Daffodil Polytechnic Institute, Institute Code: 50238

Subject Teacher : Asif Shahriar
Subject Name : Advance Wet
Subject Code 21362
Technology : Textile Technology
Semester : 6th Textile
Reference Book : A d v a n c e Wet Processing-I (Publisher: Prime Publication)

Marks	Grade Point	Letter Grade	Marks	Grade Point	Letter Grade
80>	4.00	A+	55-59	2.75	B-
75-79	3.75	A	50-54	2.50	C+
70-74	3.50	A-	45-49	2.25	C
65-69	3.25	B+	40-44	2.00	D
60-64	3.00	B	0-39	0.00	F

Mark Distribution (for 150 Marks)			
Theory Marks		**Practical Marks**	
Midterm	20	PC	25
Class test	05	PF	25
Quiz test	05	-	-
Final	80	-	-
Total	**100**	**Total**	**50**

THEORY LESSON PLAN

Chapter	Learning Area	Learning Outcome	Supporting Equipments
1.	**Basic concept of wet process.** 1.1. Define wet processing. 1.2. Describe the importance of wet processing in Textile sector. 1.3. Mention the steps of wet processing. 1.4. Illustrate the process flow chart of pre-treatment for woven fabric. 1.5. Illustrate the process flow chart of pre-treatment for knit fabric.	1. To know about basic concept of wet processing 2. To know the flow process of pre treatment 3. To know the importance of wet processing in textile industry	Text Book, marker&
2	**Treatments of water**	1. To know the importance of	Text book, marker &

	2.1 Discuss the importance of water quality in wet processing. 2.2 Mention the standard water quality for wet process. 2.3 Distinguish between hard and soft water. 2.4 Explain the problems of hard water in wet processing. 2.5 Define water treatment. 2.6 Describe the soda lime process. 2.7 Describe the base or ion exchange process. 2.8 Define sequestering/chelating. 2.9 Describe the methods of expressing hardness. 2.10 Describe the process of estimating hardness of water.	water quality in wet processing 2. To know the difference between hard water and soft water 3. Water treatment system 4. To learn the process of estimating hardness of water	
Quiz Test - 1 Date:		**Evaluation of Chapter- 1 & 2**	**Questions & answers script**
3	**Acid, Base and salts** 3.1. Define acid, base and salts. 3.2. Discuss the chemistry of acid, base and salts. 3.3. Classify acid, base and salts. 3.4. Mention the uses of acids, bases and salts in wet process. 3.5 Define alkalinity of acid and acidity of alkali.	1. To know about acid, base and salt 2. To know the use of acid,bases, and salt in wet processing	Text Book, Marker
4	**pH, Normality, Molarity,Molality of solution and waste water standard** 4.1 Define pH of a solution. 4.2 Mention the importance of pH for solution. 4.3 Describe the process of pH determination. 4.4 Define buffer solution. 4.5 Discuss normality, molality and molarity. 4.6 Solve the problems of pH, normality,	1. To know about PH solution 2. To know the process of pH determination 3. To know about normality,molality and molality	Text Book, Marker

	molality and molarity. 4.7 Discuss COD, BOD and DO. 4.8 Discuss the standard of discharge waste water in environment as per Bangladesh Government rules.	4. To know about COD,BOD,DO	
Class Test - 1 Date:		**Evaluation of Chapter- 3 & 4**	**Questions & answers script**
5	**Auxiliaries for pretreatments** 5.1 Define auxiliaries for pretreatment. 5.2 Mention oxidizing agents. 5.3 Explain the uses of oxidizing agents in textile wet processing. 5.4 Mention the name of reducing agents. 5.5 Explain the uses of reducing agents in textile wet processing. 5.6 Define detergents. 5.7 Classify detergents. 5.8 Discuss the uses of detergents in textile wet processing. 5.9 Define sequestering agent. 5.10 Mention the uses of sequestering agents in textile wet processing.	1. Define auxiliaries for pretreatment. 2. Mention oxidizing agents. 3. Explain the uses of oxidizing agents in textile wet processing. 4. Mention the name of reducing agents. 5 .Explain the uses of reducing agents in textile wet processing. 6. Define detergents.	Text Book, Marker & Link:
MID TERM EXAM - (Exam starts from March 01)		**Syllabus: Chapter 1-5**	
6	**Brushing and shearing.** 6.1 Define brushing and shearing. 6.2 Explain the necessity of brushing and shearing. 6.3 Describe the process of brushing and shearing.	1. To know brushing and showing 2. To know to know necessary of brushing and shearing and process of brushing and shearing	Text book,, Marker

7	**Singeing and Heat setting** 7.1 Define singeing. 7.2 Explain the necessity of singeing. 7.3 Mention the processes of singeing. 7.4 Describe the process of gas singeing. 7.5 Discuss the faults and remedies of singeing. 7.6 Mention the use of enzymes in pretreatment process 7.7 Define heat setting for elastomeric fabric. 7.8 State the objectives of heat setting. 7.9 Discuss the process of heat setting. 7.10 Mention the faults and remedies of heat setting.	1. To know about singeing 2. To know the necessity of singeing 3. To know the fault and remedies of singeing 4. To know about heat setting 5. Process of the faults and remedies of heat setting	Text book, Marker
Quiz Test - 2 Date:		**Evaluation of Chapter- 6 & 7**	**Questions & answers script**
8	**Batching for knit dyeing** 8.1 Define batching. 8.2 State the objectives of batching. 8.3 Mention the factors for batch preparation. 8.4 Draw the process flow chart of batch preparation for dyeing.	1. To know about batching 2. Factor for batch preparation 3. To know about the flow chart of batch preparation for dyeing	Text book, Marker
9	**De-sizing** 9.1 Define de-sizing. 9.2 State the objectives of de-sizing. 9.3 Classify de-sizing process. 9.4 Describe the enzymatic de-sizing procedure. 9.5 Mention the faults and remedies of de-sizing.	1. To know about De-sizing 2. Flow process, classification,faults and remedies of desizing.	Text book, Marker
Class Test - 2 Date:		**Evaluation of Chapter- 8 & 9**	**Questions & answers script**

10	**Scouring** 10.1 Define scouring. 10.2 Explain the necessity of scouring. 10.3 Mention the methods of scouring. 10.4 Mention the functions of chemicals used in scouring. 10.5 Describe the scouring process of cotton fabric for exhaust & continuous method 10.6 Mention the faults and remedies of scouring. 10.7 Describe the scouring of blended fibers.	1. To know the about scouring process 2. To know about method of scouring 3. Faults and remedies of scouring process	Marker, Text Book
11	**Bleaching** 12.1 Define bleaching. 12.2 Mention the objectives of bleaching. 12.3 State the types of bleaching agent. 12.4 Describe bleaching mechanism of hypochlorite. 12.5 Describe bleaching mechanism of cotton with peroxide. 12.6 Mention merits and demerits of hypochlorite and peroxide bleaching	1. To know the about bleaching 2. To know about bleaching agent 3. Mechanism,merit and demerits of hypochlorite and peroxyde bleaching process	Text book, Marker
12	**Bleaching processes** 13.1 Describe the bleaching process in exhaust process 13.2 Describe pad-roll/pad- batch process. 13.3 Describe continuous process for bleaching. 13.5 Describe the bleaching of polyester-cotton blended fabrics. 13.6 Mention the factors considered for the selection of bleaching agent.	1. To know the about bleaching process 2. To know about method of bleaching 3. Faults and remedies of bleaching process	Text book, Marker

13	**Combined preparatory processes** 14.1 State the necessity of combined processes. 14.2 Describe combined de-sizing & scouring. 14.3 Describe combined scouring & bleaching. 14.4 Describe combined de-sizing, scouring & bleaching.	1. To know the combined desizing and scouring process 2. To know the combined scouring and bleaching process	Text book, Marker
14	**Souring/Neutralization** 11.1 Define souring. 11.2 Mention the necessity of souring. 11.3 Describe souring processes. 11.4 Distinguish between scouring and souring.	1. To know about souring 2. To distinguish scouring and souring process	Text book, Marker
15	**Mercerization** 15.1 Define mercerization. 15.2 Classify mercerization processes. 15.3 Mention the objectives of mercerization. 15.4 State the mechanism of mercerization. 15.5 Describe the methods of mercerization for yarn & fabric. 15.6 Discuss the steps of mercerizing.	1. To know about mercerization 2. Importance of mercerization process 3. Method of mercerization process	Text book, Marker
Submission of Assignment or Presentation (All Chapters)		**Date:**	
Total Class & Quiz Tests: 4		**Total Class:**	

PRACTICAL LESSON PLAN

Chapter	Learning Area	Learning Outcome
1	**Observe hardness of water & its removal process.**	1.1 Identify the devices involved in this experiment. 1.2 Observe the operations involved in water hardness removal process. 1.3 Sketch the experiment related instruments.

		1.4 Demonstrate working principle using material. 1.5 Maintain the record of performed experiments.
2	**Observe cotton fabric by enzyme de-sizing.**	2.1 Identify the different chemicals for enzyme de-sizing. 2.2 Observe the operations involved in enzyme de-sizing. 2.3 Sketch the fabric path of enzyme de-sizing. 2.4 Demonstrate working principle using material. 2.5 Maintain the record of performed experiments.
3	**Observe the scouring of cotton fabric using caustic soda.**	3.1 Identify the different chemicals involved in the process. 3.2 Observe the operations involved in scouring. 3.3 Sketch the respective apparatus. 3.4 Demonstrate working principle using material. 3.5 Maintain the record of performed experiments.
4	**Observe the bleaching cotton fabric using H2O2**	4.1 Identify the different chemicals involved in experiment. 4.2 Observe the operations involved in experiment. 4.3 Sketch the respective apparatus. 4.4 Demonstrate working principle using material. 4.5 Maintain the record of performed experiments.
5	**Observe mercerization proc**	5.1 Identify the different chemicals involved in experiment. 5.2 Observe the process involved in experiment. 5.3 Sketch the respective apparatus. 5.4 Demonstrate working principle using material. 5.5 Maintain the record of performed experiments.