

Course Name : Diploma in Technical Chemistry
Course Code : DTC
Semester : Sixth
Subject Title : Process House Planning & Control
Subject Code : 09-CH-622

Teaching and Examination Scheme:-

Teaching Scheme			Paper Hours	Examination Scheme										Total Marks	
L	T	P		Theory		Test	Total		P		OR		TW		
				Max	Min		Max	Min	Max	Min	Max	Min	Max		Min
3	-	-	3	100	35	25	125	50	-	-	-	-	-	--	125

Rationale:

- The chemical processing of textiles is a part of textile manufacturing process, which has various types of machines, which treat the fabric in stages to give desired properties or finishes suitable for particular use. To get optimum performance of various machines in the section, planned layout of machine is very important.
- The flow of material and the fluids or chemicals are important, which depends on good layout of machines and other ancillaries.
- The material handling is one of the important aspects of manufacturing process.
- In recent days the pollution of water and air is considered seriously. The processing houses let off lot of polluted water, which if not treated properly would pollute the drinking water severely. The processing technologist should have knowledge of these aspects too.
- The subject covers the planning of various processes involved in Wet processing of textiles and machines for a given set of conditions. It covers sources and consumption of important materials such as water, steam, power, fuel, etc.
- The subject includes wage structure, costing and cost control measures. Areas of safety and accident free working also form a part of the subject

Objectives:

The students will be able to:

- Get the knowledge of construction and planning of dye house.
- Get the knowledge of production norms for various stages of processing
- Study various norms and methods of pollution control.
- Get the knowledge of material handling and safety in textile industry.

PERT- I COURSE CONTENTS:

S.N.	Contents	Hours Reqd.	Marks Alloted
1	Process House Planning: <ol style="list-style-type: none"> 1. Selection of site for process house for cotton, synthetic processing with ecological aspects. 2. Principles of general layout of building, machinery, fire prevention. 3. Pollution control operations. 4. Preparation of overall plan for layout and construction of building for modern process house. 5. Factors to be considered in section of site/place for modern process house. 6. Sources and consumption of water, steam, power, oils, etc. for the planned production. 	15	25

	7 Material handling equipments. Requirement of staff & labour for planned production.		
2	<p>Costing and its application to Textiles:</p> <ol style="list-style-type: none"> 1. Costing, its definition and its uses to management. 2. Classification of cost and various methods of costing. Marginal costing and Break even analysis. Standard costing and its applications. 3. Process costing and its applications. 4. Wage structure in textile mills. Depreciation, over-head cost and its absorption in the unit of production 	10	30
3	<p>Process Control:</p> <ol style="list-style-type: none"> 1. Definition of quality and process control. 2. Process control measures in bleaching department, quality control aspects of bleached and inimized fabric, measures to increase the production, reduce the cost of production with reference to water and energy and cost saving. Norms for various stages of bleaching and mercersing. 3. Process control measures in dyeing and printing departments. Measures to inimize redyeing, to reduce damages, to reduce cost of production and increase in production. 4. Process control measures in finishing department. 5. Important check list at various processing stages. 	15	30
4	<p>Safety in Textile Industry:</p> <p>Concept and importance of safety measure in textile industry with special emphasis on processing department. Factors responsible for accidents in textile mills. Factors to be considered for accident free working e.g. flooring, machine, lightness, drainage, maintenance, awareness of safety among workers, storage system of various chemicals, safety in transportation. Different chemicals used in wet processing and their safe handling.</p>	08	15
	TOTAL	48	100

Learning Resources:

Text Book

1. Dye-House Management Edited by John Shore Published by Society Of Dyers & Colorists 2000

BOOKS FOR REFERENCE:

1. Cost Accounting in Textile Mills P.V.Bhave and V.Shrinivasan first reprint 1997
2. Norms for the textile Industry BTRA publication 2000
3. Industrial Engg & Management Dr. O.P. Khanna Dhanpal Rai & sons 2000 New Delhi
4. Business Administration & Management Dr. S.C. Saksena Sahitya Bhavan Agra
5. The process of Management W.H. Newman E.Kirby Warren Andrew R. McGill Prentice- Hall of India Pvt. Ltd. New Delhi - 110001

Course Name : Diploma in Technical Chemistry

Course Code : DTC

Semester : Sixth

Subject Title : Chemistry, Applications & Testing of Textile Auxiliaries

Subject Code : 09-CH-623

Teaching and Examination Scheme:-

Teaching Scheme			Paper Hours	Examination Scheme										Total Marks	
L	T	P		Theory		Test	Total		P		OR		TW		
				Max	Min		Max	Min	Max	Min	Max	Min	Max		Min
3	-	-	-	100	35	25	125	50	-	-	-	-	-	-	125

RATIONALE:

- Like any other textile manufacturing processes chemical treatment of textiles involves the use of raw material, men, money, and machine with lot of other things. As such, the processes in the chemical processing must be managed to give the best performance with respect to production, quality, and the cost of production. In today's competitive world it is very essential to achieve very high standards of quality of the finished product. Therefore the testing of raw material (textiles and chemicals), intermediate products, and the final product becomes important aspect of the process.
- This subject intends to impart the knowledge and skill to the students in this area.

Objectives:

The students will be able to:

- Get the knowledge of various tests of dyes
- Get the knowledge of various tests of auxiliaries (Used for pretreatment, dyeing, printing and finishing)
- Get the knowledge of testing of textile after processing.
- Get the knowledge of quality control norms.

PART – I COURSE CONTENTS:

S.N.	Contents	Hours Reqd.	Marks Alloted
1	<ul style="list-style-type: none">• General considerations.• Definition of Textile Auxiliaries.• Nomenclature, Functions & Classification of Textile auxiliaries.	04	10
2	<ul style="list-style-type: none">• Surfactants / their chemistry and applications.• Definition & classification of surfactants, mechanism of the action of surfactants/surface active agents.• Basic properties such as Cloud point, Critical Micelle Concentration (CMC), Solubility, Hydrophilic Lypophilic Balance (HLB) etc.• Essential requirements of good SAA.• Importance of HLB value and its influence on properties of SAA.• Preparation, properties & chemistry of TRO.	04 02	25

	<ul style="list-style-type: none"> Anionic Surfactants : preparation, properties & uses of anionics from carboxylic acids, alkylaryl sulphonates, alkyl sulphates, alkane sulphonates and phosphate esters, etc. Preparation, properties and uses of Cationic surfactants from fatty amines, ethoxylated fatty amines, quaternary ammonium compounds. Preparation, properties and uses of Nonionics surfactants from polyoxyethylene ethers of fatty alcohols, polyoxyethylene ethers of alkyl phenol, polyglycol thioethers, polyglycol fatty acid esters, etc. Biodegradability of surfactants. Evaluation & testing of various types of surfactants used in textile processing. 	02	
		02	
		04	
3	<p>Chemistry & applications of</p> <ul style="list-style-type: none"> Dyefixing agents, Wetting agents, Levelling agents & Retardants, Defoaming agents & Swelling agents. Dispersing agents & Antimigrating agents, Proofing agents. Study of various auxiliaries used in Desizing, Scouring, Bleaching, Mercerizing, Dyeing, Printing & Finishing processes 	02	20
		02	
		02	
		02	
4	<p>Methods of Evaluation of Textile Auxiliaries and use of various equipments:</p> <ul style="list-style-type: none"> Qualitative & Quantitative evaluation of : Wetting agents. Detergency Wettability of textiles. Levelling agents. Cross linking agents. Optical whitening agents. Water repellents. Flame retarding agents. Soil release agents. Anti-static agents. Anti-pilling agents. Binders. 	10	25
5	<ul style="list-style-type: none"> Principle & application of thin layer chromatography. Paper chromatography, Gas liquid chromatography, Infra-red spectroscopy, NMR used in analysis of textile auxiliaries. 	06	10

6	• Recent developments in textile auxiliaries with ecofriendly concept.	06	10
7	5. Speciality auxiliaries used in Garment processing.		
8	6. Red list chemicals, banned amines		
	TOTAL	48	100

Learning Resources:

Text Book

Chemistry of textile Auxiliaries By V A Shenai Sevak Publicatrions edition 2000

BOOKS FOR REFERENCES:

- 1.Chemistry of Organic Textile Chemicals–Dr.V.A.Shenai & Dr.N.M.Saraf (Sevak Publications)2000.
- 2.Colorant and Auxiliaries Vol 2 - John Shore Published by SDC 1995 UK
4. Evaluation of Textile Chemists Vol.VIII – Dr.V.A.Shenai (Sevak Publications)1999

Course Name : Diploma in Technical Chemistry
Course Code : DTC
Semester : Sixth
Subject Title : Technology of Garment Processing and Analysis
Subject Code : 09-CH-626

Teaching and Examination Scheme:–

Teaching Scheme			Paper Hours	Examination Scheme											Total Marks
L	T	P		Theory		Test	Total		P		OR		TW		
				Max	Min		Max	Min	Max	Min	Max	Min	Max	Min	
3	-	-	-	100	35	25	125	50	-	-	-	-	--	--	125

RATIONALE:

- The latest trend is a high demand for Ready Made Garments both locally and globally. The subject deals with the processing of garments as well as the study of various properties required by fabrics used by garment manufacturers.
- Different aspects of garments to suit International standards are also dealt with.
- Fabrics processed require Analysis and Testing for the production of consistent quality goods.
- In order to ensure final fault free processed fabrics, it is essential to check the quality at every stage of processing.
- The subject of Analysis and Testing of Processed goods deals with methods for the evaluation of processed fabric at different stages of wet processing.
- **Objectives:**
- The students will be able to:
 - Get the knowledge of garment manufacturing.
 - Get the knowledge of processing of various types of garments and the machinery involved.
 - Get the knowledge of testing of textile garments after processing.
 - Get the knowledge of quality control norms.

PART – I COURSE CONTENTS:

Technology of Garment Processing:

S.N.	Contents	Hours Reqd.	Marks Alloted
1	Introduction to garment processing.	01	
2	Identification of different types of garments.	01	02
3	Classification of garments based on 100% cotton, 100% wool, 100% synthetics, 100% silk, blends of above, Knitted fabrics.	02	02
4	Garment dyeing machines. Various garment washing machines used in industries.	06	10
5	Garment finishing. Finishing of garments made from Woven, Denim, Knit fabrics. Role of enzyme to produce novel effects.	06	10
6	Garment finishing machinery and development.	06	10
7	Quality & process control during garment processing.	02	04
8	Emerging technologies & trends in garments.	04	06

9	International standards for specific end use of garments.	02	04
10	Functional finishing of garments for specific end use.	02	06
11	Quality control & testing of finished garments based on international standards.	02	06
12	Identification of different stains on garments and special techniques used for their removal. Uses of various stain removers, etc	02	04
13	Care of seam (stitching) & the garment quality used in garment constructive effect on processing.	01	02
14	Care labelling of various garments and its significance.	01	02
15	Causes of stitch damage.	01	
16	Garment comfort.	01	02
	ANALYSIS OF PROCESSED GOODS	04	
1	Objects of testing.		06
2	Grey fabric and its evaluation to achieve corrective action and preventive measures.		
3	Estimation of size content, wax content, noncellulose matter, whiteness, absorbance at various stages of processing.		06
4	Assessment of chemical damage during processing, estimation of hydrocellulose and oxycellulose. Estimation of scouring loss.		06
5	Colour fastness standards. Colour fastness of textiles to different agencies such as washing, light, rubbing, hypochlorite bleaching, peroxide bleaching, perspiration, gas fumes, etc.		06
6	Study, assessment and remedies of following:- Bleaching defects, dyeing defects, printing defects, finishing defects. Types of stains produced on fabric (Grey stage) and process to minimize it and their removal by chemical means.		06
	TOTAL	48	100

Learning Resources:

Text Book

1. Garment Processing – R.M.Mittal, [ATIRA Publication] 2000.

BOOKS FOR REFERENCE:

2. An Introduction to Quality Control for the Apparel Industry- P.V.Mehta [ASQC Quality Press, Marcel Dekkar, Inc., HongCong.]
3. Garment Dyeing : Edited by P.W.Horrison, [The Textile Institute, Textile Progress Series Vol 19, No.2].
4. Garment Finishing of Knits-Book Of Papers-NCUTE-PLIOT PROGRAMME at VJTI-Sept-01.
5. Fabric Care – Noemia D’Souza (New Age International (P) Ltd.Publication 1997.
6. Towards Zero Defects- Ambubhai Patel[Meena Publisher-Ahmedabad 1995]

Course Name : Diploma in Technical Chemistry
Course Code : DTC
Semester : Sixth
Subject Title : Technology of Printing -II
Subject Code : 09-CH-624

Teaching and Examination Scheme:--

Teaching Scheme			Paper Hours	Examination Scheme											Total Marks
L	T	P		Theory		Test	Total		P		OR		TW		
				Max	Min		Max	Min	Max	Min	Max	Min	Max	Min	
3	-	-	-	100	35	25	125	50	-	-	-	-	--	--	125

RATIONALE:

- The subject of technology of Printing-II deals with the printing techniques for wool, silk, polyester, polyamides, acrylics and blended fabrics.
- Various styles of printing and fixation methods with corresponding machines are also given coverage.
- Preparation of screens for flat bed and rotary printing machines is also included along with energy conservation and economics in printing.
- Synthetic fibres being thermoplastic in nature, the conventional methods of printing sequence fail to provide serviceability to the customer.
- The technological advancements introduced new techniques and chemicals.
- The students should be given through knowledge of the same.
- This subject intends to impart the modern knowledge of printing.

OBJECTIVES:

The students will be able to:

- Get the knowledge of printing of manmade fibres with different classes of dyes.
- Get the knowledge of transfer printing.
- Know the recent developments in textile printing.

PART – I COURSE CONTENTS:

S.N.	Contents	Hours Reqd.	Marks Alloted
1	<ul style="list-style-type: none"> • Printing of 100% polyester. • Preparation of cloth for printing. • Selection criteria of dyes for direct, discharge & resist style using disperse dyes. 	08	20

	<ul style="list-style-type: none"> • Fixation and after treatment process, reduction clearing and carbonizing process, etc. 		
2	<ul style="list-style-type: none"> • Miscellaneous styles of printing such as burn out style, batik, crimpe style & newly developed styles of printing. 	04	10
3	<ul style="list-style-type: none"> • Printing Machines - General principles, working of printing machines such as roller, rotary and flat bed printing machines (Semi auto & automatic machines). 	06	10
4	<ul style="list-style-type: none"> • Preparation of screen for flat bed and rotary screen printing. 	03	10
5	<ul style="list-style-type: none"> • Use of steamers & curing equipment used in colour fixation such as steamer, loop-ager, polymeriser / curing chamber, etc. 	04	05
6	<ul style="list-style-type: none"> • Printing of Wool & Silk. • Printing process, preparation of cloth for printing, selection of dyes, printing with various dyes. • All styles of printing on wool & silk. Printing of wool & silk with Natural dyes. 	04	10
7	<ul style="list-style-type: none"> • Printing of blended fabrics. • Preparation of blended fabrics like Polyester/cotton, selection of dyes, mixture of dyes for above blends. Problems & remedies during blend printing. Printing of other blended fabrics. 	05	10
8	<ul style="list-style-type: none"> • Printing of Polyamide (nylon) and acrylic fabrics. • Preparation, print paste formulation, selection of various dyes, fixation techniques. 	05	10
9	<ul style="list-style-type: none"> • Transfer printing process. • principles, machinery used. • merits and demerits. 	03	05
10	<ul style="list-style-type: none"> • Energy conservation techniques used in textile printing such as Foam application techniques in printing & other processes. • Eco-friendly textile printing process, auxiliaries. 	06	10
	TOTAL	48	100

Learning Resources:

Text Book

1. Technology of Printing-Vol IV- V.A.Shenai Sevak Publications Edition 2000
2. Textile Preparation and Dyeing Asim kumar Roy Chaudhary Oxford & IBH Publishing Co Pvt Ltd.2006 New Delhi

BOOKS FOR REFERENCE:

1. Introduction to Textile Printing-.Published by Butter Works In Association with I C I dyestuff Division.

Course Name : Diploma in Technical Chemistry

Course Code : DTC

Semester : Sixth

Subject Title : Technology of Finishing -II

Subject Code : 09-CH-625

Teaching and Examination Scheme:-

Teaching Scheme			Paper Hours	Examination Scheme											Total Marks
L	T	P		Theory		Test	Total		P		OR		TW		
				Max	Min		Max	Min	Max	Min	Max	Min	Max	Min	
3	-	-	-	100	35	25	125	50	-	-	-	-	--	--	125

RATIONALE:

Fabrics are finished to give them final face uplift so as to increase attractiveness & serviceability along with certain desirable properties. With the rise in demand by the consumers, speciality finishes are applied to improve their marketability. The subject also deals with various finishing chemicals, methods of applications and machineries.

OBJECTIVES:

The students will be able to:

- Get the knowledge of mechanical and chemical finishes
- Get the knowledge of different finishes applied on textile fabric.
- Get the knowledge of garment finishing
- Study the recent finishes for textiles

PART – I COURSE CONTENTS

Sr No	Name of the Topic	Hours	Marks
01	<ul style="list-style-type: none">• Finishing of wool, silk.	04	15
02	<ul style="list-style-type: none">• Finishing of synthetic fibre fabrics:• Techniques in heat setting.• Pilling, mechanism• Factors affecting pilling• Various physical & chemical methods to minimize pilling• Weight or denier reduction of polyester.• Optical whitening of polyester, Poplin finish, Shiffon finish, Foam finishing• Antistatic finish, agents & their applications.	10	15
03	<ul style="list-style-type: none">• Weight or denier reduction of polyester	02	05
04	<ul style="list-style-type: none">• Antistatic finish, agents & their applications. (soil release)	04	05
04	<ul style="list-style-type: none">• Finishing of hosiery goods, finishing of knit goods.	04	10

05	<ul style="list-style-type: none"> • Foam Finishing • Definition of foam & blow ratio, properties of foam, stability of foam, • various methods to prepare foam, • factors affecting stability of foam, • methods to determine stability of foam, • various methods of foam application 	06	15
05	<ul style="list-style-type: none"> • Recent developments in finishing • Study of multifunctional finishes, • Moisture management finishes • UV protective finishes • Oil repellent finishes 	06	15
06	<ul style="list-style-type: none"> • Eco-friendly finishing techniques • Ecological aspects of the finishing agents currently in use 	06	20
	TOTAL	48	100

Learning Resources:

Text Book

1. Technology Of Finishing Vol X By V A Shenai Sevak Publications Edition 2000.
2. Textile Preparation and Dyeing Asim kumar Roy Chaudhary Oxford & IBH Publishing Co Pvt Ltd.2006 New Delhi

Reference Books

1. Textile Finishing By Derek Heywood Society Of Dyers & Colorists 2000.

Course Name : Diploma in Technical Chemistry
Course Code : DTC
Semester : Sixth
Subject Title : Colour Harmony and Computer Colour Matching
Subject Code : 09-CH-627

Teaching and Examination Scheme:-

Teaching Scheme			Paper Hours	Examination Scheme											Total Marks
L	T	P		Theory		Test	Total		P		OR		TW		
				Max	Min		Max	Min	Max	Min	Max	Min	Max	Min	
3	-	-	-	100	35	25	125	50	-	-	25	10	50	20	75

RATIONALE:

It is necessary for the textile chemistry students to understand the elements and principles of textile design, the methods of comparing design, conditions to be observed in designing and to know the properties of colour and various types of colours.

The computer colour matching and computer applications substantially help in reducing duplicating efforts in data entry in various departments for preparation of daily production and management reports. Other applications are process monitoring, helping dyehouse manager, computer colour matching, computer aided textile designing and process control.

OBJECTIVES:-

The students will be able to:

- Get the knowledge basics of colour system.
- Get the knowledge digitalization of colour.
- Know the recent developments computer colour matching system

PART – I COURSE CONTENTS

S.N.	Contents	Hours Reqd.	Marks Alloted
1	COLOUR HARMONY <ul style="list-style-type: none"> • Elements and principle of design. • Units of design, treatment of natural, conventional and abstract form • Construction of sketch design and bases of textile design • Planning a design character's design technique and motif arrangement. • Composition of design • Conditions to be observed in designing figure fabrics • Guide lines for fabric printing 	04	10
2	COLOUR COMPUTER MATCHING <ul style="list-style-type: none"> • Colour theory. required in understanding computer colour matching • Electromagnetic spectrum. • Perception of colour 	10	15

	<ul style="list-style-type: none"> • Additive and subtractive colour mixing. • Munsell colour tree. • CIE colour theory. • Tristimulus values. • Chromaticity Diagram. • Colour measuring instruments. • Spectral Reflectance curves. • Isomeric and Metameric matches. • Metamerism. • Kubelka-Munk theory. • Colour Difference Equations. • Colour control system. 		
3	<p>QUALITY CONTROL APPLICATIONS</p> <ul style="list-style-type: none"> • Colour differences assessments. • Colour strength analysis. • Pass/fail status. • Whiteness/Yellowness Index. • Opacity/Contrast ratio/Haze Calculation. • Shade sort method. 	04	10
4	<p>RECIPE FORMULATION APPLICATION.</p> <ul style="list-style-type: none"> • K-S Data of Colrants. • Mathematics in recipe prediction. • Colour matching. • Batch correction. • Other applications based on colour theory. 	04	15
5	Advantages of instrumental measurement and prediction.	02	05
6	Limitations of instrumental match prediction.	02	05
7	<p>Other Computer applications:</p> <ul style="list-style-type: none"> • Introduction to applications. • Technical applications. • Commerical applications. • How to get started. • Final tuning to applications. • Performance analysis. • Expert systems & their development. 	06	10

Learning Resources:

Text Book:-

1. 'Colour Technology : Tools, Techniques and Applications', By V C Gupte WOODHEAD PUBLISHING September 2008.

BOOKS FOR REFERENCE:-

1. Computer Colour Analysis: Textile Applications A D Sule [New Age International](#) 1971

Course Name : Diploma in Technical Chemistry.
 Course Code : DTC
 Semester : Sixth
 Subject Title : Industrial Organisation and Management
 Subject Code :09-HM-605

Teaching and examination scheme

Teaching Scheme			Paper Hours	Examination Scheme										Total Marks	
L	T	P		Theory		Test	Total		P		OR		TW		
				Max	Min		Max	Min	Max	Min	Max	Min	Max		Min
2	-	-	-	-	-	-	-	-	-	-	-	-	25	10	25

RATIONALE:

Students of diploma courses on completion of the course join industry in supervisory positions, where they are responsible for decision making, leading, motivating and controlling the subordinates. This subject aims at exposing them to theory and practice related to these through lectures, seminars and case studies.

OBJECTIVES:

- To develop in students the ability to understand and assess the organizational environment.
- To expose them to the planning and decision making process.
- To develop in them the understanding of leadership, communication and motivational practices.

COURSE CONTENTS:

S.No.	Topic	Contents	Hrs.*
1	Management	Definition, functions, levels, skills.	2
2	Planning	Process, merits, limitations.	4
3	Decision making	Decision making models, group decision making.	4
4	Organizing	Span of management, delegation of authority, decentralization of authority, departmentation.	8
5	Communication	Upward, downward, formal and informal communication. Barriers to effective communication and ways to overcome them.	4
6	Motivation	Maslow's and Herzberg's theories. Incentives.	4
7	Leadership	Autocratic and democratic styles, Situational leadership. Leadership continuum and managerial grid.	4
8	Controlling	Controlling process. Requirements of a good control system.	2

*Hrs includes lecture time and assignment time.

Assignments:

SIX Group / individual assignments on the above topics comprising of:

- 1) 3 to 4 case studies,
- 2) 1 seminar and
- 3) 1 role plays/group discussion.

Learning resources

Text book

Industrial and business management: Telsang, M.T., S.Chand, 1998 edition.

Reference book

Essentials of Management: Koontz Harold and Wehrich Heinz, McGraw Hill, fifth ed.

COURSE NAME: Diploma in Technical Chemistry.
 COURSE CODE: DTC
 SEMESTER : Sixth
 SUBJECT TITLE: Dye House Practicals
 COURSE CODE:09-HM-628

Teaching and Examination Scheme:-

Teaching Scheme			Paper Hours	Examination Scheme										Total Marks	
L	T	P		Theory		Test	Total		P		OR		TW		
				Max	Min		Max	Min	Max	Min	Max	Min	Max		Min
-	-	10	-	-	-	---	-	200	70	25	10	50	20	275	

RATIONALE:

Experiments are based on Chemistry & Applications & Testing of Textile auxiliaries, Technology of Garment Processing & Analysis of Processed goods and Technology of Printing – II

OBJECTIVES:

The students will be able to:

- Get the knowledge of mechanical and chemical finishes
- Get the knowledge of different styles of printing on synthetic textile fabric.
- Get the knowledge of garment finishing
- Study the recent finishes for textiles

COURSE CONTENTS:

1. Experiments based on Chemistry & applications & Testing of Textile auxiliaries. Preparation and qualitative and quantitative evaluation of auxiliaries e.g. stain remover, dye fixing agent, resin, stiffener, binder, etc.
2. Analysis of different types of garments for end uses. Dyeing of garments with selected dyes.
3. Testing and Analysis of bleached, dyed and printed goods for end use as per International standards ie. testing of all types of fastness properties.
4. Analysis of specialized printing auxiliaries used in cotton and manmade fabric printing.
 - a. Printing of blended fabrics.
 - b. Printing of cotton & synthetics for discharge and resist style of printing.
 - c. Printing of nylon, wool, silk and others for direct, discharge and resist styles of printing.
 - d. Miscellaneous styles of printing such as Batik style, Khadi printing, Brasso style, etc.
5. Printing of natural dyes on polyester, wool, silk, etc.
6. Analysis of effluents of textile process house and study of prescribed norms, etc.
7. Experiments based on colour computer matching (CCM) system. Recipe prediction, standardization, etc.
8. Evaluation of banned dyes, chemical and auxiliaries with use of instrumentation techniques (demonstration experiment).

NOTE:

Exams in VIII Semester for Dye House Practicals-III will be based on experiments covered under Dye House Practicals II & Dye House Practicals III.

Part II:- Practicals

Book for reference:

1. Analysis of Textile Chemicals - N.F.Desai [Colourage Publication]2000
- 2 Principle and practices in Dyeing - V.A.Shenai Shenai Sevak Publications Fifth Edition 1999