ol style="list-style-type: none"> 1. Understand various Paper and Board sizes & Estimates, warehouse management & adhesive & other related materials, different finishing tools. 2. Appreciate styles of binding, layout of binding & finishing department. 3. Understand various types of binding, the detailed steps to be taken in each binding type. 4. Understand various cutting machines and other allied equipment. 5. Get an idea about various automation-taking places in binding & finishing. 			
Pre-Requisite: Elementary knowledge of Basic Printing , Pre-Press Repro Technique & Binding Finishing			
Contents:			
Group-A	COSTING	Hrs/unit	Marks
Unit 1	1.0 Variable Cost 2.0 Names of Variable materials & services used in Printing Industries 3.0 Semi – Variable Cost 4.0 Name of the things included in Semi – Variable Costs in Printing	15	10
Unit 2	5.0 Indirect Cost 6.0 Names of the things included in Fixed Costs in Printing Industries 7.0 Definition of Pricing 8.0 Different factors of Pricing 9.0 Brief overview on Bin Card, Job Ticket, Purchase Requisition and Depreciation	15	15
Unit 3	10.0 Definition of Break – Even Point 11.0 Algebraical & Graphical representation of Break – Even Point	10	10

Group-B Unit 4	ESTIMATING			
	12.0	Quality of a good Estimator	05	10
	13.0	Good Copy & Bad copy in Printing		
Unit 5	14.0	SPANKS method to find out ink coverage in Printing	05	10
	15.0	Casting Off calculation by En method		
Unit 6	16.0	Calculation of Kg of a Ream for a known GSM and size of a stock and to estimate cost from it	14	15
	17.0	To find out the fixed cost of a machine for a known initial cost, interest%, depreciation%, insurance% etc.		
Name of Author	Title of the Book		Name of the Publisher	
1. K S Venkataraman & K S Balaraman	1. Estimating Methods & Cost Analysis for Printers		GraphicArt Publication	
2. Gary G Field	2. Printers' Production Management			
3. Harold Mills	3. The Printers Estimator			
4. F C Avis	4. A Primary Course in Printers' Costing			

CONTACT PERIODS: 64

INTERNAL ASSESSMENT: 06

TOTAL PERIODS: 70

Examination Scheme:

- a) Internal Examination Marks: 20
 - b) End Semester Examination Marks: 70
 - c) Attendance + Assessment + Interaction : 10
- Full Marks: 100

End Semester Examination Marks: 70

Group	Unit	Objective	Marks/Qs	Total Marks
		<u>To be set</u>	<u>To be answered</u>	
A	1, 2 & 3	12	Any 20Qs	01 20
B	4, 5 & 6	13	-	
		-		

Group	Unit		Subjective	Marks/Qs	Total Marks
A	1, 2 & 3	04	Any five Qs	10	05x10
			Taking atleast		=50
			One from each		
			Group		
B	4, 5 & 6	06	-	-	-

Note 1: Teachers' Assessment will be based on performance on given assignments.

Note 2: Assignments may be given on all the topics covered in the syllabus.

SURFACE PREPARATION TECHNIQUE

Name of the Course: Diploma in Printing Technology			
Course Code:		Semester: Fifth	
Duration: 16 Weeks		Maximum Marks: 100	
Teaching Scheme		Examination Scheme	
Theory: 3 hrs/week	Internal Examination: 20		
Tutorial: nil	Assignment & Attendance: 10		
Practical: 4 hrs/week	End Semester Exam: 70		
Credit: 3			
Aim:			
<p>In the recent past the pre-press operations have gone through sea changes. The advents of modern machinery are the main reason of it. So, we feel the necessity of upgrading the syllabus of this particular subject. We have not eliminated all the older techniques but have blended old and new judiciously. Before printing with the printing units all the printing elements should be processed systematically through Prepress Reproduction Technique and then through Prepress Surface Imaging Technique. The aim of this subject is to provide the students with the knowledge and skill of the preparation of image carrier on different surfaces.</p>			
Objective: The students will be able to			
<ol style="list-style-type: none"> 1. Appreciate the Surface Imaging concept. 2. Understand the Various Light-Sensitive Emulsion & processing on Litho-offset Plates. 3. Understand the various processing on Gravure Cylinders. 4. Understand the various processing on Metal Plates of Blocks. 5. Understand the Halftone & Line reproduction technique. 6. Understand the various processing on Silk Screen Surface Imaging. 7. Understand the various processing on Flexography, Decal and other Master Surface Imaging. 8. Understand equipment and allied. 			
Pre-Requisite: Elementary knowledge of Basic Printing & Pre-Press Repro Technique			
Contents:			
Group-A		Hrs/unit	Marks
Unit 1	1.0 Appreciate the concept of Imaging on various surfaces of plate making. 1.1. Equipment used in Plate making department 1.2. Study of various metal for making image carriers 1.3. Study of Graining & Image transfer 1.4. Study of manual and automatic Plate processing technique.	15	10
Unit 2	2.0 Engraving for Block making 2.3 Etching - line blocks 2.4 Halftone etching - on zinc & Copper 2.5 Powderless etching 2.6 Electronic engraving	15	15
Unit 3	3.0 Flexography Surface preparation 3.1 Photopolymer relief plates 3.2 Rubber plates for flexo printing		

Group-B			
Unit 4	4.0 Offset platemaking 4.1 Deep etch – Gum and PVA 4.2 P.S. – Negative 4.3 P.S.- Positive 4.4 Automatic Plate Processing Technique	10	10
Unit 5	5.0 Multi-metal Offset plates 5.1 Bi- Metal Plate 5.2 Tri-Metal Plate	10	10
Unit 6	6.0 Other Plate making 6.1 Electrostatic Plate making 6.2 Laser exposed Plate 6.3 Dye-Sublimation Process 6.4 Ceramic Transfer Process		
Group-C			
Unit 7	7.0 Modern techniques of screen printing 7.1 Preparing a Screen – Direct, Indirect, Direct – Indirect, Capillary 7.2 Exposing Technique 7.3 Finishing	08	10
Unit 8	8.0 Gravure Cylinder Making 8.1 Carbon tissue paper method – Five important gelatins, exposure, etching solution and its density, specific gravity, development 8.2 Epoxy Resin method using LASER ray 8.3 Digital method using diamond stylus		
Unit 9	9.0 Computer to Plate (overview) – Thermal & Violet Plates	04	10
Unit 10	10.0 Chemicals used in Surface Preparation	02	05
Name of Author	Title of the Book		Name of the Publisher
1. M H Bruno	1. Platemaking Department — M. H. Bruno		GATF
2. J P Crouch	2. Flexography Premier I & II Edin. — J. P. Crouch		GATF
3. Albert Kosloft	3. Ceramic Screen Printing — Albert Kosloft		GATF
4. GATF	4. Lithographers' Manual — GATF		GATF
5. C C Ammonds	5. Photoengraving — C. C. Ammonds		GATF
6. Robert F Reed	6. The Deep-Etch Process — Robert F. Reed		GATF
7. P J Hartsuch	7. Chemistry for the Graphic Arts — P. J. Hartsuch		GATF
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GATF	Magazines: GATF World, Focal Press, Printers' Voice Etc.		
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CONTACT PERIODS: 64

INTERNAL ASSESSMENT: 06

TOTAL PERIODS: 70

Examination Scheme:

- a) Internal Examination Marks: 20
 - b) End Semester Examination Marks: 70
 - c) Attendance + Assessment + Interaction : 10
- Full Marks: 100

End Semester Examination Marks: 70

Group	Unit	Objective		Marks/Qs	Total Marks
		<u>To be set</u>	<u>To be answered</u>		
A	1, 2 & 3	07	Any 20Qs	01	20
B	4, 5 & 6	08	-		
C	7, 8, 9 & 10	10	-		
Group	Unit	Subjective		Marks/Qs	Total Marks
A	1, 2 & 3	02	Any five Qs	10	05x10
			Taking atleast		=50
			One from each		
			Group		
B	4, 5 & 6	04	-	-	-
C	7, 8, 9 & 10	04	-	-	-

Note 1: Teachers' Assessment will be based on performance on given assignments.

Note 2: Assignments may be given on all the topics covered in the syllabus.

Plano graphic Printing Technique I

Name of the Course: Diploma in Printing Technology			
Course Code:		Semester: Fifth	
Duration: 16 Weeks		Maximum Marks: 100	
Teaching Scheme		Examination Scheme	
Theory: 3 hrs/week		Internal Examination: 20	
Tutorial: nil		Assignment & Attendance: 10	
Practical: 4 hrs/week		End Semester Exam:70	
Credit: 3			
Aim:			
<p>Among the wide spectrum of different printing processes the most versatile and popular process is Plano graphic process. A wide range of substrates can be printed by Plano graphic process. Continuous R and D are going on in this process into different printing machines manufacturing companies and allied trades. There are tremendous job opportunities for the printing students in this field. The rapid changes and development in the field of Plano graphic technology obviate certain very old methodology and claim inclusion of up to date concept. The present syllabus reflects this rationale.</p>			
Objective: The students will be able to			
<ol style="list-style-type: none"> 1) Understand the four units that make up any printing press. 2) Understanding the development of press design from platen presses to rotary presses. 3) Understanding the principle of offset printing 4) Understanding the feeding unit, registration unit, printing unit, inking unit, dampening unit and delivery unit operation of an offset lithographic press. 5) Understanding the basic steps in setting up and operating an offset lithographic press 6) Understanding the several quality control devices commonly used in offset printing. 7) Understanding the concept of offset blanket 8) Understanding the feeding, dampening and inking systems of offset presses. 9) Understanding the common press problems. 10) Understanding the different imposition schemes, precautionary measures in machine room. 			
Pre-Requisite: Elementary knowledge of Basic Printing & Pre-Press Repro Technique			
Contents:			
Group-A		Hrs/unit	Marks
Unit 1	Introduction to Plano graphic Printing		
	<ol style="list-style-type: none"> 1. Introduction to Plano graphic Printing – Classification of Printing (Impact and Non-impact – Different Printing processes – Visual Characteristics. (Identification) of different printing processes. 2. Plano graphic Printing – Discovery, Application and Development. 	15	15
Unit 2	Introduction to Web Offset Printing		
	<ol style="list-style-type: none"> 3. Elements of In feed section of Web Offset including Splicer, Unwinding unit, Web Tension Control, Guide Rollers 4. Web Delivery – Roll to Roll, Roll to Fold, Roll to Sheet 	15	15

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CONTACT PERIODS: 64

INTERNAL ASSESSMENT: 06

TOTAL PERIODS: 70

Examination Scheme:

- a) Internal Examination Marks: 20
 - b) End Semester Examination Marks: 70
 - c) Attendance + Assessment + Interaction : 10
- Full Marks: 100

End Semester Examination Marks: 70

Group	Unit	Objective		Marks/Qs	Total Marks
		<u>To be set</u>	<u>To be answered</u>		
A	1, 2	10	Any 20Qs	01	20
B	3 & 4	08	-		
C	5, 6	07	-		
Group	Unit	Subjective		Marks/Qs	Total Marks
A	1, 2	03	Any five Qs	10	05x10
			Taking atleast		=50
			One from each		
			Group		
B	3 & 4	03	-	-	-
C	5, 6	04	-	-	-

Note 1: Teachers' Assessment will be based on performance on given assignments.

Note 2: Assignments may be given on all the topics covered in the syllabus.

Printing Machine Maintenance I

Name of the Course: Diploma in Printing Technology				
Course Code:		Semester: Fifth		
Duration: 16 Weeks		Maximum Marks: 100		
Teaching Scheme		Examination Scheme		
Theory: 3 hrs/week		Internal Examination: 20		
Tutorial: nil		Assignment & Attendance: 10		
Practical: Nil		End Semester Exam: 70		
Credit: 3				
Aim:				
Maintenance of printing machines is important for many reasons. The delay in production for a equipment failure can create serious problem because printing is a service industry. Today's newspaper if supplied tomorrow is no longer news but history. Like other technological fields, new concepts and applications are developing continuously in maintenance also. This proposed syllabus is based on latest changes.				
Objective: The students will be able to				
<ol style="list-style-type: none"> 1) Choose the right piece of printing equipment considering the end product requirement. 2) Understand the different lubricants and the importance of correct lubrication 3) Use different compressor in printing machines and do maintenance job. 4) Differentiate the various mechanical drives in the printing machines and work with them. 5) Select and maintain bearings in the printing machines. 				
Pre-Requisite: Elementary knowledge of Basic Printing & Pre-Press Repro Technique				
Contents:				
Group-A			Hrs/unit	Marks
Unit 1	1.0	Printing Equipment Purchasing		
		1.1 Initial cost, installation of printing machines		
		1.2 Printing equipment design consideration.		
		1.3 Critical questions regarding printing equipment purchasing.	12	10
Unit 2	2.0	Lubrication		
		2.1 Types of lubricants – Petroleum, animal and vegetable oils, grease, graphite (over-view only)		
		2.2 Purpose of lubrication – control of friction, control of wear, control of temperature, removal of contaminants, shock absorption.		
		2.3 Characteristic – wetting ability, surface tension, viscosity, adhesion.	15	15
		2.4 Lubrication maintenance failure.		
Group-B				
Unit 3	3.0	Pneumatics in Printing		
		3.1 Reciprocating compressor in front separation feeder.		
		3.2 Rotary compressor (vaner-type) in back separation feeder.	10	10
		3.3 Compressor maintenance.		
Unit 4	4.0	Bearing used to printing machines		
		4.1 Selection of bearing, different types of bearings used in printing machine, definition.	12	
		4.2 Bearing failure		15
		4.3 Advantages and maintenance.		

Group-C			
Unit 5	<p>5.0 Mechanical drives in printing machines</p> <p>5.1 Chain – Roller chain and its application areas in printing, Sprocket-with hub and without hub and its application in printing. Maintenance of chains and sprocket.</p> <p>5.2 Belt and pulleys – Definition, classification, maintenance. Definition, application areas in printing.</p> <p>5.3 Cam, follower, an overview of theoretical curve, working curve, base circle stroke and dwell.</p> <p>5.4 Gear terminology, material, different types of gears used in printing machines. (No mathematical calculations included anywhere).</p>	15	20
Name of Author	Title of the Book		Name of the Publisher
1. C. W. Latham	1. Advanced Pressmanship – C. W. Latham		
2. Ian Faux	2. Modern Lithography – Ian Faux		
3. G.A.T.F.	3. Web Offset Press Troubles – G.A.T.F.		
4. G.A.T.F.	4. Solving Sheet-fed Press Troubles – G.A.T.F.		
5. Weber & Geib	5. Method Of Conditioning Paper for Multicolour Offset Printing – Weber & Geib		
6. L.T.F. Inc.	6. Prevention of Occupational Dermatitis in Lithography – L.T.F. Inc.		
7. L.T.F. Inc.	7. pH Control of Fountain Solution – L.T.F. Inc.		
8. Banks	8. Paper in the Printing Processes – Banks		
9. L.T.F. Inc.	9. Guides, Grippers & Insertion Devices for Litho- Offset Presses – L.T.F. Inc.		
10. Victor Strauss	10. Graphic Arts Management – Victor Strauss		
11. G.A.T.F.	11. Safety Practices for the Graphic Arts – G.A.T.F.		
12. L.T.F. Inc.	12. Gauges and Instruments For		

	Offset Lithography – L.T.F. Inc. 13. Lithographers Manual – G.A.T.F. 14. Machine Printing – Durrant 15. The Printing Industry – Victor Strauss 16. Safety Measures – G.A.T.F.		
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CONTACT PERIODS: 64

INTERNAL ASSESSMENT: 06

TOTAL PERIODS: 70

Examination Scheme:

- a) Internal Examination Marks: 20
 - b) End Semester Examination Marks: 70
 - c) Attendance + Assessment + Interaction : 10
- Full Marks: 100

End Semester Examination Marks: 70

Group	Unit	Objective		Marks/Qs	Total Marks
		<u>To be set</u>	<u>To be answered</u>		
A	1, 2	10	Any 20Qs	01	20
B	3 & 4	10	-		
C	5	05	-		
Group	Unit	Subjective		Marks/Qs	Total Marks
A	1, 2	03	Any five Qs	10	05x10
			Taking atleast		=50
			One from each		
			Group		
B	3 & 4	04	-	-	-
C	5	03	-	-	-

Note 1: Teachers' Assessment will be based on performance on given assignments.

Note 2: Assignments may be given on all the topics covered in the syllabus.

BINDING & FINISHING

Name of the Course: Diploma in Printing Technology			
Course Code:		Semester: Fifth	
Duration: 16 Weeks		Maximum Marks: 100	
Teaching Scheme		Examination Scheme	
Theory: 2 hrs/week		Internal Examination: 20	
Tutorial: 1 hr/week		Assignment & Attendance: 10	
Practical: 3 hrs/week		End Semester Exam: 70	
Credit: 2			
Aim:			
Getting the output through Print Finishing Processes are the most important operations for completing the print production. This will enable the students to make judgement about the aspect of Binding & Print Finishing, particularly the selection of a particular process chosen for a specific print production.			
Objective: The students will be able to			
<ol style="list-style-type: none"> 1. Understand various Paper and Board sizes & Estimates, warehouse management & adhesive & other related materials, different finishing tools. 2. Appreciate styles of binding, layout of binding & finishing department. 3. Understand various types of binding, the detailed steps to be taken in each binding type. 4. Understand various cutting machines and other allied equipment. 5. Get an idea about various automation-taking places in binding & finishing. 6. Understand various Paper and Board sizes & Estimates, warehouse management & adhesive & other related materials, different finishing tools. 7. Appreciate styles of binding, layout of binding department. 8. Understand various types of binding, the detailed steps to be taken in each binding type. 9. Understand various cutting machines and other allied equipment. 10. Get an idea about various automation-taking places in binding. 			
Pre-Requisite: Elementary knowledge of Basic Printing & Pre-Press Repro Technique			
Contents:			
Group-A		Hrs/unit	Marks
Unit 1	Book Binding in Print Finishing		
	1.0 Definition, General description of a book, classification of bookbinding & its operational divisions, main stages of Binding.	10	10
	2.0 Paper and its sizes – GSM, relation between GSM and weight of a ream, Estimation for paper, board, cloth calculations. Paper consideration – Size, Grain, Weight, Squaring & Singling.		
	3.0 Styles of binding and covering materials.		
	4.0 Use of different boards and adhesives.		
Unit 2	Binding equipment & tools.	10	05
	5.0 Cutting Machine – Single knife, three knives & five knives trimmer– Application of Air cushion table.		
	6.0 Binding & Finishing tools and equipment.		

Group-B Unit 3 Unit 4	Binding & Finishing terms & Terminology 7.0 Binding & Finishing terms and terminology. 8.0 End papers – definition, classification and its purpose. 9.0 General layout of a Binding & Finishing Department Folding & Assembling the folded material for binding 10.0 Folding – Manual & Mechanical, Folding to print – Folding to paper, Right angle folding and parallel folding, knife folder, buckle folder, Former folder (for newspaper), Spiral folder (continuous stationery/business forms) 12.0 Assembling the folded material for binding – Gathering, Collating, Inserting, – Manual and mechanical version.	05 12	05 10
Group-C			
Unit 5	Binding Proper 1.0 Binding Proper – Stitching, Methods of using staplers or wire stitching machine, Sewing (Hand and Machine version), and classification of sewing, Adhesive/perfect binding loose leaf and mechanical binding. 2.0 Case book binding work (Manual and Mechanical).	07	10
Unit 6	Operational Sequences - Flush cut binding, Edition Binding, Library Binding, Account Book Binding, Re-binding – Prevention of Deterioration.	05	05
Unit 7	Miscellaneous Supplementary and Finishing Processes – Ruling, Bronzing, Varnishing, Embossing, Stamping/Tooling, Lamination, Die – cutting & indexing, UV coating.	10	10
Unit 8	Converting & its importance -Purpose of packaging and packaging labels- Purpose of Package printing Environmental considerations for packaging – Concept of 4 Rs in Packaging Packaging Materials – flexible, rigid, non-rigid Packaging Types – 1 ⁰ , 2 ⁰ , 3 ⁰ , 4 ⁰ , 5 ⁰ , 6 ⁰ Packaging systems for extending shelf life- CAP, MAP, Retort Packaging, Aseptic packaging, Vacuum packaging, Blister packaging, Smart and Intelligent Packaging Types of closures – Cushioning Transport packaging symbols-flammable, explosive, fragile, avoid water, Packaging symbols - vegetarian, non vegetarian, recyclable, radura Polymer symbols for packaging (APME)	05	15

Name of Author	Title of the Book		Name of the Publisher
1. M P Kini	1. Book Binding For Students - M.P.Kini		GATF
2. Alen J Vaugha	2. Modern Book Binding – Alen. J. Vaugha		GATF
3. Lorence Thom	3. Book Binding By Hand - Lorence Thom		GATF
4. John Massa	4. Book Binding – John Masa		GATF
5. J Key	5. Book Binding For Beginers – J.Key		GATF
6. E V Whicher	6. Practical Elementary Book Craft – E.V.Whicher		GATF
7. J W Zachensden	7. The Art Of Book Binding – J.W.Zachensden		GATF
8. A G Martin	8. Finishing Process In Printing – A.G.Martin		GATF
9. Victor Strauss	9. The Pinting Industry – Victor Strauss		GATF

CONTACT PERIODS: 64

INTERNAL ASSESSMENT: 06

TOTAL PERIODS: 70

Examination Scheme:

- a) Internal Examination Marks: 20
 - b) End Semester Examination Marks: 70
 - c) Attendance + Assessment + Interaction : 10
- Full Marks: 100

End Semester Examination Marks: 70

Group	Unit	Objective	Marks/Qs	Total Marks
		<u>To be set</u>	<u>To be answered</u>	
A	1, 2	07	Any 20Qs	01 20
B	3 & 4	08	-	
C	5, 6 ,7 & 8	10	-	
Group	Unit	Subjective	Marks/Qs	Total Marks
A	1, 2	03	Any five Qs	10 05x10
			Taking atleast	=50

One from each					
Group					
B	3 & 4	03	-	-	-
C	5, 6, 7 & 8	04	-	-	-

Note 1: Teachers' Assessment will be based on performance on given assignments.

Note 2: Assignments may be given on all the topics covered in the syllabus.

Syllabus for SURFACE PREPARATION TECHNIQUE W/SHOP – I

Name of the Course: Diploma in Printing Technology			
Course Code:		Semester: Fifth	
Duration: : Seventeen weeks/Semester		Maximum Marks: 100	
Teaching Scheme		Examination Scheme: Continuous Evaluation	
Theory: Nil hrs./week		Mid Semester Exam.: Nil	
Tutorial: Nil hrs./week		Attendance & Teacher's Assessment : 50 Marks	
Practical: 4 hrs./week		End Semester Exam: 50Marks	
Credit: 3			
Aim: To impart practical knowledge in Work Shop/Lab related with course of study.			
Objective: Student will able to			
Sl. No.			
1.	Know basic Surface Preparation Processes.		
2.	Read and interpret Print Production Planning.		
3.	Identify, select, & use of various tools, equipment & software.		
4.	Operate, control different machines & equipment.		
5.	Inspect the job for specified dimensions.		
6.	Produce jobs as per specified dimensions.		
7.	Adopt safety practices (tools, jobs & personal) while working on various machines.		
8.	Acquaint with the chronological operational processes involving in the jobs.		
9.	Care & maintenance of the tools & machines.		
Pre-Requisite:			
Sl. No.			
1.	Elementary knowledge of Basic Printing		
2.	Process Camera, Block & Plate, Color		
Contents:		Hrs./Unit	Marks
<p>CONTINUOUS INTERNAL ASSESSMENT OF 50 MARKS IS TO BE CARRIED OUT BY THE TEACHERS THROUGHOUT THE SEMESTER WHERE MARKS ALLOTTED FOR ASSESSMENT OF SESSIONAL WORK UNDERTAKEN IN EACH SEMESTER IS 25. DISTRIBUTION OF MARKS IN 3RD SEMESTER: PERFORMANCE OF JOB– 10; LABORATORY NOTEBOOK – 10, & ATTENDANCE – 05.</p> <p>EXTERNAL ASSESSMENT (END SEMESTER EXAM) OF 50 MARKS SHALL BE HELD AT THE END OF THE THIRD SEMESTER ON THE ENTIRE SYLLABI OF . ONE JOB PER STUDENT FROM ANY ONE OF THE JOBS DONE IS TO BE PERFORMED. JOB IS TO BE SET BY LOTTERY SYSTEM.</p> <p>DISTRIBUTION OF MARKS: ON SPOT JOB – 20; VIVA-VOCE – 30</p> <p>Unit: 1,2,3 &4</p> <p>TOTAL PERIODS: 64 (16 Weeks) + 4 (1 Week) = 68 (17 Weeks)</p> <p>Practical Class – 64 hrs/16 weeks & Evaluation 4 hrs/1 week</p>		14/Unit 1	25
		05/Unit 2	25
		05/Unit 3	25
		40/Unit 4	25
		64 Hrs	100

Syllabus for SURFACE PREPARATION TECHNIQUE W/SHOP – I

UNIT: 1

- 1.0 Line etching, viz
 - 1.1 Metal printing and Burning in
 - 1.2 Make-ready and Retouching
 - 1.3 First etching and powdering
- 2.0 Finishing and Mounting for the production of line block

Unit: 2

- 3.0 Finishing and Mounting for the production of line block
- 4.0 Making half-tone print on metal and half-tone etching

Unit: 3

- 5.0 Finishing and Mounting for the production of half-tone block
- 6.0 Production of combination block (line and half-tone)

Unit: 4

- 7.0 Production of colour line block (two colour)
- 8.0 Preparation of key drawing and chart making
- 9.0 Photo-polymer plate making by using photo polymer process

Syllabus for **PLANOGRAPHIC PRINTING TECHNIQUE W/SHOP – I**

Name of the Course: Diploma in Printing Technology			
Course Code:	Semester: Fifth		
Duration: : Seventeen weeks/Semester	Maximum Marks: 100		
Teaching Scheme	Examination Scheme: Continuous Evaluation		
Theory: Nil hrs./week	Mid Semester Exam.: Nil		
Tutorial: Nil hrs./week	Attendance & Teacher's Assessment : 50 Marks		
Practical: 4 hrs./week	End Semester Exam: 50Marks		
Credit: 3			
Aim: To impart practical knowledge in Work Shop/Lab related with course of study.			
Objective: Student will able to			
Sl. No.			
1.	Know basic Offset Printing Processes.		
2.	Read and interpret Print Production Planning.		
3.	Identify, select, & use of various tools, equipment & software.		
4.	Operate, control different machines & equipment.		
5.	Inspect the job for specified dimensions.		
6.	Produce jobs as per specified dimensions.		
7.	Adopt safety practices (tools, jobs & personal) while working on various machines.		
8.	Acquaint with the chronological operational processes involving in the jobs.		
9.	Care & maintenance of the tools & machines.		
Pre-Requisite:			
Sl. No.			
1.	Elementary knowledge of Basic Printing		
2.	Image Carrier, Ink, & Substrate		
Contents:	CONTINUOUS INTERNAL ASSESSMENT OF 50 MARKS IS TO BE CARRIED OUT BY THE TEACHERS THROUGHOUT THE SEMESTER WHERE MARKS ALLOTTED FOR ASSESSMENT OF SESSIONAL WORK UNDERTAKEN IN EACH SEMESTER IS 25. DISTRIBUTION OF MARKS IN 3RD SEMESTER: PERFORMANCE OF JOB– 10; LABORATORY NOTEBOOK – 10, & ATTENDANCE – 05.	Hrs./Unit	Marks
		14/Unit 1	25
		05/Unit 2	25
		05/Unit 3	25
		40/Unit 4	25
EXTERNAL ASSESSMENT (END SEMESTER EXAM) OF 50 MARKS SHALL BE HELD AT THE END OF THE THIRD SEMESTER ON THE ENTIRE SYLLABI OF . ONE JOB PER STUDENT FROM ANY ONE OF THE JOBS DONE IS TO BE PERFORMED.			
	JOB IS TO BE SET BY LOTTERY SYSTEM.		
	DISTRIBUTION OF MARKS: ON SPOT JOB – 20; VIVA-VOCE – 30		
	Unit: 1,2,3 &4		
	TOTAL PERIODS: 64 (16 Weeks) + 4 (1 Week) = 68 (17 Weeks)		
	Practical Class – 64 hrs/16 weeks & Evaluation 4 hrs/1 week		
		64 Hrs	100

Syllabus for PLANOGRAPHIC PRINTING TECHNIQUE W/SHOP – I

UNIT: 1

- 1.0 Demonstration of Single color sheet-fed offset press arrangements.
- 2.0 Functions of different units of a sheet-fed offset machine.

Unit: 2

- 3.0 Application of different chemicals used in offset press.
- 4.0 Preparation of Fountain solution.

Unit: 3

- 5.0 Mounting plate on plate cylinder with properly adjusted packing.
- 6.0 Fitting of offset blanket – checking the levelness of the blanket – preparing it for blanket.

Unit: 4

- 7.0 Setting of Dampening (Water Form) rollers.
- 8.0 Setting of Ink Form rollers.

Syllabus for **BINDING & FINISHING W/SHOP**

Name of the Course: Diploma in Printing Technology			
Course Code:		Semester: Fifth	
Duration: : Seventeen weeks/Semester		Maximum Marks: 100	
Teaching Scheme		Examination Scheme: Continuous Evaluation	
Theory: Nil hrs./week		Mid Semester Exam.: Nil	
Tutorial: Nil hrs./week		Attendance & Teacher's Assessment : 50 Marks	
Practical: 3 hrs./week		End Semester Exam: 50Marks	
Credit: 2			
Aim: To impart practical knowledge in Work Shop/Lab related with course of study.			
Objective: Student will able to			
Sl. No.			
1.	Know basic Imposition/Planning & Post Press Technology.		
2.	Read and interpret Print Production Planning.		
3.	Identify, select, & use of various tools, equipment & software.		
4.	Operate, control different machines & equipment.		
5.	Inspect the job for specified dimensions.		
6.	Produce jobs as per specified dimensions.		
7.	Adopt safety practices (tools, jobs & personal) while working on various machines.		
8.	Acquaint with the chronological operational processes involving in the jobs.		
9.	Care & maintenance of the tools & machines.		
Pre-Requisite:			
Sl. No.			
1.	Elementary knowledge of Basic Printing		
2.	Planning & Imposition		
Contents:		Hrs./Unit	Marks
<p>CONTINUOUS INTERNAL ASSESSMENT OF 50 MARKS IS TO BE CARRIED OUT BY THE TEACHERS THROUGHOUT THE SEMESTER WHERE MARKS ALLOTTED FOR ASSESSMENT OF SESSIONAL WORK UNDERTAKEN IN EACH SEMESTER IS 25. DISTRIBUTION OF MARKS IN 3RD SEMESTER: PERFORMANCE OF JOB- 10; LABORATORY NOTEBOOK – 10, & ATTENDANCE – 05.</p> <p>EXTERNAL ASSESSMENT (END SEMESTER EXAM) OF 50 MARKS SHALL BE HELD AT THE END OF THE THIRD SEMESTER ON THE ENTIRE SYLLABI OF . ONE JOB PER STUDENT FROM ANY ONE OF THE JOBS DONE IS TO BE PERFORMED. JOB IS TO BE SET BY LOTTERY SYSTEM.</p> <p>DISTRIBUTION OF MARKS: ON SPOT JOB – 20; VIVA-VOCE – 30</p> <p>Unit: 1,2,3 &4</p> <p>TOTAL PERIODS: 64 (16 Weeks) + 4 (1 Week) = 68 (17 Weeks)</p> <p>Practical Class – 64 hrs/16 weeks & Evaluation 4 hrs/1 week</p>		14/Unit 1	25
		05/Unit 2	25
		05/Unit 3	25
		40/Unit 4	25
		64 Hrs	100

Syllabus for BINDING & FINISHING W/SHOP

Unit: 1

1. Acquaintance with the tools and equipment and their uses
2. Performing operations like Counting, Jogging
3. Folding by hand
4. Acquaintance with the plan of Sewing machine
5. Sewing by hand
6. Wire Stitching

Unit: 2

7. Acquaintance with different styles of Binding
8. Preparing a quarter bound book cut flush
9. Demo on different kind of end papers
10. Case Binding
11. Document Binding

Unit: 3

12. Preparing a Writing Pad
13. Exercise on stitching and cutting machine
14. Demo on various Finishing operations such as Ruling, Numbering, Laminating (dry table top) -Miscellaneous operations such as Perforation, Eye-letting, Numbering.
15. Demo on Account Book Binding

Unit: 4

16. Demo on the Folding machine
17. Acquaintance with Die – cutting, Scoring, Rotary board cutter.
18. Demo on Adhesive/Perfect binding
19. Demo on Saddle stitcher cum three knife trimmer – complete Binding & Finishing m/c for magazine work

Syllabus for: Professional Practice III(Offset Printing machine Maintenance)

Name of the Course: Diploma in Printing Technology			
Course Code:		Semester: Fifth	
Duration: : Eight weeks/Semester		Maximum Marks: 50	
Teaching Scheme		Examination Scheme: Continuous Evaluation	
Theory: Nil hrs./week		Mid Semester Exam.: Nil	
Tutorial: Nil hrs./week		Attendance & Teacher's Assessment : 25 Marks	
Practical: 3 hrs./week		End Semester Exam:25 Marks	
Credit: 2			
Aim: To impart practical knowledge in Work Shop/Lab related with course of study.			
Objective: Student will able to			
Sl. No.			
1.	Know basic setting of Feeder, Pneumatic Control.		
2.	Read and interpret Offset Printing machine Maintenance & Planning.		
3.	Identify, select, & use of various tools, equipment & software.		
4.	Operate, control different machines & equipment.		
5.	Inspect the job for specified dimensions.		
6.	Produce jobs as per specified dimensions.		
7.	Adopt safety practices (tools, jobs & personal) while working on various machines.		
8.	Acquaint with the chronological operational processes involving in the jobs.		
9.	Care & maintenance of the tools & machines.		
Pre-Requisite:			
Sl. No.			
1.	Elementary knowledge of Offset Printing Machine Sheet Fed		
2.	Knowledge of Mechanical Drives		
Contents:		Hrs./Unit	Marks
<p>CONTINUOUS INTERNAL ASSESSMENT OF 25 MARKS IS TO BE CARRIED OUT BY THE TEACHERS THROUGHOUT THE SEMESTER WHERE MARKS ALLOTTED FOR ASSESSMENT OF SESSIONAL WORK UNDERTAKEN IN EACH SEMESTER IS 25. DISTRIBUTION OF MARKS IN 4TH SEMESTER: PERFORMANCE OF JOB- 10; LABORATORY NOTEBOOK – 10, & ATTENDANCE – 05.</p> <p>EXTERNAL ASSESSMENT (END SEMESTER EXAM) OF 25 MARKS SHALL BE HELD AT THE END OF THE THIRD SEMESTER ON THE ENTIRE SYLLABI OF . ONE JOB PER STUDENT FROM ANY ONE OF THE JOBS DONE IS TO BE PERFORMED.</p> <p style="text-align: center;">JOB IS TO BE SET BY LOTTERY SYSTEM.</p> <p style="text-align: center;">DISTRIBUTION OF MARKS: ON SPOT JOB – 10; VIVA-VOCE – 15</p> <p style="text-align: center;">Unit: 1,2,3 &4</p> <p style="text-align: center;">TOTAL PERIODS: 24 (8 Weeks) + 3 (1 Week) = 27 (9 Weeks)</p> <p style="text-align: center;">Practical Class – 24 hrs/8 weeks & Evaluation 3 hrs/1 week</p>		4/Unit 1	10
		4/Unit 2	10
		4/Unit 3	10
		4/Unit 4	10
		4/Unit5	05
		4/Unit6	05
		24 Hrs	50

Syllabus for: Professional Practice III(Offset Printing machine Maintenance)

PRACTICE ON OFFSET PRINTING MACHINE MAINTENANCE

UNIT:

1. Setting of Feeder Pneumatic Control, Setting Feeder Ramp, Setting Side Lay, Adjusting Detectors, and Front Lay alignment – Problems & Solution.
2. Cylinder Parallelism, Thumb test, and Filler Gauge Test.
3. Roller Setting – Form roller with plate (ink – band test), Form roller with oscillating (Filler gauge test) – setting of Ductor roller, Connection with toggle mechanism, drive cam, wobble gear.
4. Roller setting – dampening rollers, motorised dampening.
5. Pile Lifting System – problems & remedies.
6. Impression on/off systems, problem & remedies.
7. Pneumatic insertion device and transfer point.
8. Delivery gripper setting and transfer point.
9. Jogger problems and remedies, delivery pile lowering mechanism.
10. Lubrication system.
11. Machine timing.