

CURRICULUM FOR THREE YEAR  
(SIX SEMESTER)  
DIPLOMA COURSE IN

=====  
: TEXTILE DESIGN WITH SPECIALISATION:  
: IN PRINTING :  
: Effective from Session :  
=====

=====  
UNDER DEVELOPMENT  
=====

=====  
:Semester System :  
=====

Prepared By

=====  
: Curriculum Development Cell :  
=====

INSTITUTE OF RESEARCH DEVELOPMENT  
& TRAINING, U.P., KANPUR

APPROVED BY

=====  
: BOARD OF TECHNICAL EDUCATION :  
: U.P. LUCKNOW, :  
:CORRECTED AS SYLLABUS COMMITTEE OF:  
: B.T.E. MEETING HELD ON 16.06.17 :  
=====

0

Approved and Corrected by BTE on Dated 16.06.2017

STUDY AND EVALUATION SCHEME FOR  
THREE YEAR (SIX SEMESTER) DIPLOMA COURSE IN TEXTILE DESIGN (PRINTING)  
(Effective from session )

(Common to Three year Diploma Course in Textile Design)

I SEMESTER

Curriculum						S U B J E C T	Scheme of Examination											
Periods Per Week							Theory				Practical				Grand			
Le	Tut	Dr	Lab	Work	Tot	Dur.	Marks	Sess.	Total	Dur.	Marks	Sess.	Total	Total				
c.	ori	aw	Shop	al	Examination										Marks	Marks	Examination	Marks
4	-	-	-	-	4	1.1	Foundational Communication	2.5	50	20	70	-	-	-	70			
4	2	-	-	-	6	1.2	Textile Materials	2.5	50	20	70	-	-	-	70			
4	2	-	-	-	6	1.3	Yarn Manufacturing Process Practicals	2.5	50	20	70	-	-	-	70			
-	-	-	14	-	14	1.4	Drawing & Study of Objects	--	--	--	--	4	80	50	130			
-	-	-	8	-	8	1.5	Identification of Textile Materials	--	--	--	--	4	100	50	150			
12	4	-	22	-	38	<-----TOTAL----->					--	150	60	210	180	100	280	490
														Games/NCC/Social and Cultural Activities + Discipline ( 15 + 10)		25		
														TOTAL		515		

II SEMESTER

4	2	-	-	-	6	2.1	Indian Traditional Textile	2.5	50	20	70	-	-	-	70			
4	2	-	-	-	6	2.2	Fabric Manufacturing Process-I	2.5	50	20	70	-	-	-	70			
4	2	-	-	-	6	2.3	Principles of Design And Sketching	2.5	50	20	70	-	-	-	70			
-	-	-	13	-	13	2.4	Basic Design & Sketching Practicals	--	--	--	--	4	100	50	150			
-	-	-	10	-	10	2.5	Introduction To Textile Design & Craft	--	--	--	--	4	80	50	130			
2	-	-	5	-	7	2.6	Introduction To Computer	--	--	--	--	3	60	30	90			
14	6	-	28	-	48	<-----TOTAL----->					--	150	60	210	240	130	350	580
														Games/NCC/Social and Cultural Activities + Discipline ( 15 + 10)		25		
														TOTAL		605		

- NOTE :-
- (1) Each period will be of 50 minutes duration.
  - (2) Each session will be of 16 weeks.
  - (3) Effective teaching will be of atleast 14 weeks.
  - (4) Remaining periods will be utilised for revision etc.
  - (5) For Community Development work see Annexure-I.

STUDY AND EVALUATION SCHEME FOR  
THREE YEAR (SIX SEMESTER) DIPLOMA COURSE IN TEXTILE DESIGN (PRINTING)  
(Effective from session )

(Common to Three year Diploma Course in Textile Design)

III Semester

Curriculum						Scheme of Examination											
Periods Per Week						S U B J E C T	Theory					Practical					Grand
Le	Tut	Dr	Lab	Work	Tot		Examination	Sess.	Total	Examination	Sess.	Total	Tot				
c.	ori	aw	Shop	al		Dur.	Marks	Marks	Marks	Dur.	Marks	Marks	Marks	al			
4	2	-	-	-	6	3.1 Textile Colouration	2.5	50	20	70	-	-	-	-	70		
6	2	-	-	-	8	3.2 Fabric Construction & Cloth Analysis Practicals	2.5	50	20	70	-	-	-	-	70		
-	-	-	12	-	12	3.3 Drawing & Rendering	--	--	--	--	4	80	40	120	120		
-	-	-	10	-	10	3.4 Textile Colouration	--	--	--	--	3	80	40	120	120		
-	-	-	8	-	8	3.5 Fabric Construction & Cloth Analysis	--	--	--	--	3	80	40	120	120		
10	4	-	30	-	44	<-----TOTAL----->	--	100	40	140		240	120	360	500		
														Games/NCC/Social and Cultural Activities + Discipline ( 15 + 10)	25		
															525		

IV Semester

4	-	-	-	-	4	4.1 Functional Communication	2.5	50	20	70	-	-	--	--	70
4	2	-	-	-	6	4.2 Textile Printing	2.5	50	20	70	-	--	--	--	70
6	2	-	-	-	8	4.3 Fabric Manufacturing Process-II	2.5	50	20	70	-	-	-	-	70
4	2	-	-	-	6	4.4 Textile Design-I Practicals	2.5	50	20	70	-	-	-	-	70
-	-	-	10	-	10	4.5 Textile Printing	--	--	--	--	4	80	40	120	120
-	-	-	8	-	8	4.6 Textile Design-I	--	--	--	--	3	80	40	120	120
-	-	-	4	-	4	4.7 Computer Aided Textile Design-I (CATD)	--	--	--	--	3	100	50	150	150
18	6	-	22	-	46	<-----TOTAL----->	--	200	80	280		260	130	390	670
														Games/NCC/Social and Cultural Activities + Discipline ( 15 + 10)	25
															695

- NOTE :-
- (1) Each period will be of 50 minutes duration.
  - (2) Each session will be of 16 weeks.
  - (3) Effective teaching will be of atleast 14 weeks.
  - (4) Remaining periods will be utilised for revision etc.
  - (5) Four weeks structured and supervised,branch specific,task oriented industrial/field exposure to be organised after IV semester. Students will submit a report, there shall be 65 marks for this exposure, these marks shall be awarded by the project examiner in the VI Semester exam. (Examination marks: 40 Sess. marks: 25).
  - (6) Field visits and extension lectures are to be organised and managed well in advance at institute level as per need.
  - (7) For Community Development work see Annexure-I.

STUDY AND EVALUATION SCHEME FOR  
THREE YEAR (SIX SEMESTER) DIPLOMA COURSE IN TEXTILE DESIGN (PRINTING)  
(Effective from session )

V Semester

CURRICULUM					SCHEME OF EXAMINATION										
PERIOD PER WEEK					S U B J E C T S	T H E O R Y					P R A C T I C A L				
Lect	Tut.	Drc./Pract	W/S	Total		Examination	Sessl	Total	Examination	Sessl	Total	Grand			
						Dur.	Marks	Marks	Dur.	Marks	Marks	Marks	Total		
-	-	4	-	4	5.1 Integrative Communication	-	-	-	3	40	20	60	60		
4	2	-	-	6	5.2 Garment Technology	2.5	50	20	70	-	-	-	70		
6	2	-	-	8	5.3 Textile Design-II	2.5	50	20	70	-	-	-	70		
6	2	-	-	8	5.4 Professional Studies	2.5	50	20	70	-	-	-	70		
4	2	-	-	6	5.5 Advance Textile Printing	2.5	50	20	70	-	-	-	70		
PRACTICALS															
-	-	10	-	10	5.6 Garment Technology	-	-	-	4	100	50	150	150		
-	-	8	-	8	5.7 Textile Design-II	-	-	-	4	100	50	150	150		
20	8	20	-	48	T O T A L		200	80	280		200	100	300	580	

Games/NCC/Social & Cultural activity/Community Development Work+ Discipline (15+10) 25

Aggregate 605

VI Semester (COMMON TO TEXTILE DESIGN)

4	-	-	-	4	6.1 Environmental Education * & Disaster Management	2.5	50	--	--	-	-	-	--	
4	2	-	-	6	6.2 Fashion Studies	2.5	50	20	70	-	-	-	70	
6	2	6	-	14	6.3 Textile Quality Assurance	2.5	50	20	70	6	40	20	130	
3	-	-	-	3	6.4 Advance Fabric Structure & Analysis	2.5	50	20	70	-	--	--	70	
PRACTICALS														
1	-	5	-	6	6.5 Computer Aided Textile Design (CATD)-II	-	-	-	4	100	50	150	150	
-	-	8	-	8	6.6 Project (i) Viva-Voce (ii) Field Exposure (Done After in IV Sem.)	-	-	-	Viva	125	50	175	175	
									Viva	30	20	50	50	
18	4	19	-	41	T O T A L		150	60	210		295	140	435	645

Games/NCC/Social & Cultural activity/Community Development Work+ Discipline (15+10) 25

Aggregate 670

30% Carryover of I & II Sem. 345

70% Carryover of III & IV Sem. 805

100% Carryover of V & VI Sem. 1275

GRAND TOTAL 2425

- NOTE :-
- (1) Each period will be of 50 minutes duration.
  - (2) Each session will be of 16 weeks.
  - (3) Effective teaching will be of atleast 14 weeks.
  - (4) Remaining periods will be utilised for revision etc.
  - (5) Field visits and extension lectures are to be organised and managed well in advance at institute level as per need.
  - (6) For Community Development work see Annexure-I.
  - (7) In Field Exposure at least one seminar is compulsory in the Final Year and the sessional marks will allotted after the seminar.
  - (8) (\*) It is compulsory to appear & to pass in examination, But marks will not be included for division and percentage of obtained marks.

C O N T E N T S

S.NO.	PARTICULARS	PAGE NO.
I.	Study and Evaluation Scheme	
II.	Main Features of the Curriculum	1
III.	List of Experts	2
IV.	Need Analysis and Curriculum Profile	3
V.	Job Opportunities	4
1.	I SEMESTER	
	1.1 Foundational Communicatiojn	5-9
	1.2 Textile Materials	10
	1.3 Yarn Manufacturing Process Practicals	11
	1.4 Basic Design & Sketching	12-13
	1.8 Identification of Textile Materials	14
2.	II SEMESTER	
	2.1 Indian Traditional Textile	15-16
	2.2 Fabric Manufacturing Process-I Practicals	17
	2.3 Principles of Design & Sketching	18
	2.4 Drawing & Study Objects	19
	2.5 Introduction To Computer	20-22
3.	III SEMESTER	
	3.1 Textile Colouration	23
	3.2 Fabric Construction, Cloth analysis and Costing Practicals	24
	3.3 Drawing & Rendering	25
	3.4 Textile Colouration	26
	3.5 Fabric Construction & Cloth analysis	26
4.	IV SEMESTER	
	4.1 Textile Printing	27-28
	4.2 Fabric Manufacturing Process-II	29
	4.3 Textile Design-I Practicals	30
	4.4 Textile Printing	31
	4.5 Textile Design-I	32
	4.6 Computer Aided Textile Design-I (CATD)	
5.	V SEMESTER	
	5.1 Garment Technology	33
	5.2 Textile Design-II	34
	5.3 Professional Studies	35
	5.4 Advance Textile Printing Practicals	
	5.5 Garment Technology Lab	36
	5.5 Textile Design -II Lab	36
6.	VI SEMESTER	
	6.1 Environmental Education & Disaster Management	37-39
	6.2 Fashion Studies	40
	6.3 Textile Testing	41-43
	6.4 Advance Fabric Structure & Analysis Practicals	

6.5	Computer Aided Structure & Analysis	44
6.6	Project	45-48
	(i) Viva-voce	
	(ii) Field Exposure	
IX.	Staff structure & Staff qualifications	49
X.	Space requirement	50-51
XI.	List of Equipment	52-58
XII.	Learning Resource Materials	59
XIII.	Annexure - I Community Development Work.	60
XIV.	Annexure - II Format for Field Exposure/ Industrial Training.	61
XV.	Annexure - III Questionnaire	62-64

II. MAIN FEATURES OF THE CURRICULUM

TITLE OF THE COURSE		DIPLOMA IN TEXTILE DESIGN SPECIALISATION IN PRINTING
DURATION OF THE COURSE		THREE YEAR(SIX SEMESTER)
TYPE OF THE COURSE		FULL TIME
PATTERN OF THE COURSE		SEMESTER SYSTEM
INTAKE		60
ENTRY QUALIFICATION		Passed High School with 35% Marks
MODE OF ADMISSION		THROUGH JOINT ENTRANCE EXAMINATION

List of experts who contributed in the development of the curriculum in Semester System for the Three year (Six Semester) Diploma Textile Design (Printing) at I.R.D.T., U.P., Kanpur on 15-04-15 are honourable named below :.

1. Shri B. D. Dixit Professor  
I.I.C.T., Bhadohi
2. Shri R. K. Srivastava H.O.D.  
Govt. Girls Poly., Allahabad
3. Shri D. K. Verma H.O.D.  
Govt. Poly. Varanasi
4. Shri Brajesh Misra Lecturer  
Govt. Poly., Mau
5. Shri Pankaj Yadav Professor  
I. R.D. T., U.P. Kanpur

List of experts who contributed in the revision of the curriculum for the three year Diploma Textile Design at Government Polytechnic, Ghaziabad, on 27-11-15 are honourable named below :.

1. Shri D. K. Verma Deputy Director, D.T.E., Kanpur
2. Shri R. K. Srivastava H.O.D.  
Govt. Girls Poly., Allahabad
3. Shri M.M.Tiwari Asstt. Director, Northern India Textile  
Research Associate, Ghaziabad
4. Shri Neeraj Agarwal Principal Scientific Officer, Northern  
Indian Textile Reseach Asso. Ghaziabad
5. Smt. Sweta Saxena S.S.O., Northern India Textile  
Research Associate, Ghaziabad
6. Shri P. K. Chaurisiya Lectuer, G.G.P., Allahabad
7. Shri Yogesh Singh Professor, I.R.D.T.U.P., Kanpur
8. Shri A. N. Misra Programmer, I.R.D.T.U.P., Kanpur

On Line Comments in the revision workshop are honourable named below-

1. Shri Ananad Nagar S.N.D., Design & Processing Pvt.  
Ltd., Varanasi
2. Mrs. Reena Nagar Cheif Designer, S.N.D. Design and  
Processing Pvt. Ltd., Varanasi
3. Smt. Mamta Sainik Lecturer, G.G.P., Varanasi
4. Dr. V. C. Sonker Lectuer, G.G.P., Varanasi
5. Mrs. Joyti Lecturer TD, G.G.P., Varanas

List of experts who contributed in the revision of the curriculum for the three year Diploma Textile Design at Government Polytechnic, Ghaziabad, on 27-11-15 are honourable named below :.

1. Shri D. K. Verma Deputy Director, D.T.E., Kanpur
2. Shri R. K. Srivastava H.O.D.  
Govt. Girls Poly., Allahabad
3. Shri M.M.Tiwari Asstt. Director, Northern India Textile  
Research Associate, Ghaziabad
4. Shri Neeraj Agarwal Principal Scientific Officer, Northern  
Indian Textile Reseach Asso. Ghaziabad
5. Smt. Sweta Saxena S.S.O., Northern India Textile  
Research Associate, Ghaziabad



6. Shri P. K. Chaurisiya Lectuer, G.G.P., Allahabad
7. Shri Yogesh Singh Professor, I.R.D.T.U.P., Kanpur
8. Shri A. N. Misra Programmer, I.R.D.T.U.P., Kanpur

On Line Comments in the revision workshop are honourable named below-

1. Shri Ananad Nagar S.N.D., Design & Processing Pvt. Ltd., Varanasi
2. Mrs. Reena Nagar Cheif Designer, S.N.D. Design and Processing Pvt. Ltd., Varanasi
3. Smt. Mamta Sainik Lecturer, G.G.P., Varanasi
4. Dr. V. C. Sonker Lectuer, G.G.P., Varanasi
5. Mrs. Joyti Lecturer TD, G.G.P., Varanas

List of exprets who contributed in the development of the curriculum in Review and Revision for the Three year (Six Semester) Diploma Textile Design(Printing) at I.R.D.T., U.P., Kanpur on 22 & 23 August 2016 and 19 & 20 September 2016 are honourable named below :.

1. Shri B. D. Dixit Retd. Professor U.P.T.T.I., Kanpur
2. Shri R. K. Srivastava H.O.D. Govt. Girls Poly., Allahabad
3. Shri Pankaj Yadav Assistant Director D.T.E., U.P. Kanpur
4. Shri R. K. Gupta H.O.D./Principal, Govt. Poly., Furrakhabad
5. Shri Ramakant Yadav Manager, New Civil Lines, Kanpur
6. Shri Rainvijay Singh Industrilist, Shop No 7-8, Sai Market Opposite BDB Green, Lucknow
7. Shri Grish Verma Retd. Assistant Director, NITRA, Kanpur
8. Dr. Alka Ali Professor, U.P.T.T.I., Kanpur
9. Shri Brajesh Mishra Lecturer, Govt. Poly, Mau
10. Shri Pavan Chauraisa Lecturer, Govt. Girls Poly., Allahabad
11. Shri H. K. Shau Lecturer, Govt. Poly., Furrakhabad
12. Shri Himanshu Maurya Lecturer, Govt Girls Poly, Allahabad
13. Shri Rahul Singh Lecturer, Govt. Poly., Kanpur
14. Smt. Anubha Gupta Lecturer, G. P., Kanpur
15. Shri Yogesh Singh Professor, I.R.D.T.U.P., Kanpur

#### IV. NEED ANALYSIS & CURRICULUM PROFILE

The process of education is to impart knowledge and skill to the students of a desired need. The need of this desire changes with the objectives and need of the time. At any level, need of the time is more pressing factor, so the development of curriculum of Textile Design with specification in Printing felt necessary due to the fast changing patterns and fashion in textile printing and designs. The curriculum in Textile Design has been running since long and it become invetable now to develop to meet the present demand of the world of work in terms of the skill of the personnel concerned in Textile Design & Printing. For this reason it was decided to develop a curriculum for the three year diploma in "Textile Design with spl. in Printing".

In developing the curriculum, professional of the relevent fields related to our problem were contacted personally and workshop was organised at this institute in which experts from higher technological institutes, fiddl organisation and polytechnics participated and a draft curriculum was developed. The experts appreciated the idea introducing a subject of "Advance Textile Printing" in the existing curricula of Textile Design as an additional subject. The content of the subject is so developed as may befit the world of work and suffice enough to serve the purpose.

It is hope that the curriculum of Diploma in Textile Design with will prove useful in producing the desired type of middle level trained manpower for Textile Design as well as Textile Printing industry.

## V. JOB OPPORTUNITIES

After completing the course, students can venture to enter into the under mentioned fields.

- Medium & Small scale industries
- Garment manufacturing industries
- Garment Sales Emporium
- Department of Education
- Orphanage
- Women Prison
- Deaf & Dumb Schools
- Angan bari
- Film Industry
- Advertising industry
- Modelling
- Fashion Designing
- Article Writing in Ladies Fashion magazines
- Painting on Pottery
- Entrepreneur
- I- Textile Designer
- II- Botic/Stencil/Screen Printing
- III- Interior Decoration Courses
- IV- Drawing & Painting Courses
- V- House hold decorative Textile Articles
- VI- Dying/Bleaching
- VII- Garment Manufacturing
- VIII-Consultancy Services.

**1.1 FOUNDATIONAL COMMUNICATION  
SECTION 'A' (ENGLISH)**

L    T    P  
4    -    -

**TOPIC WISE DISTRIBUTION OF PERIODS**

Sl.No.	Units	Coverage Time		
		L	T	P
<b>Section A English</b>				
1.	PARTS OF SPEECH	12	-	-
2.	VOCABULARY BUILDING	05	-	-
3.	Grammar	15	-	-
4.	DEVELOPMENT OF EXPRESSION (Composition)	12	-	-
<b>Section B Hindi</b>				
5.	Topic 5	2	-	-
6.	Topic 6	5	-	-
7.	Topic 7	5	-	-
		<b>56</b>	-	-

**DETAILED CONTENTS**

1. **PARTS OF SPEECH** :
  - a. Noun
  - b. The pronoun : Kinds and Usage
  - c. The adjective : Kinds and Degree
  - d. Determiner : Articles
  - e. The verb : Kinds
  - f. The Adverb : Kinds, Degree and Usage
  - g. Prepositions
  - h. Conjunctions
  - i. The Interjections
  - j. Subject: Verb Agreement (Concord)
  
2. **VOCABULARY BUILDING** :
  - a. Antonyms and Synonyms
  - b. Homophones
  - c. One word substitutions
  - d. Idioms and Phrases
  - e. Abbreviations
  
3. **Grammar**
  - a. Sentence & its types

- a. Tenses
- b. Punctuations
- c. Active and Passive voice
- d. Transformation of Sentences
- e. Synthesis of Sentences
- f. Direct and Indirect Narrations

4. **DEVELOPMENT OF EXPRESSION (Composition) :**

- a. Paragraph Writing
- b. Essay Writing
- c. Proposal Writing
- d. Letter Writing (Formal, Informal, Business, official etc.)
- f. Report Writing
- g. Note Making
- h. News Making
- i. Application Writing
- j. Minute Writing
- k. Invitation Letter Writing

**SECTION "B" (Hindi)**

- 5- संज्ञा, सर्वनाम, विशेषण, क्रिया विशेषण, वर्ण समास, संधि, अलंकार, रस, उपसर्ग प्रत्यय।
- 6- पत्र लेखन, निविदा संविदा, दर आमंत्रण (कोटेशन) अपील, स्वतन्त्र अभिव्यक्ति, प्रतिवेदन लेखन, प्रेस विज्ञप्ति।
- 7- वाक्य/वाक्यांश के लिए शब्द, पर्यायवाची या समानार्थी शब्द, विलोम शब्द, अनेकार्थी शब्द, शब्दयुग्म या समुच्चारित शब्द समूह, वाक्य शुद्धि (शुद्ध अशुद्ध वाक्य), मुहावरे एवं लोकोक्तियाँ।

## 1.2 TEXTILE MATERIALS

(Common to Three year Diploma course in Textile Design  
(Printing))

L T P  
4 2 -

**RATIONAL :**

The students of textile design have to deal with the different types of designs over variety of textile fabrics. Before going through the design aspect one must know about the different types of materials used in fabric manufacture. The students are expected to know the varieties of different materials of the textile.

### TOPICWISE DISTRIBUTION OF PERIODS

Sl.No.	TOPIC	LECTURE	TUTORIAL
1.	TOPIC-I	8	4
2.	TOPIC-II	8	4
3.	TOPIC-III	8	4
4.	TOPIC-IV	8	4
5.	TOPIC-V	8	4
6.	TOPIC-VI	8	4
7.	TOPIC-VII	8	4
	TOTAL	56	28

### DETAILED CONTENTS

- I- Introduction to world's sources of textile fibres (natural and manmade) and their utilisation General classification of fibres.
- II- Essential properties and uses of various varieties of cotton. Introduction to bast fibres; Flex, Jute, Hemp and Rammie.
- III- Introduction to natural silk. Rearing of silk worm. Properties and uses of various types of silk, silk reeling, Throwing and weighting.
- IV- Introduction to wool-merino Mohair, Kashmere, Camel and alpaca. sorting and grading of wool. Introduction to wool fibre and elementary idea of different wool.
- V- Introduction to Manmade fibres such as Nylons, Terelene, Acrylic and Rayons - Viscose, Acetate and Cupramonium.
- VI- Introduction various to blends of the fibres, care of fabrics, spots removing, types of removing agent.
- VII. Introduction to specilized fibres and technical

textiles. Properties of specialized fibers such as Glass fibre, Cabiler fibre Aramide fibre, etc.

### 1.3 YARN MANUFACTURING PROCESS

(Common to Three year Diploma course in Textile Design (Printing))

L T P  
4 2 -

#### TOPICWISE DISTRIBUTION OF PERIODS :

Sl.No.	TOPIC	LECTURE	TUTORIAL
1.	TOPIC-I	10	5
2.	TOPIC-II	10	5
3.	TOPIC-III	12	6
4.	TOPIC-IV	12	6
5.	TOPIC-V	12	6
T O T A L		56	28

#### DETAILED CONTENTS

- I. Flow chart of the processes involved in the Conversion of fibres into Yarn and objective of different processes.
- II. Brief study and working principles of blow room and carding.
- III. Brief description and working of draw frame, combing and speed frame
- IV. Brief description and working of ring frame, dubling frame and reeling.
- V. Types of yarn and their uses along with brief idea of manufacturing, Numbering system and characteristics such as strength, twist and evenness of yarn. (No numerical question should be asked in the examination).



#### 1.4 DRAWING AND STUDY OF OBJECTS

(Common to Three year Diploma course in Textile Design(Printing))

L T P  
- - 14

##### RATIONALE :

It is the further knowledge of sketching in which the students will be made perfect in making drawings of different objects in pencil with light & shade. They will also be made well versed in using colours in the variety of objects. Study of the following in pencil with light and shade.

##### 1. INTRODUCTION TO SKETCHING :

Meaning and difference between sketching and drawing

##### 2. INTRODUCTION TO DRAWING :

How to draw.

##### 3. DRAWING IN AN ACTIVE ENVIRONMENT :

This is to develop the students skills in quick sketching.

##### 4. NATURE STUDY :

Handling of different media in black and white and also in color i.e pencil, charcoal, pen and ink, brush and ink, water color, pastels and mixed media.

##### STUDY :

Flowers, Leaves, Stems, Fruits, Vegetables, Trees, Birds, Butterflies, Land scapes, Creepers, etc.

##### OBJECT STUDY :

Understanding of basic shapes in prespective concept of illusion in art expression, three dimensional effect.

## 1.5 IDENTIFICATION OF TEXTILE MATERIALS

(Common to Three year Diploma course in Textile Design (Printing))

L T P  
- - 8

### RATIONALE:

It is the further addition of knowledge of the subject Textile Materials. In this the students will be practically acquainted with the materials used in textile fabrics.

Inspection and classification of various types of textile materials covered in the subject. Textile Materials also to visualize for collecting information regarding distinguishing features.

All experiments to be done with respect to below listed fibres

- a. Cotton
- b. Wool
- c. Silk
- d. Jute
- e. Linen
- f. Polyester
- g. Acrylic
- h. Viscose
- i. Nylon

1. To Study handle, feel, appearance of textile fibres
2. To study burning behaviour of Textile Fibres
3. To observe various fibres under microscope and study their longitudinal and cross sectional view

To study different types of yarns: Spun Yarn, Filament Yarn, Fancy Yarn, Mono Filament yarn, Ply Yarn, Textured Yarns, High Twist Yarn, Cable yarn, Core spun yarn, Rotor Spun Yarn, Friction Spun Yarn etc.

(Common to Three year Diploma course in Textile Design (Printing))

L	T	P
4	2	-

## RATIONALE :

The developmental history of textiles proves many times more enlightening to deal and solve even the present day problems. So its importance can not be ignored.

## TOPICWISE DISTRIBUTION OF PERIODS :

Sl.No.	TOPIC	LECTURE	TUTORIAL
1.	Topic 1	6	3
2.	Topic 2	6	3
3.	Topic 3	30	16
4.	Topic 4	14	6
T O T A L		56	28

## DETAILED CONTENTS

## 1. INTRODUCTION TO INDIAN WOVEN TEXTILE :

Historical significance, Construction techniques, Styles, Colours and Motifs, Centers of production.

## 2. DYEING AND PRINTING IN INDIA :

Historical significance, Construction techniques, Styles, Colours and Motifs, Centers of production.

## 3. The following topics should be covered in History of textile.

- 3.1 Phulkari
- 3.2 Kashmir embroidery
- 3.3 Chickankari
- 3.4 Bengal Kantha
- 3.5 Sanganari
- 3.6 Kalamkari
- 3.7 Patola
- 3.8 Bandhani
- 3.9 Ikat
- 3.10 Varanasi Brocades
- 3.11 Jamdani
- 3.12 Chanderi
- 3.13 Kanchipuram
- 3.14 Baluchar
- 3.15 Madhubani

## 4. INTRODUCTION TO INDIAN CRAFT:

A brief introduction to the following craft with special reference to their location tools and materials used, and their special features.

Wood Work (Block Printing), Metal work (Pottery (Ceramics), Ivory and stone work, Carpet and Floor covering.

## 2.2 FABRIC MANUFACTURING PROCESS-I

(Common to Three year Diploma course in Textile Design(Printing))

L T P  
4 2 -

### RATIONALE :

Aim of this paper is to give new intrants in the field of textile first hand knoledge of principles and processes involved in preparation for weaving.

### TOPICWISE DISTRIBUTION OF PERIODS

Sl.No.	TOPIC	LECTURE	TUTORIAL
1.	TOPIC-I	18	9
2.	TOPIC-II	10	5
3.	TOPIC-III	18	9
4.	TOPIC-IV	10	5
T O T A L		56	28

### DETAILED CONTENTS

1.
  - 1.1 Flow chart of the process involved in preparation for weaving
  - 1.2 i. Winding: Its Objects, types on basis of machine speed and winding packages. Passage of material through upright spindle winding machine(Slow speed) and any high speed drum winding machine e.g. Rotoconer
    - ii. Faults found in winding package.
    - iii. General idea of pirn winding and its need and advantages.
2. Warping:- Its main objects, general idea of beam and sectional warping machine
3. Sizing :- Its main objects, methods of sizing on the basis of drying system used for drying wet yarn and on the basis of amount of size put on yarn.
  - ii. Sizing ingredients for cotton and cotton blade.
  - iii. Passage of warpsheet through Slasher sizing machine and knowledge of necessary parts of machine.

4. Drawing in & Beaming:-Main objects, different method used in textile industry.

2.3 PRINCIPLES OF DESIGN & SKETCHING

(Common to Three year Diploma course in Textile Design(Printing))

L T P  
3 - -

RATIONAL :

The Fundamental of design skills is the vital part of the Textile Design process, which develops the better understanding and skill to make a foundation for design which is aesthetically expresses the specific meaning.

TOPICWISE DISTRIBUTION OF PERIODS

Sl.No.	TOPIC	LECTURE	TUTORIAL
1.	TOPIC-I	6	3
2.	TOPIC-II	8	4
3.	TOPIC-III	6	3
4.	TOPIC-IV	6	3
5.	TOPIC-IV	8	4
6.	TOPIC-IV	6	3
7.	TOPIC-IV	8	4
8.	TOPIC-IV	8	4
T O T A L		56	28

1. INTRODUCTION TO ART AND DESIGN :

Difference between art and design.

2. INTRODUCTION TO ART MATERIALS :

Pencils, Types of colour (Poster, Water, Pencil, etc.), Paper and other materials, Compass and liner, T-square, Set-square, Drawing board.

3. STUDY OF LINES & DOTS :

Types of lines, Psychological and visual association.

4. STUDY OF SHAPES :

Types of shapes, Psychological and visual association.

5. STUDY OF COLOURS :

Colour wheel, Light theory of colour, Pigment theory of colour, Primary, Secondary, Tertiary, Monochromatic, Complementary, Analogous, Achromatic, Colourpsychology and visual effects.

6. STUDY OF TEXTURE :

Types of texture, Categories of texture, Psychological and Visual association.

7. STUDY AND UNDERSTANDING OF PRINCIPLES OF DESIGN :

Rhythm, Harmony, Emphasis, Balance, Repetition, Gradation, Radiation, Negative and positive space, Proportion.

8. AESTHETIC QUALITIES OF DESIGN ELEMENTS :

Formal qualities (Tradition, Geometric), Expressive qualities (Modern, Realistic), Symbolic qualities (Abstract, Folk).



## 2.4 BASIC DESIGN & SKETCHING

(Common to Three year Diploma course in Textile Design)

L T P  
- - 13

1. Interpretation of single line, 2 lines and using many lines for specific expression.  
  
Total number of lines, 3 each with appropriate emotional or psychological expression.
2. Conversion of shapes from natural to geometric and abstract any one natural shape to be converted in 6 different forms of geometrical and abstract.
3. Organizing these shapes in a given area to create motif.
4. Drawing colour wheel that includes primary, secondary and tertiary colours.
5. Rendering value scale for value and intensity of each color from the color wheel in the circular chart form, Monochromatic, complementary, split complementary, analogous, achromatic, primary, secondary, tertiary color schemes will be rendered in 2"x2" block.
6. Understanding of various types of design: Traditional. - Modern, realistic, Abstract, Folk, Geometric, Total number of variations at list 6 No.

2.5 INTRODUCTION TO TEXTILE ART AND CRAFT

(Common to Three year Diploma course in Textile Design(Printing))

L T P  
- - 10

1. TIE AND DIE:

Preparation of a file with Tie and Dye samples

2. BATIK :

Preparation of a file with Batik samples like a wall hanging, dupatta/scarf/gents shirt.

3. STENCIL CRAFT :

Preparation of a file by paper stencil method on different fabrics with different designs and colours.

4. EMBROIDERY TECHNIQUES :

Preparation of a sample file with the following like a Phulkari, Kashmiri, Bengal kantha, Chickenkari, etc.

5. FLOK ART :

Preparation of a file with paper samples detailed study of Madhubani Paintings and Phar painting, etc.

6. CREATIVE ART :

Preparation of a trace the textures on paper and will interpret the same for creating fabric textures using various raw materials and techniques like crushing, dying, wax effects, colours, etc. and relating the textures to certain expressions.

## 2.6 INTRODUCTION TO COMPUTER

[Common with Civil Engg., Civil (Spl. With Rural), Mechanical Engg., (Specialisation in Production, Automobile, Refrigeration and Air conditioning), Electronics Engg., Instrumentation and Control Engg., Dairy Engg., Leather Technology, Footwear and Leather Goods Tech., Ceramics, Chemical Engg. (Four year Sandwich), Chemical Tech. (Rubber & Plastic), Chemical Tech. (Fertilizer) ]

L    T    P  
2    -    5

Rationale:

Computers are being used for design and information processing in all branches of engineering. An exposure to fundamentals of computer programming is very essential for all diploma holders. This subject has been included to introduce students in the use and application of computers in engineering.

### TOPIC WISE DISTRIBUTION OF PERIODS

Sl.No.	Units	Coverage Time		
		L	T	P
1.	Introduction to Computer	4	-	-
2.	Introduction To Operating System (MS DOS/Windows)	3	-	-
3.	Word Processing	4	-	-
4.	Worksheet	4	-	-
5.	Presentation	4	-	-
6.	Data Base Operation	3	-	-
7.	Introduction to Internet	2	-	-
8.	Introduction to advance tools	4	-	-
		28	-	70

### DETAILED CONTENTS

1. Introduction to Computer:
  - A. Block Diagram of Computer.
  - B. Types Of Computer
  - C. Types of Input and Output devices
  - D. Memories Devices (Its Types and Basic).
  
2. INTRODUCTION TO OPERATING SYSTEMS (MS-DOS/MS-WINDOWS:)
 

What is operating system, its significance, Commands of DOS, Features/Application of window.
  
3. WORD PROCESSING:
 

File : Open, Close, Save, Save as, Search, Send to, Print Preview, Print and Page Setup

Edit : Cut, Copy, Paste, Office Clipboard, Select All,

Find, replace, Goto, etc.  
View : Normal/Web Layout/Print Layout; Tool Bars;  
Header/Footer; Zoom, etc.  
Insert: Break, Page Number, Date & Time, Symbol, Comment,  
Reference, etc.  
Format: Font, Paragraph, Bullets & Numbering, Borders &  
Shading, Column, Change case, Back ground, etc.  
Tools : Spelling & Grammer, Language, Word Count, Letters &  
Mailing, Options, Customize, etc.  
Table : Draw, Insert, Delete, Select, Auto Format, AutoFit,  
Convert, Sort, Formula, etc.  
Mail Merge

4. WORKSHEET:

Introduction, Use of Tools/Icons for preparing simple  
Mini Project.

5. PRESENTATION :

Introduction, Use of Tools/Icons for preparing simple  
presentation on Power Point.

6. DATABASE OPERATION :

Create database using MS Access, Create Table and Creating  
Reports.

7. Introduction to Internet:

What is Network, How to send & receive messages, Use of  
Search Engines, Surfing different web sites. Creating Mail  
ID, Use of Briefcase, Sending./replying emails.

8. INTRODUCTION TO ADVANCE TOOLS :

I. Steps requires to solving problems.

- A. Flow Chart
- B. Algroithm
- C. Programming

II. Use of advance Tools such as Skype, Teamviewer, Installation  
of Modem, use of WiFi, Etc.

## INTRODUCTION TO COMPUTER LAB

### List Of Practicals

1. Practice on utility commands in DOS.
2. Composing, Correcting, Formatting and Article (Letter/Essay/Report) on Word Processing tool Word and taking its print out.
3. Creating, editing, modifying tables in Database tool.
4. Creating labels, report, generation of simple forms in Database tool.
5. Creating simple spread sheet, using in built functions in Worksheet tool..
6. Creating simple presentation.
7. Creating mail ID, Checking mail box, sending/replying e-mails.
8. Surfing web sites, using search engines.

Note : In the final year, related students have to use the concept of MS Word/MS Excel/MS Access/ MS Power Point in their respective branch's project work such as creating project report through MS Word/Creation of statistical data in MS Excel/Creation of database in MS Excel/Demonstration of project through Power Point Presentation.

(Common to Three year Diploma course in Textile Design(Printing))

L	T	P
4	2	-

## RATIONALE :

The purpose of colouring textile is to make it attractive to eyes. There are many a techniques & procedures developed for colouring & dyeing the fabrics made of various kinds of fibres. There knowledge is essential for decorating the product to suit the mood and taste of the consumer.

## TOPICWISE DISTRIBUTION OF PERIODS

Sl.No.	TOPIC	LECTURE	TUTORIAL
1.	TOPIC-I	8	4
2.	TOPIC-II	6	3
3.	TOPIC-III	6	3
4.	TOPIC-IV	6	3
5.	TOPIC-V	8	4
6.	TOPIC-VI	8	4
7.	TOPIC-VII	6	3
8.	TOPIC-VIII	8	4
T O T A L		56	28

## DETAILED CONTENTS :

1. Preparatory processes, Singeing, desizing, scouring and bleaching for cotton, wool and silk.
2. Brief study on the necessity and use of optical whitening agents.
3. Classification of dyes according to application, Principal classes of natural and synthetic dyes.
4. Definition of Dyeing, methods of dyeing.
5. Principal classes of dyes used for cotton, wool and synthetic fibres, limitations of dyestuffs on different fabrics.
6. Common methods of dyeing cotton with direct vats and naphthol colours, wool dyeing with acid and manmade colours polyester by disperse, use of assistant & textile auxiliaries in dyeing.
7. Introduction to different dyeing machines like Jigger, Paddymangie winch, infrared dyeing machine, Jet dyeing & HTHP.
8. Difficulties in dyeing synthetic fibres by the common methods and ways of overcoming them.
9. Introduction to different colour fastness and their testing methods. Factors affecting colour fastness.

### 3.2 FABRIC CONSTRUCTION & CLOTH ANALYSIS

(Common to Three year Diploma course in Textile Design(Printing))

L T P  
6 2 -

#### RATIONALE :

The importance of the paper lies in the fact that it introduces the reader with different varieties of the fabric and designs and related technical terminology. Knowledge of these things very base of textile designer's working.

#### TOPICWISE DISTRIBUTION OF PERIODS :

Sl.No.	TOPIC	LECTURE	TUTORIAL
1.	TOPIC-I	8	3
2.	TOPIC-II	8	3
3.	TOPIC-III	8	3
4.	TOPIC-IV	10	3
5.	TOPIC-V	12	4
6.	TOPIC-VI	10	3
7.	TOPIC-VII	10	3
8.	TOPIC-VIII	10	3
9.	TOPIC-IX	8	3
T O T A L		84	28

#### DETAILED CONTENTS :

- I. Classification of woven fabrics.
- II. Introduction to technical terms used in cloth construction. Warp, weft, ends, picks, weave, design, repeat of design draft, pegplan and denting plan
- III. Methods of ornamenting a fabric.
- IV. Plain weave and its derivatives ie, warp rib, weft rib, and matt or hopsack or basket.
- V. Regular twill weaves and their derivatives such Pointed, Herring bone, Zigzag-wavy, Curved, Broken, Re-arranged, Fancy twill, Combined twill and Diamonds.
- VI. Satin and sateen weaves, cork screw twills etc.
- VII. Towelling weaves-Huckaback, honeycomb and brighten honeycomb.
- VIII. Plain faced, Twill faced & wadded bed-ford cords.
- IX. Crepe Weaves.

### 3.3 DRAWING AND RENDERING

(Common to Three year Diploma course in Textile Design(Printing))

L T P  
- - 12

#### RATIONALE :

A designer is always in pursuit of new ideas to make his designs newer. The source of ideas may be anything in nature quite in vicinity to him. For this the only thing wanted is an open eye and creating nature. The paper aims to draw analytical attention of the new entrants in the field towards such animate and inanimate objects to pick up some ideas for his creativity.

#### OBJECTIVE :

1. Meaning of drawing and rendering.
2. How to draw and render study of related features.

STUDY OF THE FOLLOWING with Pencil, Pen, Ink and Water Colours :

Students will make various motifs with coloured pictures on given suggested themes.

1. Flower heads.
2. Vegetables with green leaves.
3. Creepers with flowers.
4. Sea shells
5. Sea animals
6. Animals
7. Feathers.
8. Stones and Rocks.
9. Monuments and Building
10. Jewellery

Cross - Sectional, Study of the Following with Water Colours:

1. Fruits and Vegetables
2. Dry Fruits

#### Compositions :

Composition of any three forms from Design Point of View with Water and Poster Colours, on 1/4, imp, sheets.

Composition of Cross Sectioned forms from Design Point of View with Pen and Ink on 1/4, imp, sheet

#### NOTE :



A sketch file for first three exercises shall be maintained by students having 2 drawings of each topic with at least 4 different angles.

### 3.4 TEXTILE COLOURATION(Lab)

(Common to Three year Diploma course in Textile Design(Printing))

L T P  
- - 10

#### RATIONALE :

The purpose of colouring textile is to make it attractive to eyes. There are many a techniques & procedures developed for colouring & dyeing the fabrics made of various kinds of fibres. There knowledge is essential for decorating the product to suit the mood and taste of the consumer.

Dyeing of yarn's and cloths covered in the course. Matching of shade cotton, silk, wool, nylon, polyster, viscos etc.

### 3.5 FABRIC CONSTRUCTION & CLOTH ANALYSIS

(Common to Three year Diploma course in Textile Design(Printing))

L T P  
- - 8

#### RATIONALE :

The importance of the paper lies in the fact that it introduces the reader with different varieties of the fabric and designs and technical terminology knowledge of these things vary base of textile designer's working.

Analysis of fabrics Covered in the course for their manufacturing particulars. Construction particulars such as identification of warp and weft, direction, face and back of the fabric ends per inch, warp and weft, warp and weft twist direction and ply. Warp crimp percentage and weft crimp percentatge, weave weight per square yearad and meter of common use fabrics.

## 3.1 Functional Communication

L	T	P
4	-	-

## TOPIC WISE DISTRIBUTION OF PERIODS

Sl.No.	Units	Coverage Time		
		L	T	P
<b>Section A English</b>				
1.	On Communication	04	-	-
2.	Exploring Space	04	-	-
3.	Sir C.V. Raman	04	-	-
4.	Professional Development	04	-	-
5.	Buying a Second Hand Bicycle	04	-	-
6.	Leadership and Supervision	04	-	-
7.	First Aid	03	-	-
8.	The Romanance of Reading	03	-	-
9.	No Escape from Computers	03	-	-
10.	Bureau of Indian Standards	03	-	-
<b>Section B Hindi</b>				
1.	Topic 1	02	-	-
2.	Topic 2	02	-	-
3.	Topic 3	02	-	-
4.	Topic 4	02	-	-
5.	Topic 5	02	-	-
6.	Topic 6	02	-	-
7.	Topic 7	02	-	-
8.	Topic 8	01	-	-
9.	Topic 9	02	-	-
10.	Topic 10	02	-	-
11.	Topic 11	01	-	-
		<b>56</b>	-	-

## Section "A" (English)

## Text Lessons

Unit I.	On Communication
Unit.II	Exploring Space
Unit.III	Sir C.V. Raman
Unit.IV	Professional Development of Technicians
Unit.V	Buying a Second Hand Bicycle
Unit.VI	Leadership and Supervision
Unit.VII	First Aid
Unit.VIII	The Romanance of Reading
Unit.IX	No Escape from Computers
Unit.X	Bureau of Indian Standards

Section "B" Hindi

- 1- स्वरोजगार
- 2- भारतीय वैज्ञानिकों एवं तकनीकियों का भारत के विकास में योगदान
- 3- ग्राम्य विकास
- 4- परिवार नियोजन
- 5- सामाजिक संस्थायें
- 6- नियोजन और जन कल्याण
- 7- भारत में प्रौद्योगिकी के विकास का इतिहास
- 8- हरित क्रांति
- 9- पर्यावरण एवं मानव प्रदूषण
- 10- श्रमिक कल्याण
- 11- भारत में श्रमिक आन्दोलन

## 4.2 TEXTILE PRINTING

(Common to Three year Diploma course in Textile Design(Printing))

L T P  
4 2 -

RATIONAL :

Printing of fabrics for making it attractive is an art and there is no end to development of technologies for the process. The paper is meant to give an insight of the means and methods used in printing.

### TOPICWISE DISTRIBUTION OF PERIODS

Sl.No.	TOPIC	LECTURE	TUTORIAL
1.	TOPIC-I	4	2
2.	TOPIC-II	6	3
3.	TOPIC-III	4	2
4.	TOPIC-IV	6	3
5.	TOPIC-V	4	2
6.	TOPIC-VI	4	2
7.	TOPIC-VII	6	3
8.	TOPIC-VIII	4	2
9.	TOPIC-IX	6	3
10.	TOPIC-X	4	2
11.	TOPIC-XI	4	2
12.	TOPIC-XII	4	2
T O T A L		56	28

### DETAILED CONTENTS

1. Preparation of cloth for printing.
2. Printing methods-Block, Screen, Stencil (or spray) and Transfer. Limitations as well as advantages of different printing methods.
3. Composition of printing paste
  - A. Classification of thickening agents, preparation of thickening paste.
  - B. Solvents, Hygroscopic agents, Alkalics, Oxidising and reducing agents and binders.
  - C. Printing paste composition, its calculation based on coverage.
4. Different styles of Printing, Direct Discharge and resist printing styles; underlying principles and methods. (the above study will be with respect to cotton, silk, viscos and synthetics fabrics).
5. Brief study of wool printing (use of Chlorination Prior

to printing ).

6.A. Batik Printing - Ingredients used and their preparation.

B. Type and dye style of printing.

7. Processes of developing forms and surfaces, repeat for Block, Screen and Printing in fabrics covering factors of different colours and patterns for above methods.
8. After treatments : such as steaming, curing, ageing, Soaping and Washing.
9. Various defects in Printing and their remedies.
10. Introduction to digital printing and their pre and post finishing treatments.
11. Introduction to textile finishing i.e. calendering, mitting, sonforzing, mercerizing, parchmENZAING and weighting of silk.
12. Costing of printed fabric.

#### 4.3 FABRIC MANUFACTURING PROCESS-II

(Common to Three year Diploma course in Textile Design(Printing))

L T P  
4 2 -

##### RATIONALE :

From the title of the paper, it is evident that the knowledge of manufacturing process is matter of imparitive importance to textile designer. So is the importance of the paper.

##### TOPICWISE DISTRIBUTION OF PERIODS

Sl.No.	TOPIC	LECTURE	TUTORIAL
1.	TOPIC-I	8	4
2.	TOPIC-II	8	4
3.	TOPIC-III	10	5
4.	TOPIC-IV	10	5
5.	TOPIC-V	10	5
6.	TOPIC-VI	10	5
T O T A L		56	28

##### DETAILED CONTENTS

- I. Primary, Secondary and Auxillary motions in weaving process.
- II. Passage of warp on loom. Showing all its necessary parts.
- III. Classification of various types of weaving machine. Study of handloom, power loom and elementary knowledge of automatic looms.
- IV. Brief study of drop box, doobby and jacquard.
- V. Introduction to knitted fabrics and various types of knitting machines ( Warp knit and Weft knit machines only)
- VI. Introduction & Principles of Modern Weaving Machines (Shuttle less 100 ms) i.e Projectile, Airfet and Rapier 100 ms.

#### 4.4 TEXTILE DESIGN-I

(Common to Three year Diploma course in Textile Design(Printing))

L T P  
4 2 -

##### RATIONAL :

This paper deals with generating self designs in the fabrics. Use of free hand sketching and their enlargement and fabric finishing activities.

##### TOPICWISE DISTRIBUTION OF PERIODS

Sl.No.	TOPIC	LECTURE	TUTORIAL
1.	TOPIC-I	4	2
2.	TOPIC-II	6	2
3.	TOPIC-III	10	5
4.	TOPIC-IV	6	2
5.	TOPIC-V	6	2
6.	TOPIC-VI	8	3
7.	TOPIC-VII	8	3
8.	TOPIC-VIII	8	3
T O T A L		56	28

##### DETAILED CONTENTS :

1. Free hand sketching, enlargement and reduction of designs.  
Concept of design repeats
2. Composition of Bi-symmetrical and Multi-symmetrical figures suitable for corner and centre placement.
3. Development of stripe and check pattern -
  - i. Simple - Regular and Irregular pattern.
  - ii. Counter change pattern.
  - iii. Graduated pattern.
  - iv. Modified form.
4. Development of design - suitable for dobby
5. Development of design suitable for Jacquards.
6. Development of decorative geometrical designs.
7. Development of all over design of different form - Natural, Abstract, Geometrical and traditional modified.
8. Introduction to Electronic Jacquard.



#### 4.5TEXTILE PRINTING

(Common to Three year Diploma course in Textile Design(Printing))

L T P  
- - 10

RATIONAL :

Printing of fabrics for making it attractive is an art and there is no end to development of technologies for the process. The paper is meant to give an insight of the means and methods used in printing.

- A. Printing of Cotton and rayon fabrics by different methods by Block and Screen printing, Batik printing etc.
- B. Testing of fabric on various agencies like washing fastness, light fastness, rubbing fastness.

#### 4.6 TEXTILE DESIGN-I

(Common to Three year Diploma course in Textile Design(Printing))

L T P  
- - 8

RATIONAL :

This paper deals with generating self designs in the fabrics. Use of free hand sketching and their enlargement and fabric finishing activities.

Preparation of 12 drawing sheets on the basis of theory syllabus to be ornamented by different colours and system.

#### 4.7 COMPUTER AIDED TEXTILE DESIGN CATD I (PRACTICAL)

(Common to Three year Diploma course in Textile Design(Printing))

L T P  
- - 4

##### RATIONALE :

In today's world Computer Aided Textile Designing (CTAD) becomes versatile for all the designing and weaving industry. Designing with the help of computer is becoming more relevant with time. The main objective of teaching this subject is to develop skill of designing using different software of textile design in the students.

##### COREL DRAW SOFTWARE :

Learn Step by step command :

##### PHOTOSHOP SOFTWARE :

Learn Step by step command

Experiment are given below

1. Pattern Generation
2. Scanning
3. Editing Scanning Image
4. Sketch Formation
5. Colouring
6. Flowers and twigs
7. Bi-symmetrical
8. Multi-symmetrical
9. Stripe and check pattern- Regular, Irregular, Counter change, Graduated, Modified forms.
10. Design Modification (Repeat).

**5.1 INTEGRATIVE COMMUNICATION**

L	T	P
-	-	4

**TOPIC WISE DISTRIBUTION OF PERIODS**

Sl.No.	Units	Coverage Time		
		L	T	P
1.	Introduction to Personality Development	-	-	02
2.	Factors Influencing / Shaping Personality	-	-	02
3.	Self Awareness - 1	-	-	03
4.	Self Awareness - 2	-	-	02
5.	Self Awareness - 3	-	-	02
6.	Change Your Mind Set	-	-	02
7.	Interpersonal Relationship and Communication	-	-	03
8.	Non-Verbal communication Communication Skills	-	-	02
9 .	Communication Skills ACTIVITIES	-	-	06
10.	Body Language skills	-	-	03
11.	Leadership Traits & Skills	-	-	03
12.	Attitude	-	-	03
13.	Analyzing & Solving a Problem skills	-	-	02
14.	Time Management skills	-	-	03
15.	Stress Management Skills	-	-	02
16.	Interview Skills	-	-	04
17.	Conflict Motives	-	-	02
18.	Negotiation / Influencing Skills	-	-	02
19.	Sociability	-	-	03
20.	Importance of Group	-	-	03
21.	Values / Code of Ethics	-	-	02
		-	-	56

**PERSONALITY DEVELOPMENT****1 Introduction to Personality Development**

AIM, Skills, Types of Skills, LIFE SKILLS VS OTHER SKILLS, Concept of Life Skills. Ten core Life Skills identified by

WHO

**2. Factors Influencing / Shaping Personality :**

Introduction, Physical and Social Factors Influencing / Shaping

Personality (Hereditary, Self-Development, Environment, Education, Life-situations ) Psychological AND Philosophical Factors Influencing / Shaping Personality ( Past Experiences, Dreams and Ambitions, Self-Image, Values)

**3. Self Awareness - 1**

DIMENSIONS OF SELF AWARENESS ( Self Realization, Self Knowledge or Self Exploration, Self Confidence, Self Talk, Self

Motivation, Self Esteem, Self Image, Self Control, Self Purpose, Individuality and Uniqueness, Personality, Values,

Attitude, Character ), SELF REALIZATION AND SELF EXPLORATION THROUGH SWOT ANALYSIS AND JOHARI WINDOW,

4. **Self Awareness - 2**

SYMPATHY VS EMPATHY AND ALTRUISM,  
Importance of Empathizing with Others,

5. **Self Awareness - 3**

Self-Awareness through Activity, Body Image ( What is Body Image, What Decides our Body Image, What is Poor Body Image, What are the Harmful Effects of Poor Body Image ), Tackling Poor Body Image( Enhance Self-Esteem, Build Up Critical Thinking, Build up Positive Qualities, Understand Cultural Variation, Dispel Myths, Utilize Life Skills )

6. **Change Your Mind Set**

What is Mindset, HOW TO CHANGE YOUR MINDSET ( Get the Best Information Only, Make the best people your Role Model, Examine Your Current Beliefs, Shape Your Mindset with Vision and Goals, Find Your Voice, Protect Your Mindset, Let Go of Comparisons, Put An End To Perfectionism, Look At The Evidence, Redefine What Failure Means, Stop Worrying About What "People" Think)

**INTERPERSONAL SKILLS**

7. **Interpersonal Relationship and Communication**

INTERPERSONAL RELATIONSHIP , Forms of Interpersonal Relationship, Must Have in an Interpersonal Relationship, Interpersonal Relationship between a Man and a Woman ( Passion, Intimacy, Commitment), Relationship Between Friends, ROLE OF COMMUNICATION IN INTERPERSONAL RELATIONSHIP ( Take Care Of Your Tone And Pitch, Choice of Words is Important in Relationships, Interact Regularly, Be Polite, Try To Understand The Other Person's Point Of View As Well, Individuals Can Also Communicate Through Emails,

8. **NON-VERBAL COMMUNICATION Communication Skills**

Non-Verbal Communication,  
We Communicate with Our Eyes, Communication with Facial Expression, A Good Gesture, Appearance, Posture and Gait, Proximity and Touch ), IMPORTANCE OF LISTENING,  
Characteristics of Good and Effective Listener( Is Attentive,

Do

Not Assume, Listen for Feelings and Facts, Concentrate on the Other Speakers Kindly and Generously, Opportunities)

9. **Communication Skills ACTIVITIES -**

Activities in Making Collages, Making Advertisements, PPT Preparation & Presentation, Speaking -Seminars, Group Discussions, Debates, Extempore Speeches, Listening to an audio clip and telling its gist, Answering a telephone call, Making enquiries, General tips- Pronunciation, Tone, Pitch, Pace, Volume, relevance, brief,

simple Reading Newspaper, Magazines ( Current Affairs, Economic magazines, Technical magazines), How to read a report, article, Writing- Resume Writing, Writing joining report, Notice writing, Report making, Proposal writing, Advertisement, Notice for tender, Minutes writing, E-Mail writing, Listening News, Listening to audio clips.( Lecture, poetry, speech, songs),

#### **10. Body Language skills**

Introduction, What is Body Language , Body Language Parts, Personal Space Distances (Intimate Distance, Personal Distance, Social Distance, Public Distance), IMPORTANT BODY LANGUAGE SIGNS AND THEIR MEANING

#### **UNDERSTANDING OTHERS**

#### **11. Leadership Traits & Skills :**

Introduction, Important Leadership Traits (Alertness, Bearing, Courage, Decisiveness, Dependability, Endurance, Enthusiasm, Initiative, Integrity, Judgment, Justice, Knowledge, Loyalty, Sense of Humour), Other Useful traits (Truthfulness, Esprit-de-corps, Unselfishness, Humility and sympathy, Tact without loss of moral courage, Patience and a sense of urgency as appropriate, Selfconfidence, Maturity, Mental including emotional stability)

#### **12. Attitude**

Types of Attitude, Components of Attitudes (Cognitive Component, Affective Component, Behavioral Component ), Types of Attitudes (Positive Attitude, Negative Attitude, Neutral Attitude, Rebellious Attitude, Rational and Irrational Attitudes, Individual and Social Attitudes), Kinds of Attitude, ASSERTIVENESS, How to Develop Assertiveness (Experiment and Try New Things, Extend Your Social Circle, Learn to Make Decisions for Yourself, Indulge in Knowledge, Admire Yourself & Others), Negotiation (Be Sensitive to The Needs Others, Be Willing To Compromise, Develop Your Problem-Solving Skills, Learn to Welcome Conflict, Practice Patience, Increase Your Tolerance For Stress, Improve Your Listening Skills, Learn To Identify Bottom-Line Issues Quickly, Be Assertive, Not Aggressive)

#### **PROBLEM SOLVING**

**13. Analyzing & Solving a Problem skills**

Critical Thinking, Creative Thinking, Decision Making, Goal Setting & Planning, Problem Solving

**14. Time Management skills**

Need of Time Management, TIME WASTERS (Telephone, Visitors , Paper work, Lack of Planning & Fire Fighting , Socializing , Indecision , TV , Procrastination ), PRINCIPLES

OF

TIME MANAGEMENT - Develop a Personal Sense of Time (Time Log , value of other people's time ), Identify Long-Term Goals ,

Concentrate on High Return Activities , Weekly & Daily Planning

(The Mechanics of Weekly Planning , Daily Planning ), Make

the

Best Use of Your Best Time , Organize Office Work

(Controlling

Interruptions , Organizing Paper Work ), Manage Meetings, Delegate Effectively, Make Use of Committed Time, Manage Your Health,

**15. Stress Management Skills**

INTRODUCTION, Understanding Stress and its Impact, Expected Responses (Physical, Emotional, Behavioral), stress signals(thoughts, feelings, behaviors and physical), STRESS MANAGEMENT TECHNIQUES (Take Deep Breath, Talk It Out, Take A Break, Create a Quiet Place in Your Mind, Pay

Attention

to Physical Comfort, Move, Take Care of Your Body, Laugh, Manage Your Time, Know Your Limits, Do You Have To Be Right Always, Have A Good Cry, Look for the Good Things Around You, Talk Less, Listen More), UNDERSTANDING EMOTIONS AND FEELINGS-through Activity

**16. Interview Skills ( 2 sessions from Industry Expert is Compulsory)**

Curriculum Vitae (When Should a CV be Used, What Information Should a CV Include, personal profile, Covering Letter, What Makes a Good CV, How Long Should a CV Be, Tips on Presentation), Different Types of CV (Chronological, Skills-Based ), BEFORE THE INTERVIEW , CONDUCTING YOURSELF DURING THE INTERVIEW , FOLLOWING THROUGH AFTER THE INTERVIEW , Interview Questions To Think About , MOCK INTERVIEW - Activity (MOCK INTERVIEW EVALUATION - NON-VERBAL BEHAVIORS, VERBAL BEHAVIORS, General Etiquettes to face the Board , Telephonic interview

**17. Conflict Motives -Resolution**

Motives of Conflict( Competition for Limited Resources, The Generation Gap and Personality Clashes, Aggressive Personalities, Culturally Diverse Teams, Competing Work and Family Demands, Gender Based Harassment), Merits and

Demerits of Conflict , Levels of Conflict (Interpersonal Conflict, Role Conflict, Inter-group Conflict, Multi-Party Conflict, International Conflict ), Methods of Conflict Resolution (The Win-Lose Approach, The Lose-Lose Strategy, The Win-Win Approach), Techniques for Resolving Conflicts (Confrontation and Problem Solving Leading to Win-Win, Disarm the Opposition, Cognitive Restructuring, Appeal to Third Party, The Grievance Procedure)

#### **18. Negotiation / Influencing Skills**

Why Influencing, What Is Influencing, TYPES OF INFLUENCING SKILLS (Probing And Listening, Building Rapport, Sign Posting, Pacing, Selling, Assertiveness), LAWS AND PRINCIPLES OF INFLUENCE, The Six Laws of Influence (The Law of Scarcity, The Law of Reciprocity, The Law of Authority, The Law of Liking, The Law of Social Proof, The Law of Commitment and Consistency), Influencing Principles (Making a Start, Buy Yourself Thinking Time, Dealing With Disagreement, Difficult And Sensitive Situations)

#### **19. Sociability : Etiquettes And Mannerism & Social Skills**

Need for Etiquette , Types of Etiquettes (Social Etiquette, Bathroom Etiquette, Corporate Etiquette, Wedding Etiquette, Meeting Etiquette, Telephone Etiquette, Eating Etiquette, Business Etiquette, E-Mail Etiquettes, ), MANNERISMS, HOW TO IMPROVE YOUR SOCIAL SKILLS (Be Yourself, Be Responsible, Be Open & Approachable, Be Attentive, Be Polite, Be Aware, Be Cautious)

#### **20. Importance of Group / Cross Cultural Teams / Team Work skills**

Introduction, Types and Characteristics of Groups (Definition of a Group, Classification / Types of Groups, Friendship Group, Task Group, Formal Groups, Informal Group, Effective Group), Importance of a Group, Characteristics of a Mature Group, TYPES AND CHARACTERISTICS OF A TEAM ( Definition of a Team, Types of Teams, Functional Teams, Problem Solving Teams, Cross - Functional Teams, Self - Managed Teams), Importance of a Team, Characteristics of a Team

#### **21. VALUES / CODE OF ETHICS**

Meaning, A FEW IMPORTANT VALUES (Honesty, Integrity, Purity, Discipline, Selflessness, Loyalty, Fairness, Equality, Trust, Support, Respect, etc)

Note : One Orientation module for the faculty is must.  
Involvement of Industry Experts is necessary for  
Interview Skills



## 5.2 GARMENT TECHNOLOGY

(Common to Three year Diploma course in Textile Design(Printing))

L T P  
4 2 -

RATIONAL :

This paper mostly deals with construction of garments, technology used for their industrial production, quality assurance etc.

### TOPICWISE DISTRIBUTION OF PERIODS

Sl.No.	TOPIC	LECTURE	TUTORIAL
1.	TOPIC-I	8	4
2.	TOPIC-II	10	5
3.	TOPIC-III	10	5
4.	TOPIC-IV	12	6
5.	TOPIC-V	8	4
6.	TOPIC-VI	8	4
T O T A L		56	28

### DETAILED CONTENTS

#### 1. CLASSIFICATION OF GARMENTS AND MEASUREMENTS :

Garment classification for men and women, Fabric selection for various types of garments, FS , Measurements and its importance, Method of taking important body measurements for gents and ladies garments.

#### 2. PATTERNING AND GRADING :

Patterning importance of paper patterns, types of paper patterns, Principles of pattern drafting, Study of pattern making of top and bottom garments, Grading - Study of grading of various components of top and bottom garments ( Two examples of men and women both).

#### 3. SPREADING, CUTTING AND SORTING PATTERN ALTERNATION:

Objective and Equipments for spreading, cutting and sorting pattern alternation.

4. SEWING TECHNOLOGY :

Classification of stitch and Seam, Parts of sewing machine, Study of various types of sewing machines such as Lock Stitch, Chain Stitch, Over lock, Flat Lock, Button Holing, Buttoning and computer Controlled Sewing Machines. Trimmings. Overview of different garment production like Line System, Tailor system

5. FUSING, PRESSING AND PACKING :

Basic of fusing, Pressing and Packaging. Care Labeling, various symbols used on care labels, importance and statutory regulations for care labeling

6. GARMENT QUALITY ASSURANCE:

Brief study of Pre Sewing defects, sewing defects and post sewing defects their causes and remedy. Dimensional Stability of garments (bowing, skewing, shrinkage). Quality assurance of accessories: button, linings, hooks, laces, packing material etc.

5.3 TEXTILE DESIGN - II

(Common to Three year Diploma course in Textile Design(Printing))

L T P  
6 2 -

RATIONAL :

This paper mostly deals with decorative designs, development & printing and their transfer to fabrics.

TOPICWISE DISTRIBUTION OF PERIODS

Sl.No.	TOPIC	LECTURE	TUTORIAL
1.	TOPIC-I	9	3
2.	TOPIC-II	9	3
3.	TOPIC-III	9	3
4.	TOPIC-IV	12	4
5.	TOPIC-V	12	4
6.	TOPIC-VI	12	4
7.	TOPIC-VII	9	3
8.	TOPIC-VIII	6	2
9.	TOPIC-IX	6	2
T O T A L		84	28

DETAILED CONTENTS

1. Development of pattern by colour and weave effect.
2. Construction of motif suitable for printing and weaving.
3. Preparation of motif, figures and their arrangement. Graph designs suitable for Dobbies and jacquards.
4. Elements and principles of preparing decorative designs for woven and printed fabrics for various uses. Basis of textile design like diamond ogee, curved line half drop, reverse etc. Ways of modifying colours in textiles.
5. Transferring of design of shirting sarees, brocades etc to the point paper. Ways of arrangement of figures or motifs.
6. Transferring of design on graphic (Point), Paper, edging and insertion of weaves in figured protion and on ground.
7. Brief idea of special and complex fabries e.g. Double cloth, Brocades, Tapesteries adn Damarks.
8. Brief idea of Turkish Towelling fabric and their ornamentation.
9. Types of design functional items designed for a specific purpose that may include examples from the following focus areas.  
Apparel, Furnishing textile arts aesthetic surface

decoration.

5.4 PROFESSIONAL STUDIES

(Common to Three year Diploma course in Textile Design(Printing))

L T P  
6 2 -

RATIONAL :

This paper aims to give a brief idea of fundamentals related to managerial & entrepreneurial activities and responsibilities in an industry. Students choosing their carrier as industrial worker need it to understand the industrial environment.

TOPICWISE DISTRIBUTION OF PERIODS

Sl.No.	TOPIC	LECTURE	TUTORIAL
1.	TOPIC-I	12	4
2.	TOPIC-II	12	4
3.	TOPIC-III	12	4
4.	TOPIC-IV	12	4
5.	TOPIC-V	12	4
6.	TOPIC-VI	12	4
7.	TOPIC-VII	12	4
T O T A L		84	28

DETAILED CONTENTS

1. Understanding of designers environment. A brief idea about Textile Industry in India and its organisation. Problems faced by Designers.Sociological-psychological. Financial steps necessary to overcome them.
2. Nature of management, functions of management. The science and Art of management. (Brief ideas).
3. Principles of Marketing management. Nature and importance, Meaning of Marketing. Marketing Techniques and skills-Market Research Sales Promotion, Product Planning pricing, distribution factors governing adoption of such techniques.
4. Establish liaisoning with clients. Need for liasioning with clients. Types of clients, how to deal with them. Social responsibilities of business (From Designers point of view). Need for human relations.
5. Costing :  
Elements of costs : Materials, labour expense, prime cost and overheads.  
Fixed and variable cost.  
Type of cost : predetermined, standard and marginal.
6. Requirements and organisation of a Design studio.
7. Entreprenurship : Sources of finance. For setting up small scale units. Agencies to be contacted for setting up small scale units,preparation of a project report for setting up a design studio.

5.5 ADVANCE TEXTILE PRINTING

L T P  
4 2 -

Rational :

Printing of fabrics for making it attractive is an art and there is no end to development of technologies for the process. The paper is meant to give advance knowledge, means and methods used in printing.

TOPICWISE DISTRIBUTION OF PERIODS

Sl.No.	TOPIC	LECTURE	TUTORIAL
1.	TOPIC-I	6	3
2.	TOPIC-II	6	3
3.	TOPIC-III	6	3
4.	TOPIC-IV	6	3
5.	TOPIC-V	8	4
6.	TOPIC-VI	8	4
7.	TOPIC-VII	8	4
8.	TOPIC-VIII	8	4
T O T A L		56	28

DETAILED CONTENTS

- 1A. Coloured discharge and resist style of printing on cotton using vat, reactive sulubilised vat, rapid fast, Rapidogen, Rapidazal.
- B. Natural dyes - Sources of natural dye- use of mordants and its application in printing.
2. Pigment printing using pigment separately, alongwith other colours.
3. Various types of printing such as raised, Fluck, capsule and Foam printing.
4. Printing of synthetic and their blends (Polyester- Cotton, Nylon, Acrylic and Polyester).
- 5A. Roller Printing, Various parts of M/c, their function, Printing technique, Common faults and their rectifications.
- B. Preparation, Process for engraving - tracing of design, transfer of design on roller by engraving.
- 6A. Flatbed and rotary screen printing M/c. Preparation of rotary screens, Different squeeze system and their comparison with roller printing.
- B. Preparation of design on graph paper- Screen making transfer of design from paper to screen, Chemicals used in developing of desing on screens.
7. Introduction to polychromatic printing and transfer printing.
8. Introduction to printing of yarn.

#### 5.6 GARMENT TECHNOLOGY (PRACTICALS)

(Common to Three year Diploma course in Textile Design(Printing))

L T P  
- - 12

1. To study and sketch various parts of pock stitch sewing m/c.
2. Study about paper pattern drafting for at least two sets of approval as stated below.

Designing and construction of at least two sets of apparel (with tops and bottoms) for men and women both. Preferably one set should be in traditional Indian style and another in Western style for both men and women.

#### 5.7 TEXTILE DESIGN - II

(Common to Three year Diploma course in Textile Design(Printing))

L T P  
- - 8

RATIONAL :

This paper mostly deals with decorative designs, development & printing and their transfer to fabrics.

Transfer of paper design on print paper and to produce a cloth on the loom using the same. Market surveying and production of fabrics using original designs. Preparation of sheet on the basis of theory Syllabus.

## RATIONALE:

A diploma student must have the knowledge of different types of pollution caused due to industrialisation and construction activities, so as he may help in balancing of eco-system and control pollution by providing controlling measures. They should be also aware of the environmental laws for effectively controlling the pollution of environment. The topics are to be taught in light of legislation Para-3.

## TOPIC WISE DISTRIBUTION OF PERIODS:

SL. NO.	TOPIC	L	T	P
1.	Introduction	6		
2.	Pollution	4		
2.1	Water Pollution	8		
2.2	Air Pollution	8		
2.3	Noise Pollution	4		
2.4	Radio Active Pollution	6		
2.5	Solid Waste Management	6		
3.	Legislations	4		
4.	Environmental Impact Assessment	4		
5.	Disaster Management	6		
TOTAL		56	-	-

## DETAILED CONTENTS

## 1. INTRODUCTION :

- Basics of ecology, Ecosystem, Biodiversity Human activities and its effect on ecology and eco system, different development i.e. irrigation, urbanization, road development and other engineering activities and their effects on ecology and eco system, Mining and deforestation and their effects.
- Lowering of water level , Urbanization.
- Biodegradation and Biodegradability, composting, bio remediation, Microbes .Use of biopesticides and biofungicides.
- Global warning concerns, Ozone layer depletion, Green house effect, Acid rain,etc.

## 2. POLLUTION :

Sources of pollution, natural and man made, their effects on



living environments and related legislation.

#### 2.1 WATER POLLUTION :

- Factors contributing water pollution and their effect.
- Domestic waste water and industrial waste water. Heavy metals, microbes and leaching metal.
- Physical, Chemical and Biological Characteristics of waste water.
- Indian Standards for quality of drinking water.
- Indian Standards for quality of treated waste water.
- Treatment methods of effluent (domestic waste water and industrial/ mining waste water), its reuse/safe disposal.

#### 2.2 AIR POLLUTION :

Definition of Air pollution, types of air pollutants i.e. SPM, NOX, SOX, CO, CO<sub>2</sub>, NH<sub>3</sub>, F, CL, causes and its effects on the environment.

- Monitoring and control of air pollutants, Control measures techniques. Introductory Idea of control equipment in industries i.e.
  - A. Settling chambers
  - B. Cyclones
  - C. Scrubbers (Dry and Wet)
  - D. Multi Clones
  - E. Electro Static Precipitations
  - F. Bog Fillers.
- Ambient air quality measurement and their standards.
- Process and domestic emission control
- Vehicular Pollution and Its control with special emphasis of Euro-I, Euro-II, Euro-III and Euro IV.

#### 2.3 NOISE POLLUTION :

Sources of noise pollution, its effect and control.

#### 2.4 RADISACTIVE POLLUTION :

Sources and its effect on human, animal, plant and material, means to control and preventive measures.

2.5 SOLID WASTE MANAGEMENT :

Municipal solid waste, Biomedical waste, Industrial and Hazardous waste, Plastic waste and its management.

3. LEGISLATION :

Preliminary knowledge of the following Acts and rules made thereunder-

- The Water (Prevention and Control of Pollution) Act - 1974.
- The Air (Prevention and Control of Pollution) Act - 1981.
- The Environmental Protection (Prevention and Control of Pollution) Act -1986. Rules notified under EP Act - 1986 Viz.
  - # The Manufacture, Storage and Import of Hazardous Chemical (Amendment) Rules, 2000
  - # The Hazardous Wastes (Management and Handling ) Amendment Rules, 2003.
  - # Bio-Medical Waste (Management and Handling) (Amendment) Rules, 2003.
  - # The Noise Pollution (Regulation and Control) (Amendment) Rules, 2002.
  - # Municipal Solid Wastes (Management and Handling) Rules, 2000.
  - # The Recycled Plastics Manufacture and Usage (Amendment) rules, 2003.

4. ENVIRONMENTAL IMPACT ASSESSMENT (EIA) :

- Basic concepts, objective and methodology of EIA.
- Objectives and requirement of Environmental Management System (ISO-14000) (An Introduction).

5. DISASTER MANAGEMENT :

Definition of disaster - Natural and Manmade, Type of disaster management, How disaster forms, Destructive power, Causes and Hazards, Case study of Tsunami Disaster, National policy- Its objective and main features, National Environment Policy, Need for central intervention, State Disaster Authority- Duties and powers, Case studies of various Disaster in the country, Meaning and benefit of

vulnerability reduction, Factor promoting vulnerability reduction and mitigation, Emergency support function plan.

Main feature and function of National Disaster Management Frame Work, Disaster mitigation and prevention, Legal Policy Frame Work, Early warning system, Human Resource Development and Function, Information dissemination and communication.

## 6.2 FASHION STUDIES

(Common to Three year Diploma course in Textile Design(Printing))

L T P  
4 2 -

### RATIONAL :

This paper aims to give a brief idea of fundamentals related to managerial & entrepreneurial activities and responsibilities in an industry. Students choosing their carrier as industrial worker need it to understand the industrial environment.

### TOPICWISE DISTRIBUTION OF PERIODS

Sl.No.	TOPIC	LECTURE	TUTORIAL
1.	TOPIC-I	12	6
2.	TOPIC-II	10	5
3.	TOPIC-III	12	6
4.	TOPIC-IV	10	5
5.	TOPIC-V	12	5
T O T A L		56	28

### DETAILED CONTENTS

#### 1. HISTORY OF FASHION :

Fashion in India - Geographical and environmental aspects .  
Fashion in abroad and present trends of fashion in all walks of life, Types of costumes and non-wear fabric.

#### 2. INTRODUCTION TO FASHION AND ITS TERMINOLOGY :

Fashion, Fashion design and fashion technology Brief introduction fashion terminology, Fashion industry, language guide and head theory. 8 head theory of human anatomy.

#### 3. DISTINGUISHED FASHION DESIGNERS :

Introduction to fashion designers of National and International fame and their views. Future fore-casting of Fashion trends - Analytical approach with respect to design and involvement of technology. Fashion designers and technologies of tomorrow. Know the famous labels and International producers of today.

#### 4. FASHION ILLUSTRATION :

Defination, Importance and Role of fashion illustration in costume design in todays competitive fashion world. Method and their applicaion.

#### 5. Understanding the role fo fashion professionals like designer, stylist, merchandiser and co-ordinator.

### 6.3 TEXTILE QUALITY ASSURANCE

(Common To Textile Chemistry, Textile Technology and Textile Design (Printing))

L T P  
6 2 6

#### Rationale

As the name implies this paper aims to develop in the incumbent the capability of testing the products and its components for desired results. Without it a product can never be claimed for any standard.

#### Topic Wise Distribution of Periods

Sl.No.	Topics	Coverage Time		
		L	T	P
1.	Topic 1	12	4	-
2.	Topic 2	18	6	-
3.	Topic 3	18	6	-
4.	Topic 4	24	8	-
5.	Topic 5	12	4	-
		84	28	84

#### DETAILED CONTENTS

1. Define Quality, Quality Control and Quality Assurance, difference between QC and QA. Introduction to Textile testing, properties of fibres, yarns and fabrics and their relevance in assessing the performance of textile during and after their manufacture.
2. FIBRE TESTING:  
Fibre Length (mean length, effective length and staple length), the effect of length, baer sorter technique of measuring the length. Other length measuring instruments (names and brief introduction).  
  
Fibre fineness and maturity of cotton, brief introduction of different measuring methods and their principles.  
  
Role and importance of humidity, concepts of humidity, relative humidity, moisture content and moisture regain and relation between the MC and MR.
3. YARN TESTING:  
Concept of count, its measurement by different methods. Concepts of S & Z twist, relation between tpi, twist multiplier and count.

Measurement of tpi, name and brief introduction of various twist measuring machines.

Important definitions pertaining to tensile strength, principles of CRL and CRT, tensile testers, factors affecting the strength materials, brief study of tensile testing machines, concept of RKM and CSP.

4. FABRIC TESTING:

Define various test parameters of fabric, their importance and role in fabric and end product properties.

Measurement of GSM, thickness, crimp. Fabric strength testing machines, such as cut strip, grab strip and revealed strip methods.

Air permeability and its measurement, crease recovery of fabrics and its measurement. Water proof and Water repellency tests. Abrasion resistance and its testing by martindale abrasion tester.

Concept of drape and its measurement.

Dimensional stability, bowing, skewness, residual shrinkage.

5. EVENNESS:

Nature of irregularities - short term, medium term and long term variations, periodic and non periodic irregularities. Analysis of classmate and classifults

TEXTILE QUALITY ASSURANCE  
LIST OF EXPERIMENT

1. To find the count of yarn  
(i) by physical balance  
(ii) by yarn quadrants balance.  
(iii) by Bessley yarn balance.
2. To calculate yarn count by wrap reel.
3. Determine the twist of yarn per inch/per meter in double yarn and its individual components by continuous twist tester and twist and untwist tester.
4. Find out the hank of sliver and roving with the aid of wrap block machine.
5. Find the staple length of fibre by Bare Sorter.
6. Measure fibre fineness by flowing air through a sample of fibre by micronaire.
7. Find out lea strength of cotton yarn by lea strength tester (Power driven) and CSP.
8. Find the breaking strength of cotton yarn by Ballistic strength testing machine.
9. To find the breaking strength and elongation of single thread of cotton by single thread testing machine (Hand or power driven).
10. Examine the bursting strength of a fabric by bursting strength tester.
11. Find out the relative abrasion properties of fabrics by Martindale abrasion tester.
12. Find the breaking strength of different textile fabrics by means of cloth strength tester (power driven).
13. Measure crimp by Shirley crimp meter.
14. Find out air permeability of fabric by air permeability tester.
15. Measure crease recovery of fabric by crease recovery tester.
16. Test evenness of the yarn by evenness tester,

## 6.4 ADVANCE FABRIC STRUCTURE AND ANALYSIS

L    T    P  
3   -   -

Rationale

The paper deals with more complicated structures of today's fabrics. This knowledge is essential for modern textile technologists.

### Topic Wise Distribution of Periods

Sl.No.	Topics	Coverage Time		
		L	T	P
1.	Welts & Piques	7	-	-
2.	Bed Ford Cards	7	-	-
3.	Backed Fabrics (Warp & Weft)	7	-	-
4.	Extra Warp & Weft	7	-	-
5.	Double Cloth	7	-	-
6.	Turkish Towelling	7	-	-
		42	-	-

### DETAILED CONTENTS

1. WELTS AND PIQUES:

Varieties and characteristics of piques and welts, methods of embellishing pique fabrics, their structure, plain pique, backed pique, fast backed welts and waved pique.

2. BED FORD CORDS:

Plain faced bedford, wadded bedford cord, bedford cord arranged with alternate picks and cords containing odd number of ends. twill-faced bedford cord.

3. BACKED FABRICS (WARP AND WEFT):

Backed fabrics, wadded warp and weft backed fabrics, their beaming and drafting procedure.

4. EXTRA WARP AND WEFT:

Principles of figuring with extra warp and weft, one and one i.e. pick and pick wefting, two and two wefting. Methods of disposing of extra threads on the back of the fabric. Spot figures with extra warp and extra weft arranged in a particular order.

5. DOUBLE CLOTH:

Construction of double and multiple cloths on design paper,



their beaming, drafting and pegging. Types of double structures viz.

- (i) Tubular Fabrics.
- (ii) Double-faced Fabrics.
- (iii) Fabrics opening to double the width.
- (iv) Double equal plain fabrics.
- (v) Centre stitched double cloth.

6. TURKISH TOWELLING:

Principles of formation of pile, construction of three, four, five and six pick terry fabrics their methods of drafting and denting. Terry ornamentation.

6.5 COMPUTER AIDED TEXTILE DESIGN (CATD) II PRACTICALS

(Common to Three year Diploma course in Textile Design(Printing))

L T P  
1 - 5

RATIONAL :

In today's world Computer Aided Textile Designing (CTAD) becomes versatile for all the designing and weaving industry. Designing with the help of computer is becoming more relevant with time. The main of teaching this subject is to develop skill of designing using different software of textile design in the student.

ONLY FOR THREE YEAR DIPLOMA COURSE IN TEXTILE DESIGN

DOBBY SOFTWARE :

Learn Step by step command

JACQUARD SOFTWARE :

Learn Step by step commands

SIMULATION SOFTWARE :

Learn Step by step commands

TEXTILE MAPPING SOFTWARE :

Learn Step by step commands

ONLY FOR THREE YEAR DIPLOMA COURSE IN TEXTILE DESIGN  
(PRINTING)

PRINTING SOFTWARE :

Learn Step by step commands to produce a printed desing

TEXTILE MAPPING SOFTWARE :

Learn Step by step commands

Experiment list both are textile design and textile design  
(printing) in the students.

1. Pattern Generation
2. Sketch Formation
3. Reduction and Cleanup Image
4. Colour

5. Design Modification (Repeat)
6. Create Graph and Binding (Only For Textile Design)
7. Create Colour Separation (Only For Textile Design (Printing))
8. Specification sheet
9. Simulation
10. Texture Mapping
11. Catalogues

6.5 PROJECT WORK

(Common to Three year Diploma course in Textile Design. Spl In Printing)

L T P  
- - 8

RATIONAL :  
3.11 PROJECT WORK

(Common to Three year Diploma course in Textile Design. Spl In Printing)

L T P  
- - 2

RATIONAL :

The purpose of introducing the projects are to enable student to apply the knowledge, skills and attitudes acquired during the entire course of the solution real life problems.

1. PURPOSE AND ASSESSMENT :

Each student will be assigned a specific problem solving right from conception of design up to the execution of design. The assessment of project work shall be based on.

1. Definition of the problem.
2. Explain the approach towards solution of the problem .
3. Developing and sketches (Developing alternatives).
4. Colour schemes.
5. Final Design.
6. Fabric selection.
7. Quality of print.
8. Procedure adopted by the student in arriving at final solution.
9. Originality of the design concepts.
10. Initiative and participation of the student.

A viva voce examination shall be conducted at the end of the project for assessing the work of the student. The examination committee for this purpose shall consist of a professional designer, teacher who has guided the project. The project work should be properly displayed by the student.

2. SUGGESTED PROBLEMS FOR PROJECT WORK :

The theme will be discussed in the theory period. For each submission the students are required to submit :

- (a) 20 Ideas (croquis)
- (b) Final design with repeat.
- (c) 5 colourways
- (d) Design printed on fabric.

All work will have to be executed in the theory class, studio and laboratory under the supervision of a lecturer, Studio Assistant or Laboratory Assistant.

No design without the approval of the teacher concerned will be accepted for the final submission.

1. Theme : Floral pattern in stylised and naturalistic form.
  - For : Saree for summer wear.
  - Fabric : Shaffon
  - Method : Hand painted
  - Dye : Acrymen
  - Placement : Of your choice
  - Colour scheme : No limit
  - Practical Submission : On 5.5 meter organdie fabric.
  - Special feature : placement and colour scheme, as in this method you can have light and dark shades, the play of the fine artwork with brush. Each report to have the characteristic of the flow of the hand as you are not allowed to trace the design of the fabric. Each report to be in original form.
2. Theme : Indian mythology depicting a Mahabharat or Ramayana scene. The design you could use the salient feature of mytholoy e.g. the chariot wheels. The armour used for warriors or the decorative form of architecture arches etc.
  - For : bed cover / floor covering.
  - Method : Screen printing lacquer method.
  - Fabric : Of your choice.
  - Placement : Of your choice.
  - Dyes : Acramyn.
  - Repeat : Based on the theme.
  - Colour scheme : Minimum five colours.
  - Practical Submission: Double Bed Covers/Floor covering.
  - Special feature : The choice of the fabric, and to create a harmony in the theme for all the objects as they will be placed in one room the ingenuity lies in your design to use minimum screens from small layout to large layout.
3. Theme : Batik and block printing technique in geometrical or abstract design.
  - For : Set of dinning room consisting of
    1. Table cloth and napkins or table mats and napkins.
    2. Oil painting in the theme of still life of ceramics and fruits.
  - Fabric : Khadi/cotton
  - Placement : Your choice based on the need.
  - Method : The above three techniques.
  - Dyes : Pigment
  - Repeat : Based on the placement and theme.

- Colour scheme : Minimum three colours including the back ground.
- Practical submission: Standard sizes of the requirement.
- Special feature : The application of the technique its limitations and its scops for effects.
4. Theme : Paisleymotifs with decorative form of floral pattern increased with black out line work.
- For : Silk screen.
- Method : Block printing on dyed fabric for discharge colourings.
- Placement : Border on four sides with centre motif.
- Dyes : Direct dyes for dyeing the cloth and discharge dyes for printing the block designs.
- Repeat : Based on the placement and formation of the blocks implied.
- Colour scheme : Black outline.  
Coloured background and two colours of the pattern.
- Special feature : The discharge technique, as this technique replaces the original colours and white on coloured back-ground, the intermingling of colour effect.
5. Theme : Sea Animals (Fishes), sea weeds and sea shells.
- For : Bath room set.  
Bath towel, bath mat, Hand towel, guest towel.  
Bath room curtains.
- Fabric : Ready made set or towelling material for the towel set and cambric for the curtain.
- Method : Lacquer screen printing.
- Placement : Your choice.
- Dyes : Acramyn
- Repeat : Of your choice.
- Colour scheme : On white back ground three stages one colour shades.
- Practical submission: Standard sizes towels.
- Special feature : The placement of designs and the colour effect.
6. Theme : Tantric Art.
- For : Sitting room set consisting of carpet partition screen or room divider.
- Method : Screen printing, block printing and any applied effect.
- Placement : Your choice.
- Dyes : Acramyn.
- Repeat : Refer to special feature.
- Colour scheme : Minimum 4 colours including the back ground. No white allowed in the design.
- Special feature : The curtain placement to the usual designs. Unholstry fabric design

should have all over placement and more of textural quality the screen should have all the applied art techniques (printing and embroidery etc.)

7. Theme : Floral pattern, flower heads buds, leaves and stem in intricate fine line work.  
 For : Cambric.  
 Method : Photographic screen printing.  
 Dyes : Fancy dyes.  
 Colour scheme : Two colour only.  
 Placement : All cover.  
 Repeat : 30 cm X 90 cm  
 Submission of the practical : On 3(three) meter piece.  
 Special feature : Photographic screen printing which has a good effect of the line work
8. Theme : Opart.  
 For : Sari.  
 Fabric : Nylon or organdie.  
 Method : Nozzle printing.  
 Dyes : Enamel paint.  
 Colour scheme : One colour only.  
 Placement : All over.  
 Repeat : Your choice.  
 Submission of practical : A complete sari.  
 Special feature : The free hand moving.
9. Theme : Floral pattern  
 For : Dress.  
 Fabric : Cotton.  
 Method : Spray painting with the stencil technique.  
 Colour scheme : One colour only.  
 Repeat : Your choice.  
 Dyes : Mordant dyes.  
 Placement : Half drop.  
 Submission : 3 meter fabric.  
 Special feature : Subdued effect of the stencil and spraying effect of the dyes.

Design for Roller printing and photographic screens on paper only.

- A. Theme : Stylised floral pattern.  
 For : Sarees (Synthetic)  
 Fabric : Synthetic material.  
 Method : Photographic screen printing.  
 Placement : All over.  
 Dyes : Pigments.  
 Repeat : 40 cm. X 120 cm.  
 Colour Scheme : four colours on white back ground.
- B. Theme : Trees in prespective.  
 For : Curtains.  
 Fabric : Cotton stain.  
 Method : Roller printing.  
 Placement : In horizontal stripes.  
 Dyes : Acramyn.  
 Colour scheme : Trees colours during Autumn 3-4  
 Repeat : 24" X 48"

Transfer of Paper Design on cloth on the loom.



INTAKE Pattern		60 Annual
S.No.	Name of Post	No.
1.	Principal	1
2.	HOD	1
3.	Lecturer(*)	7
4.	Lecturer in Communication Tech.	1 (Part-time)
5.	Instructor	2
6.	Computer Programmer	1
7.	Steno Typist	1
8.	Accountant/Cashier	1
9.	Student/Library Clerk	1
10.	Store Keeper	1
11.	Class IV	6
12.	Sweeper	Part time as per requirement
13.	Chaukidar & Mali	As per need with justification

## NOTE :

1. The number of staff required for individual institution shall be worked out in accordance with the norms laid down in G.O.No. 2281/Pra. Shi. -3-1989-60 (B)/85 dated June 27, 1989.
  2. Services of the staff of other disciplines of the Institute may be utilised.
  3. The post of "Computer Programmer" is not needed in the institutions where diploma in "Electronics Engineering" is running.
  4. QUALIFICATIONS OF STAFF : As per Service Rules.
- \*: Lecturer - Four - Degree In Textile Technology  
 Lecturer - Two - Degree In Textile Chemistry  
 Lecturer - One - First Class B.F.A. (Textile Designing)

X. SPACE REQUIREMENTS

[A] ADMINISTRATIVE BLOCK

S.NO.	Details of Space	Floor Area Sq.m.	Remark
1.	Principal's Room	30	
2.	Confidential Room	10	
3.	Steno's Room	6	
4. (a)	Office Including Drawing Office	80	
(b)	Record Room	20	
5.	Staff Room	20	
	(a) Head 1	15	
	(b) Lecturer 10 Sq.m./Lect. for 3 Lecturers	30	
6.	Library and Reading room	150	
7.	Store	100	
8.	Students Common room	80	
9.	Model Room	90	

[B] Academic Block

S.NO.	Details of Space	No.	@ Sq.m.	Floor Area Sq.m.
1.	Class Room	2	60	120
2.	Drawing Hall	1	90	90
3.	Design Theater	1	100	100
4.	Textile Testing Lab.	1	40	40
5.	Textile Designing (Fabric Design & Printing Design.)	1	150	150
6.	Computer Lab. (Air Cond. Glass Partition and Special type pvc flooring and false ceiling).	1	60	60

[C] Student's Amenities

1.	Hostel	40 %	of Strength of St.
2.	Cycle Stand	50 %	of Strength of St.
3.	Canteen and Tuck shop	50	
4.	N.C.C. Room	70	
5.	Dispensary	40	
6.	Guest Room (Attached Bath) including kitchen & store	45	

[E] STAFF RESIDENCES

1.	Principal	1	100	100
2.	Head of Department	1	100	100
3.	Lecturer	3	80	240
4.	Non-teaching & Supporting Staff	8	60	480
5.	Class IV	6	30	180

Priority to be given in following order.

(1)

- a. Administrative Building
- b. Labs.
- c. Over head Tank
- d. Boundary Wall
- e. Principal Residence
- f. Fourth Class Quarters (2/3)

(2)

- a. Hostel.
  - b. Students Amenities
3.  
Residences of employee.

XI. LIST OF EQUIPMENT FOR DIPLOMA IN

TEXTILE DESIGN

1. Only those of the equipments given below which are essentially required for performing the practicals mentioned in the curriculum and are not available in the institute are to be procured by the institutions.
2. "Machines/Equipments/Instruments of the old BTE list which are not included below are to be retained in the Lab. for demonstration purpose but not to be demanded a fresh for purchase."

S.NO.	NAME OF EQUIPMENT	QTY. REQUIRED	APPROX.COST (Rs.) RATE
1.	Handloom 36" Reed space with two boxes on either side with accessories Plain loom 36" reed space with plain tappet. Complete wooden frame with 8 heald frame and reed. Weaves beam Two boxes at either side 100 empty pirns and 2 shuttles, Reed Count 20,24,36,40 with all accessories Or Latest Configuration	1 No.	50,000=00
2.	Handloom 36" Reed space with Dobby with Accessories Plain loom 36" reed space with dobbie of 16 jacks,Complete wooden frame with 4 heald frame and reed. Weaves beam 2 Shuttle and 100 empty bobbin. Dobby with all accessoires-16 hooks,Reed Count 20,24,36,40 with all accessories Or Latest Configuration	1 No.	65,000=00
3.	Handloom with Jacquard (200 Hooks)	1 No.	60,000=00
4.	Pirn winding machines with electric Motor and empty pirns & bobbins	1 No.	60,000=00
5.	Hand Driven Charkha	1 No.	5,000=00
6.	Sectional warping (ordinary) Machine with creel	1 No.	45,000=00
7.	Cone Winding Machine	1 No.	50,000=00
8.	Piano Card cutting Machine for Card Punching	1 No.	30,000=00
9.	Power loom 36" reed space with 8 jacks dobbie	1 No.	75,000=00
10.	Model of mini carding plant 250 mm working width 250 mm cylinder, doffer, feed roller, opening roller, striping roller, crush roller stainless undercasing, takeup drum suitable for feeding, miniature draw	1 No.	6,50,000=00

frame with gear and pulleys to drive feed roller, cyliner and doffer and other accessories, Mechanical type possibility of processing 50 gms. per batch 10 "width, metallic wire clothing with complete accessories, Microprocessor based indidual drive or Latest Configuration

11.	<p>Model of mini spinning plant            Draw Frame : Having 3 over 3            drafting arrangement to process the silver from miniature carding machine with individual AC variable speed motors with change grars to vary the speeds of front roller, middle and back roller for different Total Draft and break Draft inclusive of motor, rpm indicators control system and other accessories            Mechanical type single delivery, 3 over 3 drafting arrangement, range 5-15 draft            Microprocessor based or Latest Configuration</p> <p>High Speed Simplex (Lab Model)            Latest Lab Model Range :6-12 Spindle            Suitable for 110 mm dia package            Draft Range=6-18, 3 roller apron            drating arragement SKF PK 1500,            individual AC variable speed motors with control system with automatic stop motion, Inching mechanism,            100 empty PP bobbins with complete accessories and pinion according to draft change with all complete accrssories or Latest Configuration</p> <p>Ring Spinning Frame : No. of Spindle            6-12, mechanical speed 25000 rpm,            ring dia - 38 mm, 70mm gauge, 180 mm lift, SKF PK 2025/2035, 3 over 3            drafting arrangement with short cradles, for gearing arrangement to change the total draft, Break draft and TPI with change gears and other accessories. Mechanical draft 10-50            Microprocessor based or Latest Configuration</p>	1 No.	5,00,000=00
12.	Standard Vertical Lea Tester (Yarn strength tester)	1 No.	40,000=00
13.	Projection Microscope	4 Nos.	10,000=00
14.	Physical Balance (Electronic)	4 Nos.	15,000=00
15.	Reeling Machine	1 No.	30,000=00
16.	Speedy Moisture testing Machine	1 No.	10,000=00
17.	Pick Counting Glass	4 Nos.	75=00
18.	Knowels Yarn Balance	4 Nos.	12,000=00

19.	Beesely Yarn balance	4 Nos.	3,000=00
20.	Dry & wet bulb Hydrometer	1 No.	1,000=00
21.	Cloth Strength testing Machine (Tensile Strength)	1 No.	50,000=00
22.	Air permeability tester	1 No.	50,000=00
23.	Stiff tester	1 No.	50,000=00
24.	Yarn Assonting Balance	1 No.	50,000=00
25.	Black Board (Graph)	1 No.	500=00
26.	WATER BATH : (Electrically heated/Stoves Vessel)	15 Nos.	250=00
27.	Dye post porceline ; Stainless steel	60 Nos.	50=00
28.	Glass rods per	L.S.	100=00
Kg.			
29.	MEASURING CYLINDER		
	(a) 5 C.C.	30 Nos.	N.A.
	(b) 100 C.C.	30 Nos.	25=00
	(c) 500 C.C.	5 Nos.	100=00
30.	Winchester Bottle (5 litres)	5 Nos.	150=00
31.	THERMOMETERS		
	(a) 0-100 C	2 Nos.	150=00
	(b) 100-200 C	2 Nos.	200=00
32.	Weighing Balance (physical)	1 No.	1000=00
33.	Electronic Balance(Range 01 gr to 03 kg)	2 No.	
34.	Buckets	5 Nos.	70=00
35.	Mugs	10 No.	8=00
36.	Cement Plateform with three sinks fitted in centre 20'X 5'X 2'	1 No.	5,000=00
37.	Printing Table (5' X 20')	1 No.	5,000=00
38.	Exposing Table	1 No.	10,000=00
39.	Screens of Various sizes	10 Sets	single 200=00 Double 300=00 Triple 400=00
40.	Electrically heated steam ager	1 No.	50,000=00
41.	Transfer Printing machine flat bat	1 No.	2,50,000=00
42.	Sample cutting machine	1 No.	10,000=00
43.	No. of blocks of various Design	10 Sets	Single 75=00 Double 120=00 Triple 175=00

				Four colour 225=00
44.	Bhigona Large Size (Stainless Steel)	2 No.		250=00
45.	Dyes and Chemicals	L.S.		25,000=00
46.	Electric Iron Large (100 watt)	2 Nos.		250=00
47.	MODELS OF :			
	(a) Jigger	1 No.		75,000=00
	(b) Pudding Mangle	1 No.		75,000=00
	(c) Winch	1 No.		10,000=00
	(d) Stenter	1 No.		25,000=00
	(e) Model of Roller Printing M/c (Four Colour)	1 No.		100000=00
48.	Miscellaneous item required for craft practice and Drawing and Rendering Lab DESIGN STUDIO	L.S.		50,000=00
49.	Multi Media Projector	1 No.		100000=00
50.	Photocopier with enlargement and reduction facility	1 No.		1,25,000=00
51.	Multi User Textile Design Software with CAD & CAM(Dobby, Jacquard & Printing)	1 No.		500000=00
52.	Multi User Software for Garment Design Degitizer & Plotter	1 No.		1000000=00
53.	Colour Printer with Scanner	1 No.		30000=00
54.	Computer with Latest Configuration (i5)	30 No.		2000000=00
55.	Baer Sorter (For Fibre Length)	2	20000	40000
	Acrylic Transparent Sheet - 6"X8"X2 pices, 3"X8"X2 pcs Fibre Mounting Templest 6"X8"X2 pices, 3"X8"X2 pcs with tweezers, velvet pad, scales, planchass with all complete accessories or Latest Configuration			
56.	Quadrant Balance	2	4000	8000
57.	R. B. Twist Tester	2	25000	50000
58.	One Inch Twist Tester	2	8000	16000
59.	Tearing Strength Tester	1	20000	20000
60.	Bursting Strength Tester	1	35000	35000
61.	Abrasion Resistance Tester (Martindle Type)	1	50000	50000
62.	Laundrometer (For washing fastness testing)	1	50000	50000
63.	Crock Meter Grey Scale	1	10000	10000
64.	Conditioning Oven 220 V With capability of maintaining temperature up to 100oC and facility for smoth variation of temperature inside 27 liter.	1	98500	98500
65.	Stelometer (For bundle Strength)	2	70000	140000
66.	Water Repellancy Tester	1	80000	80000
67.	Pilling Tester	1	30000	30000
68.	Crimp Regidity Tester Minor Load - 2 Gr. to 10Gr. in a step of one grams Major Load - 100 Gr. to 500 Gr.	2	20000	40000

	in step of 50 Grams			
	Digital display 220 V, with all complete accessories or Latest Configuration			
69.	Classimate (Yarn faults finding equipments)	1		900000
70.	Round Sample of GSM with Electronic balance	1	35000	35000
71.	Drapemeter	2	25000	50000
72.	Fabric Thickness Tester	3	8000	24000
73.	A.S.T.M. Cards For Threads/Inch	1	15000	15000
74.	Twist & Untwist Tester	2	35000	70000
75.	Xenon Arc Tester For Colour Fastness of Textile against sun light	1	1500000	1500000
76.	Model Rapier Loom 20" Reed Space with winding & warping unit Complete Set	1	3800000	3800000
77.	Small Diameter Circular Kintting 3.5" dia & 36 guage	1	160000	160000
78.	Flat Knitting Machine Computerized & Mechanical Both	3	250000	750000
79.	Linking Machine (circular) 18 guage	1	225000	225000
80.	Crease recovery tester	2		
81.	Fashion maker sweing machine	10		

NOTE:

1. Item No. 55 to 73 are common with Textile Technology course.
2. Indian make working laboratory models for costly equipment be purchased if available.



INTRODUCTION TO COMPUTER (Common to all Trades)

COMPUTER CENTRE

S.No.	DESCRIPTION	QTY.	APPROX. COST (in Rs.)
1.	Core-2 Quad Processor, 4GB RAM 1 GB SATA HDD, 19" TFT Monitor/ Server of Latest Specification OS-Windows 2007/2008/Latest Version	02 Server	1,20,000=00
2.	General Desktop Computer-Intel i5 60 node or Higher(with latest Specification Pre loaded latest Anti Virus with Life time Subscription, Licence Media and Manual with UPS 660 VA with latest window OS Including licence OR  Computer of latest Specification With latest window os including licence		36,00,000=00
3.	Software :((Latest Version)		
	i. MS OFFICE 2010/Latest Version		LS LS
	ii COMPILER 'C', C++, JAVA-7		LS LS
4.	Hardware		4,50,000.00 LS
	i. Switch-32 Port		02
	ii. Router		02
	iii. Hub		04(8 Port)
	iv. Ext. Modem		02
	v. Wireless N/W Adaptor		02
	vi. Series Access Point		02
	vii.LAN Cable Meter		05
	viii. LAN Cable Analyzer		05
	ix. Crimping Tool		15
	and all other accessories related to Networking		
5.	Scanner- Flat Bed A4/Auto Lighter (Bit depth 48)		02 20,000
6.	132 Column 600 CPS or faster 9 Pin dot matrix printer with 500 million character head life		02 50,000
7.	Laser Jet-A4 All In one 20 page per min (2 Each)		04 50,000
8.	Desk Jet-A4 Photo Smart (2 Each)		04 40,000
9.	5 KVA on line UPS with minimum 30 minute battery backup along with sealed maintenance free batteries. Provision for connecting		04 8,00000

external batteries with network connectivity. (For 2 Labs)

10.	Split Air Conditioner 1.5 tones capacity with ISI mark along with electronic voltage stabilizer with over voltage and time delay circuit	08	35,0000
11.	Room preparation and furniture	LS	
12.	19" rack, 24-port switch. connector RJ-45 Cat-6 cabling for network	LS	10,0000
13.	2 KVA Inverter Cum UPS	02	6,0000
14.	Fire Extinguisher (2 Kg.)	04	15000
15.	Fire Extinguisher (5 Kg.)	04	25000
16.	Vacuum Cleaner	02	25000
17.	LCD Projector 3000 Lumen with all Accessories	02	350000
18.	Pen Drive 16 GB	10	10000
19.	DVD Writer External	02	10000
20.	HDD External 500 GB	02	15000
21.	PAD (Latest Configuration)	02	15000
22.	Broadband For Internet (Speed Min. 8mbps)	04	LS
23.	USB Modem	02	8000
24.	Generator 15 KVA Water Coolant	01	450000

7.	LEARNING RESOURCE MATERIALS			
1.	LCD Projector with Screen	1	--	20000
2.	Handicam	1	--	30000
3.	Cutting, Binding & Stitching equipment.	1	--	30000
4.	Desk Top Computer with Internet Core i5/i7- 760, Processor, Genuine Windiw 7, Professional 18 inch HD, Flat Panel Monitor Optical Mouse, Key Board & all related media or latest version	1	--	40000
5.	Home Theater Support Disc type CD. CDR/CDRW DVDR/DVDRW, VCD Supported with USB Port Support-DIVX/JPEG/MP3	1	--	25000
6.	Commerical P A System 16 W-220W output, AC & 24V DC Operated, 5 Mic. & 2 Auxilary input, Speaker output 4 Ohm, 8 Ohm, 17 V & 100 V	1	--	20000
7.	Interactive Board	1	--	50000

ote :

1. This center will be only one at the institute level irrespective of all branches.

XIII.

ANNEXURE - I

COMMUNITY DEVELOPMENT WORK

For Community Development work two 15 days camps shall be organised during the session in the identified villages. The students shall stay in the camps and under the supervision of the concerned faculty members shall undertake/execute the assigned works in the following fields.

1. To launch and sustain functional literacy programmes.
2. To train the rural youth in different trades/skills.
3. Training by innovating and improving the efficiency of household gadgets.
4. To control and reduce pollution affecting the social fabric of rural life i.e.
  - Construction of Soak Pits and Sanitary Latrines, Tree Plantation, Social Forestry, Installation of Smokeless Chulhas.
5. To disseminate information on sources of non conventional energy. Installation and maintenance of Solar Street Lights, Solar Photovoltaic Pumps, Wind Mills, Bio Gas Plants etc shall be undertaken.
6. Transfer of appropriate Technology/Demonstration of cheap houses by use of locally available material, treatment of mud walls innovation of mud floor, treatment of thatch roofs etc shall be taken with provisions for training to the villagers.
7. Training and demonstration of new agricultural implements, household gadgets and appliances of non conventional energy.
8. To help the rural youth in preparing project reports to set up industrial units and entrepreneurial development.
9. All community polytechnics shall render, repair and maintain agricultural implements, appliances of non conventional energy, household gadgets, etc. and train the rural youth in such skills.

XIV.

ANNEXURE - II

FORMAT FOR FIELD EXPOSURE/INDUSTRIAL TRAINING

1. Name & Address of the unit
2. Date of
  - i Joining.
  - ii Leaving.
3. Nature of Industry
  - i Product.
  - ii Services.
  - iii Working Hrs.
4. Sections of the unit visited and activities there in.
5. Details of machines/Tools & instruments used in working in the section of the unit visited.
6. Work procedure in the section visited.
7. Specifications of the product of the section and materials used.
8. Work of repair and maintenance cell.
9. Details of the shops related to repair and maintenance work.
10. Name of checking and Inspecting Instruments and their details. Quality control measures taken.
11. Details of appliances used if any.
12. Discription of any breakdown and its restoring.
13. Use of computer - if any.
14. Visit of units store, Manner of keeping store items, their receiving and distribution.
15. Safety measures on work place & working conditions in general

comfortable, convenient &  
hygeinic.

XV. ANNEXURE-III QUESTIONNAIRE

INSTITUTE OF RESEARCH, DEVELOPMENT AND TRAINING U.P. KANPUR-208024

SUBJECT : Questionnaire for ascertaining the job potential and activities of diploma holder in Textile Design with specialisation in Printing.

To revise three Year Diploma curriculum in Textile Design with specialisation in Printing.

1. Please answer the questions to the points given in the questionnaire.

2. Any other point or suggestion not covered in this questionnaire may be written on a separate paper and enclosed with the questionnaire.

1. Name of the organisation : \_\_\_\_\_  
\_\_\_\_\_

2. Name & Designation of the officer filling the questionnaire. \_\_\_\_\_  
\_\_\_\_\_

3. Name of the department/section/shop. \_\_\_\_\_  
\_\_\_\_\_

4. Important functions of the department/section/shop. \_\_\_\_\_  
\_\_\_\_\_

5. Number of diploma holder employees under your charge in the area of Textile Design with specialisation in Printing. \_\_\_\_\_

6. Please give names of modern equipments/machines handled by a diploma holder in Textile Design with specialisation in Printing.

1. 2. 3.

4. 5. 6.

7. What proficiencies are expected from a diploma holder in Textile Design with specialisation in Printing.

1. 2. 3.

4. 5. 6.

8. Mention the approximate percentage of the following desired in Diploma teaching.

1. Theoretical knowledge -----%  
2. Practical knowledge -----%

3. Skill Development -----%

9. Do you think " on the job training " / Industrial training should form a part of curriculum. (Yes/No)  
if yes then  
(a) Duration of training -----  
(b) Mode of training 1. Spread over different semesters  
2. After completion of course  
3. Any other mode
10. What mode of recruitment is followed by your organisation.  
1. Academic merit  
2. Written test  
3. Group discussion  
4. Interview  
5. On the job test.
11. Mention the capabilities/ Qualities looked for while recruiting diploma holder in Textile Design with specialisation in Printing.  
(a) Technical knowledge -----  
(b) Practical skill -----  
(c) Etiqueties and behaviour -----  
(d) Aptitude -----  
(e) Health habit and social background -----  
(f) Institution where trained -----
12. Does your organisation have any system for the survey of Textile Design with specialisation in Printing. measures of different countries/States. Yes/No
13. Does your organisation conduct field survey to know users views regarding. Yes/No  
1. Textile Design measures.  
2. Effect of climatic conditions.  
3. Any other  
If yes ; Please give brief account of each.
14. Which type of assignment do you suggest for an entrepreneur in Textile Design with specialisation in Printing.
15. In which types of organisations can a diploma holder in Textile Design with specialisation in Printing can work or serve.  
1. 2. 3.  
4. 5. 6.
16. Job prospects for the diploma holder in Textile Design with specialisation in Printing in the next ten years in the state / country.
17. In your opinion what should be the subjects to be taught to a diploma student in Textile Design with specialisation in

Printing.

Theory

Practical

18. Kindly mention particulars regarding topics/areas which should be given more emphasis in the curriculum.

Theory

Practical

19. Kindly state whether your organisation can contribute towards improvement of curriculum in above field. Yes/No  
If yes : Please give names of experts in your organisation to whom contact.
20. Kindly give your valuable suggestions for being considered at the time of finalisation of curriculum.
21. What changes in technologies are to be incorporated in the development of curriculum in Textile Design with specialisation in Printing.

(Signature)

Kindly mail the above questionnaire duly filled to :-

Mr. Yogesh Singh  
Professor  
Institute of Research, Development & Training, U.P.  
Govt. Polytechnic Campus  
Kanpur - 208024

(Please note that all information in this survey is confidential for the use of curriculum design only).



REFERENCE BOOKS

- |  |                            |
|--|----------------------------|
| 1. Art of Basic Drawing                      | Walter Foster              |
| 2. How to Draw                               | Fester Series              |
| 3. Its Fun to sketch with pencil and crayons | Thompson                   |
| 4. Garden Plants Michael                     | Wright                     |
| 5. The Animal Kindom                         | Cavendish                  |
| 6. Wild Life the Beauty of Animal            | Bellanry                   |
| 7. Learn to Point Wildlife                   | Martiu Kuowelding          |
| 8. How to Draw and Pint Landscape            | Faster Series              |
| 9. Still Life                                | Faster Series              |
| 10. Batik Art                                | Sarla Sudersan             |
| 11. Indian Embroidery                        | Kamladevi Chatopadhy       |
| 12. Indian Embroidery                        | Jhon Irawin & Margwel Hall |
| 13. Craft Traditions of India                | John Haithely              |
| 14. Ideas and Techniques for Fabric          | Laynda Flower              |
| 15. Textile of the art and craft movement    | Laynda Flower              |
| 16. Hand Woven Fabric of India               | Dhamija/Jain               |
| 17. Indian Craft                             | D. N. Saraf                |
| 18. Traditional Indian Textiles              | Gillow John                |
| 19. Master Pieces of Indian Textiles         | Rustam J Metha             |
| 20. Costumes and Textiles of India           | Brij Bhusan                |
| 21. Rooppard Art                             | Mooladhar Sharma & Agarwal |
| 22. Repeat Pattern                           | Phillips & Peter           |
| 23. Abstract and Floral Design               | E. A. Seguy                |
| 24. Wastons' Textile Design & Colour         | Z. Grosicki                |
| 25. Grammer of Textile Design                | Nisbet                     |
| 26. Structural Fabric Design                 | Kilby                      |
| 27. Woven Structures and Design              | Doris Goerner              |
| 28. Fabric to Fabric                         | Ghosh                      |
| 29. Elements of Carding and Drawing          | A. R. Khare                |
| 30. Cotton Opening and Picking               | Gilbert R. Merrill         |
| 31. Cotton Drawing and Roving                | Gilbert R. Merrill         |
| 32. Principles of weaving                    | Marks and Robinson         |
| 33. Weaving Mechanism                        | N N Banerjee               |
| 34. Weaving                                  | Talukdar                   |
| 35. Textile Mathematics                      | J E Booth                  |
| 36. Fabric Manufacture                       | NCUTE                      |
| 37. Textile Fabre to Fabric                  | Corbean                    |
| 38. Textile Fibres                           | K P Hess                   |
| 39. Fundamental of Textiles and their Care   | Sushila Dhantiyagi         |
| 40. Textile Science                          | J. T. Marsh                |
| 41. Textile Science                          | Vilenski                   |
| 42. Fibre and Fabrics of Today               | Mark                       |
| 43. Textile Products Selection Use and Care  | Alexander                  |
| 44. Textiles                                 | William Morries            |
| 45. The Standard Hand Book of Textiles       | A. J. Hall                 |
| 46. Textiles in Perspective Era              | Block and Smith            |
| 47. Fibre and Fabric today                   | Hellon Thomson             |
| 48. Form Fibers and Fabric                   | Elizabeth Crale            |
| 49. Understanding Textiles                   | Phylip G. Tortora          |
| 50. Processing of Fibres in Yarn             | V. Usenko                  |
| 51. Textile Fibres                           | V. A. Shenai               |
| 52. Textile Fibrics and Their Selection      | Sabel B. Wintate           |
| 53. Essentials of Textile                    | Marjory L. Jeseoph         |
| 54. Household Textiles and Laundry Work      | Durga Dwelkar              |
| 55. Colour Source Book For Graphic Designers | Sadao Nokamnar             |
| 56. Designer : Guide to Colour               | Sadao Nokamnar             |
| 57. Colour Narnomy                           | Hideaki Chijiwa            |
| 58. Colour Trends In                         | Two Volume Products Ltd.   |
| 59. Roopprad Kala Ke Mooladjar               | Sharma/Agarwal             |
| 60. Repeat Pattern                           | Phippips & Peter           |