





## **Students Handbook + Practical Manual**

# **Class XII**



**CENTRAL BOARD OF SECONDARY EDUCATION** Shiksha Kendra, 2, Community Centre, Preet Vihar, Delhi-110301

In collaboration with



National Institute of Fashion Technology



Print Design Students Handbook + Practical Manual - Class XII

PRICE : ₹ 155/-

FIRST EDITION : 2014 © CBSE, India

COPIES : 1,000

No Part of this publication may be reproduced, stored in a retrieval system or transmitted, in any form or by any means, electronic, mechanical photocopying, recording or otherwise without the prior permission of the publisher.

PUBLISHED BY	:		ntral Board of Secondary Education, 2, Community Centre, Preet Vihar,
DESIGNED & LAYOUT	:	Dee Kay Printers Phone: 25938138,	5/37A Kirti Nagar Indl. Area, New Delhi - 110015 25414260

#### भारत का संविधान

#### उद्देशिका

**हम भारत के लोग भारत को एक** '{सम्पूर्ण प्रभुत्व-संपन्न समाजवादी पंथनिरपेक्ष लोकतंत्रात्मक गणराज्य} बनाने के लिए, तथा उसके समस्त नागरिकों को :

> सामाजिक, आर्थिक और राजनैतिक न्याय, विचार, अभिव्यक्ति, विश्वास, धर्म

> > और उपासना की स्वतंत्रता, प्रतिष्ठा और अवसर की समता

प्राप्त कराने के लिए तथा उन सब में व्यक्ति की गरिमा और राष्ट्र की एकता और अखण्डता सुनिश्चित करने वाली बंधुता बढ़ाने के लिए दृढ़संकल्प होकर अपनी इस संविधान सभा में आज तारीख 26 नवम्बर, 1949 ई॰ को एतद्द्वारा इस संविधान को अंगीकृत, अधिनियमित और आत्मार्पित करते हैं।

- संविधान (बयालिसवां संशोधन) अधिनियम, 1976 की धारा 2 द्वारा (3.1.1977) से "प्रभुत्व-संपन्न लोकतंत्रात्मक गणराज्य" के स्थान पर प्रतिस्थापित।
- 2. संविधान (बयालिसवां संशोधन) अधिनियम, 1976 की धारा 2 द्वारा (3.1.1977 से), "राष्ट्र की एकता" के स्थान पर प्रतिस्थापित।

#### भाग 4 क

#### मूल कत्तेव्य

51 क. मूल कर्त्तव्य – भारत के प्रत्येक नागरिक का यह कर्त्तव्य होगा कि वह –

- (क) संविधान का पालन करे और उसके आदर्शों, संस्थाओं, राष्ट्रध्वज और राष्ट्रगान का आदर करें;
- (ख) स्वतंत्रता के लिए हमारे राष्ट्रीय आंदोलन को प्रेरित करने वाले उच्च आदर्शों को हृदय में संजोए रखे और उनका पालन करे;
- (ग) भारत की प्रभुता, एकता और अखंडता की रक्षा करे और उसे अक्षुण्ण रखे;
- (घ) देश की रक्षा करे और आह्वान किए जाने पर राष्ट्र की सेवा करे;
- (ङ) भारत के सभी लोगों में समरसता और समान भ्रातृत्व की भावना का निर्माण करे जो धर्म, भाषा और प्रदेश या वर्ग पर आधारित सभी भेदभाव से परे हों, ऐसी प्रथाओं का त्याग करे जो स्त्रियों के सम्मान के विरुद्ध हैं;
- (च) हमारी सामासिक संस्कृति की गौरवशाली परंपरा का महत्त्व समझे और उसका परिरक्षण करे;
- (छ) प्राकृतिक पर्यावरण की जिसके अंतर्गत वन, झील, नदी, और वन्य जीव हैं, रक्षा करे और उसका संवर्धन करे तथा प्राणिमात्र के प्रति दयाभाव रखे;
- (ज) वैज्ञानिक दृष्टिकोण, मानववाद और ज्ञानार्जन तथा सुधार की भावना का विकास करे;
- (झ) सार्वजनिक संपत्ति को सुरक्षित रखे और हिंसा से दूर रहे;
- (ञ) व्यक्तिगत और सामूहिक गतिविधियों के सभी क्षेत्रों में उत्कर्ष की ओर बढ़ने का सतत प्रयास करे जिससे राष्ट्र निरंतर बढ़ते हुए प्रयत्न और उपलब्धि की नई उंचाइयों को छू ले।

### THE CONSTITUTION OF INDIA

#### PREAMBLE

WE, THE PEOPLE OF INDIA, having solemnly resolved to constitute India into a SOVEIGN SOCIALIST SECULAR DEMOCRATIC REPUBLIC and to secure to all its citizens:

JUSTICE, Social Economic and political;

LIBERTY of thought, expression, belief, faith and worship;

EQUALITY of status and of opportunity; and to promote among them all;

FRATERNITY assuring the dignity of the individual and the [unity and integrity of the Nation];

**IN OUT CONSTITUENT ASSEMBLY** this twenty-sixth day of November, 1949, do **HEREBY ADOPT ENACT AND GIVE TO OURSELVES THIS CONSTITUTION**.

- 1. Subs, by the Constitution (Forty-Second Amendment) Act. 1976, sec. 2, for "Sovereign Democratic Republic (w.e.f. 3.1.1977)
- 2. Subs, by the Constitution (Forty-Second Amendment) Act. 1976, sec. 2, for "unity of the Nation (w.e.f. 3.1.1977)

### THE CONSTITUTION OF INDIA

Chapter IV A

#### **Fundamental Duties**

#### ARTICLE 51A

#### Fundamental Duties - It shall be the duty of every citizen of India-

- (a) to abide by the Constitution and respect its ideals and institutions, the National Flag and the National Anthem;
- (b) to cherish and follow the noble ideals which inspired our national struggle for freedom;
- (c) to uphold and protect the sovereignty, unity and integrity of India;
- (d) to defend the country and render national service when called upon to do so;
- (e) to promote harmony and the spirit of common brotherhood amongst all the people of India transcending religious, linguistic and regional or sectional diversities; to renounce practices derogatory to the dignity of women;
- (f) to value and preserve the rich heritage of our composite culture;
- (g) to protect and improve the natural environment including forests, lakes, rivers, wild life and to have compassion for living creatures;
- (h) to develop the scientific temper, humanism and the spirit of inquiry and reform;
- (i) to safeguard public property and to abjure violence;
- (j) to strive towards excellence in all spheres of individual and collective activity so that the nation constantly rises to higher levels of endeavour and achievement.





he Indian Textiles Industry has an overwhelming presence in the economic life of the country and is also one of the leading textile industries in the world. Though it was a predominantly unorganized industry few years back, but the scenario started changing after the economic liberalization of Indian economy in 1991. The opening up of economy gave the much-needed thrust to the Indian textile industry, and now has successfully become one of the largest in the world.

India textile industry largely depends upon the textile manufacturing and export and thus plays a major role in contributing to the economy of the country. India earns about 27% of its total foreign exchange through textile exports and contributes nearly 14% to the total industrial production of the country. It has also contributed about 3% to 4% to the GDP of the country.

Textile industry in India is also the largest in terms of employment generation as it not only generates jobs in its own industry, but also opens up scopes for the other ancillary sectors. The sector is the second largest provider of employment after agriculture. Thus, the growth and all round development of this industry has a direct bearing on the improvement of the economy of the nation. Apart from providing one of the basic necessities of life, the Industry also plays a vital role through its contribution to industrial output, employment generation, and the export earnings of the country. The industry provides direct employment to over 35 million people.

The government of India has also promoted a number of Export promotion policies for the textile sector in the union Budget and the Foreign Trade Policy. As per the 12th Five year plan, the integrated skill development scheme aims to train over 26,75,000 people within the next 5 years. This scheme would cover all sub sectors of the textile sector such as Textiles and Apparel, Handicraft, Handlooms,Jute and Sericulture. The sector has also witnessed a spurt in investment during the last five years and has attracted foreign direct investment (FDI) worth US\$ 1.04 billion during April 2000 to November 2012. The potential size of the Indian textiles industry is expected to reach US\$ 220 billion by 2020.

In order to match the increasing requirement of skilled personnel at all levels, CBSE has initiated to introduce "Textile Design" as a vocational course for Class XI and XII. The course aims to introduce students to Elements of Design, Print Design, Fabric Science, Woven textiles, Dyeing & Printing procedures and introduction to Indian Traditional Textiles. The course will equip students for the jobs available in this sector as Assistants in Technical setups, Studios and will also prepare them for higher studies in the area of Textile Design.

The Faculty of the National Institute of Fashion Technology has developed the curriculum and the learning Material. I place on record the Board's thankful acknowledgement of the services



rendered by Shri P.K. Gera, Director General, NIFT, Sr. Prof Banhi Jha, Dean- Academics, Project In-charge and Ms. Savita Sheoran Rana, Chairperson, Textile Design Department, Project Anchor - Textile Design. The course is developed and prepared by faculty members from across the NIFT centers. CBSE also acknowledges the contribution by Prof. Kripal Mathur, Prof. V. Shivalingam, Director, NIFT Bangaluru, Prof. Sudha Dhingra, NIFT New Delhi, Ms. Savita Sheoran Rana, Associate Prof. & Chairperson, NIFT New Delhi,Mr. Manish Bhargava, Associate Prof., Gandhinagar and Ms. Ruby Kashyup Sood, Associate Prof, NIFT New Delhi . The Board also acknowledges the coordination and guidance provided by Dr. Biswajit Saha, Additional Director and Ms Swati Gupta, Deputy Director (Vocational Education).

Comments and suggestions for further improving the curriculum are always welcome.

Vineet Joshi Chairman, CBSE



# Acknowledgements

#### Preamble

Ъ

Textile Print or Printed Textiles is as old as mankind. Various records show that Printed fabric did exist about 2500 B.C. It is believed that people of India and China were the first to make simple blocks for the printing of cotton cloth, and it is certain that Textile printing was a fairly established Industry in India.

Textile prints have played an important role in enhancing fabric surfaces. Each region across the globe has its own intrinsic style, color and pattern. In India, printed textiles are very popular and are printed using various methods and styles.

The purpose of the course 'Print Design' is to introduce students to the area of Print Design. This course will give an overview of the History of Printed Textiles, Print Categories, Design Techniques, Styles and Methods of Printing Textiles.

#### **CBSE**

NIFT

Shri Vineet Joshi, Chairman

**Sh. M.V.V. Prasada Rao**, *Director Voc & Edusat* 

**Dr. Biswajit Saha**, Additional Director Vocational Education

**Ms Swati Gupta**, Deputy Director Vocational Education, CBSE Anchor **Prof. Kripal Mathur**, *Registrar, H.Q.-NIFT* 

Sr. Prof Banhi Jha, Dean (A)

Mr. Prem Kumar Gera, DG-NIFT

#### Anchor

Ms. Savita Sheoran Rana, Chairperson, Textile Design Department, NIFT Delhi

#### **Contributors**

- Prof. Kripal Mathur, Professor, Textile Design Department, NIFT Delhi
- Ms. Savita Sheoran Rana, Associate Professor, Textile Design Department, NIFT Delhi

vii



## CONTENTS

UNIT - I: Introduction to Print Design			
1.1	History of Print & Printed Textiles	1	
1.2	Traditional Indian Textiles	3	
1.3	Design and Art	5	
1.4	Reference Material	8	
1.5	Design, Layout, Color & Repeat	8	
UNIT - II: Categories of Printed Textiles		12	
2.1	Toile Prints	13	
2.2	Liberty Prints	13	
2.3	Geometric Prints	15	
2.4	Botanical Prints	15	
2.5	Dot Prints	16	
2.6	Art Nouveau Prints	19	
2.7	Floral Prints	20	
2.8	Scenic And Landscape Prints	22	
2.9	Motif Prints	25	
2.10	Animal Prints	27	
2.11	Nautical Prints	29	
2.12	Folkloric Prints & Ethnic Prints	29	
2.13	Patchwork Prints	30	
2.14	Script Prints	34	
2.15	Oriental Prints	36	
2.16	Conversational Prints	38	
2.17	Victorian Prints	40	
2.18	Pucci Prints	42	
2.19	Country Inspired Prints	42	
2.20	Graphic Prints	43	

viii

UNIT - III: Basic Print Design Techniques					
3.1	Wax Re	45			
3.2	Fevicol	Fevicol Resist Technique			
3.3	Bleach	Bleach Technique			
3.4	Rubber	Solution Technique	55		
3.5	Salt And	d Sugar Technique	58		
3.6	Bubble	Technique	61		
3.7	Etching	Technique	63		
3.8	Intercut	ting Technique	66		
3.9	Stampir	69			
3.10	Dry Bru	Dry Brush Technique and Stencil Technique			
3.11	Photoco	Photocopy Technique			
3.12	Collage Technique				
UNIT - IV:	Style and	Methods of Printing Textiles	82		
4.1	Styles c	f Printing	83		
	4.1.1	The Resist Style	83		
	4.1.2	The Dyed Style	83		
	4.1.3	The Discharge Style	84		
	4.1.4.	The Direct Style	85		
4.2	Methods of Printing				
	4.2.1	Block Printing	86		
	4.2.2	Roller Printing	87		
	4.2.3	Stencil Printing	88		
	4.2.4	Screen Printing	89		
	4.2.5	Transfer Printing	91		
	4.2.6.	Digital Printing	92		
	4.2.6.	Foil Printing	93		
4.3	Special	Special Effects Printing 94			



## **INTRODUCTION**

Printed textile fabrics are an integral part of our lives, being universally used to decorate both our clothing and surroundings. The print making technique has an unlimited potential for decorating dresses, furnishing fabrics and wallpapers etc. In order to decorate textile surfaces, various print making techniques are adopted by mankind. For printing fabric, colour is applied in definite patterns and designs using various methods such as screen printing, block printing, roller printing and digital printing.

The history of printed textile design is dated as early as 2500 B.C. A thousand years later, printed textiles were being worn in Egypt - Coptic period. Examples of printed fabrics survive from many different cultures. It is not known whether the people of China or India were the first to make blocks for printing of cotton cloth, but it seems certain that textile printing was a fairly extensive industry in India during that period.

There are many categories of textile prints which are distinguished by their origin, cultural references and colour usage. Each region all around the world has own distinguished styles of print.

Printed textiles are being developed for various products and are found on clothing for men, women and children - e.g. on blouses, shirts, skirts, kurtas, dupattas, dresses, ties, scarves, inner wear and night wear. Prints are also used at our homes on curtains, upholstery, wallpaper, bed sheets, cushions, towels, tablecloths, and napkins. In today's scenario, print are not limited to Textile surfaces only, but they are also visible on other non - textiles products too.