

INDIAN INSTITUTE OF HANDLOOM TECHNOLOGY
BARGARH/GUWAHATI/FULIA/JODHPUR/SALEM/VARANASI/CHAMPA/KANNUR/KHITI GADAG/SPKM VINKATGIRI
DIPLOMA IN HANDLOOM AND TEXTILE TECHNOLOGY
SEMESTER EXAMINATION-NOVEMBER/DECEMBER-2017 (2011 REGULATION)

Duration : 3 hrs
VI SEMESTER

Max.Marks : 80

6.3 : CHEMICAL PROCESSING OF TEXTILES-IV

PART-A

(Answer all the following questions within two or three sentences)

(2x10=20) Marks

1. What is the harmful effect of pigment printing ?
2. Mention the function of alkali in printing with Direct dyes?
3. Name the dyes suitable for batik printing.
4. In which states of India Kalamkari printing is practiced.
5. Write two objects of Textile finishing.
6. Mention the factors responsible for shrinkage of cotton fabrics on washing?
7. What is the use of THPC in finishing of cotton
8. Give two examples of stiffening agents for cotton.
9. Which enzyme is used for desizing of cotton?
10. Give the names of water soluble dyes used for cotton?.

PART-B

(4+8) x5 = 60 Marks

Answer the following questions in detail:

11.(a) State the problems associated in printing cotton with Direct dyes and suggest suitable remedy. (4)

(b) Describe the method of Printing Cotton with pigments along with function of various chemicals used . (8)

OR

(c) Why is starch not suitable for reactive printing? (4)

(d) Describe the method of Printing Cotton with reactive dyes along with function of various chemicals used . (8)

12.(a) Give brief outlines of Tie and Dye style of printing. (4)

(b) Give the recipe, method of printing silk with Metal complex dyes along with process details and role of chemicals used. (8)

OR

(c) Explain briefly how an artistic effect can be produced on cotton by application of wax. (4)

(d) Describe the method of printing polyester with disperse dyes along with function of chemicals used. (8)

13.(a) Give the classification of Textile Finishes with examples. (4)

(b) Mention the objects of calendaring ? Discuss the working of Seven bowl Calendar with a neat diagram . (8)

OR

(c) Discuss the factors which affect the selection of Textile Finishes. (4)

(d) Describe the working of a machine used for imparting Anti-shrink finishing on cotton with a neat diagram. (8)

PTO

14.(a) Differentiate between water proofing and water repellency. (4)

(b) What is mercerization ? Explain the working of Chain merceriser with a neat diagram. (8)

OR

(c) Explain the necessity of mercerization before dyeing/printing . (4)

(d) Why do cotton fabrics crease readily? Describe a method to improve crease resistance of cotton by using DMDHEU. (8)

15.(a) Discuss the harmful effects of azo dyes on man and environment. (4)

(b) Describe the application of enzymes in bio-polishing of cotton fabric. (8)

OR

(c) Explain the procedure for identification of water insoluble dyes in powder form. (4)

(d) List the various hazardous chemicals used in wet processing of Textiles and suggest suitable alternatives. (8)

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DIPLOMA IN HANDLOOM & TEXTILE TECHNOLOGY

SEMESTER EXAMINATION NOV/DEC-2017

(2014-REGULATION)

Semester: VI Semester

Time : 3 Hours

Subject:

6.3 Chemical Processing of Textiles-IV

Max.Marks : 80

Part - A

2x10=20 Marks

- 1 What is the role of urea in reactive dye printing by steaming method?
- 2 Write any two disadvantages of silicate padding method?
- 3 Why cold temperature dyes are most suitable for Tie and Dye printing process?
- 4 Write the disadvantages of Batik printing
- 5 Give two examples of temporary finishing
- 6 What are the objects of sanforizing?
- 7 Write the full chemical name of DMU
- 8 Enlist the types of softeners?
- 9 Give two examples of natural dyes
- 10 State the advantages of bio finishing process?

PART-B

(4+8) x 5= 60 Marks

- 11 A) Write the advantages and disadvantages of steaming method for reactive printing on cotton (4)
B) Describe in details about printing of cotton with pigment dyes along with recipe and process sequence (8)
(Or)
C) Why curing process is suitable for pigment printing? Justify (4)
D) Explain any one printing process of cotton with reactive dyes along with recipe and process sequence (8)
- 12 A) Write short notes on Kalamkari printing process? (4)
B) Discuss the process of printing silk using direct style with premetalized dyes? Explain the function of each chemical. (8)
(Or)
C) Write short notes on Tie & Dye process. (4)
D) Explain in details about printing of polyester with disperse dyes? Elaborate the various developing methods (8)

- 13 A) Write short notes on Temporary Finishing and Permanent Finishing (4)
B) Classify textile finishing with suitable example. (8)
- (Or)
- C) What are the objects of calendering? (4)
D) What is zero – zero finishing? Why it is called zero-zero finishing? Explain the process with neat line diagram (8)
- 14 A) Distinguish between water proof and water repellent finishing (4)
B) Describe the working principle of chainless pad less mercerizing machine with neat sketch (8)
- (Or)
- C) What are the objects of stiff finishing? (4)
D) Write short notes on Flame Retardant Finishing and Silicone Softening? (8)
- 15 A) Enlist any four hazardous chemicals in textile processing? How they influence the environment? (4)
B) Write short notes on bio washing and bio polishing (8)
- (Or)
- C) What are the advantages of bio stoning? (4)
D) Explain the identification procedure of Direct and Reactive dyes in powder form (8)

DIPLOMA IN HANDLOOM & TEXTILE TECHNOLOGY
VI SEMESTER (BACK PAPER) EXAMINATION – NOV/DEC-2015

6.3 CHEMICAL PROCESSING OF TEXTILES-IV

Max. Marks:80

Time : 3 Hours

PART-A



(2x10=20)

I. Answer all questions in ONE or TWO sentences.

- i. What do you mean by direct style of printing?
- ii. What is the role of resist salt in reactive printing?
- iii. Give examples for pre metalized dyes.
- iv. Name any two traditional styles of printing.
- v. Write any two objects of finishing.
- vi. Give examples of permanent chemical finishes (Any two)
- vii. Write the objects of mercerization.
- viii. Write any two cross linking agents used for antcrease finishes.
- ix. What do you mean by eco-textiles.
- x. How do you identify direct dyes in powder form.

PART-B

Answer all the questions in detail.

- II a. Write the draw backs of using direct dyes in printing. (04)
b. Explain in detail the printing of cotton fabric with Reactive dyes. (08)
(OR)
c. Write the advantages of Pigment printing. (04)
d. With typical recipe, explain printing of cotton fabric with pigments. (08)
- III a. Differentiate between Acid dyes and Pre-metalized dyes. (04)
b. How do you perform printing on PET fabric in direct style using Disperse dyes. (08)
(OR)
c. Write the limitations of Tie & Dye style of printing. (04)
d. Explain in detail the salient features of Kalamkari and Batik printing. (08)
- IV. a. Briefly explain the criteria for selection of finish. (04)
b. Explain in detail the classification of finishing processes with suitable examples. (08)
(OR)
c. Textile finishing adds value to the goods; Justify. (04)
d. Briefly explain any two types of Calenders with neat line diagram. (08)
- V. a. Brief on the process details for mercerization of cotton fabric. (04)
b. Explain working of padless chainless machine for fabric mercerization. (08)
(OR)
c. Differentiate Water Proof and Water repellent finishes. (04)
d. How do you produce antcrease finish on cotton fabric? (08)

- VI. a. Write the advantages of bio-finishing. (04)
b. Give the alternate wet processing conditions for present harmful chemical processing by considering green technology. (08)
(OR)
c. Brief on banned amines and list out any four names. (04)
b. How do you identify Disperse and Vat dyes in powderform. (08)



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DIPLOMA IN HANDLOOM AND TEXTILE TECHNOLOGY

SIXTH SEMESTER (REGULAR AND BACK) EXAMINATION – APRIL/MAY-2016

6.3 CHEMICAL PROCESSING OF TEXTILES-IV

Time: 3 Hours

Max. Marks: 80

PART-A

I. Answer all the question in two or three sentence.

2x10=20

- Mention the disadvantages of pigment printing.
- Why starch cannot be used as thickener for printing with reactive Dyes.
- Distinguish between Acid and Metal Complex Dyes.
- What is Thermo-fixation.
- What do you mean by Value addition after finishing?
- Give two examples of permanent mechanical finishes.
- How mercerization improves lusture?
- Name two different types of softening processes.
- Name two Banned Amines.
- What do you mean by Eco-audit?

PART-B

Answer in detail.

- II. a) Describe the role of Mild oxidizing agent in printing with Reactive Dyes. 4
b) Describe the process and sequence of operations used for printing with pigments. 8

OR

- c) Mention advantages of using Emulsion thickeners in Pigment Printing. 4
d) Outline different processes used for fixation of Reactive dyes printed on Cotton. Explain the details of any one of them. 8

- III. a) Give brief outlines of Batik Printing. 4
b) Explain the process of printing polyester with a suitable recipe and function of ingredients used. 8

OR

- c) Write at least two traditional names used for tie & dye along with the name of states in which they are practiced. 4

- e) Write down the process of printing Silk with acid dyes in direct style. Also mention the recipe and function of chemicals used. 8

- IV. a) Classify textile finishes. 4
b) Explain the parts & working of a CALENDER producing silk like lusture on cotton. 8

OR

- c) Outline the principle of compressive shrinkage. 4
d) Mention important process control parameters of Calendaring process. 8

- V. a) Why does cotton material suffer from crease formation? 4
b) Describe the parts and working of Padless – chainless mercerizing machine. 8

OR

- c) Mention briefly the role of tension applied during mercerization. 4
d) Distinguish between Flame Proof and Flame Retardant finishes. Write in details the process of making Cotton goods Flame Retardant. 8

- VI. a) What is Bio Finishing? 4
b) Briefly explain various approaches to achieve Eco-friendly Wet Processing. 8

OR

- c) What do you mean by Carcinogenic Dyes? 4
d) Write a detailed note on Toxic/Harmful chemicals used in wet processing of textiles and suggest their safer alternatives. 8

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DIPLOMA IN HANDLOOM AND TEXTILE TECHNOLOGY
SIXTH SEMESTER (2011- REGULATION) EXAMINATION –NOV/DEC-2016

6.3 - CHEMICAL PROCESSING OF TEXTILES-IV

Time: 3 Hours

Max.Marks: 80

PART – A

- I. Answer the following questions in two or three sentences : (2X10=20)
- Suggest an after treatment required for goods printed with Direct dyes.
 - Why starch/gum is not suitable for pigment printing?
 - Name the dyes suitable for batik printing.
 - Give the names of equipments used for Kalamkari printing.
 - Mention any two factors which affect selection of finishes.
 - Why do cotton fabrics shrink on washing?
 - Write chemical name of DMDHEU.
 - Give two examples of softening agents for cotton.
 - Which enzyme is used for silk degumming?
 - Give two examples of Flame retardants used for cotton.

PART B

- II. Answer all the questions in detail (4+8) x 5 = 60
- Describe the method of Printing Cotton with pigments along with function of various chemicals used. (4)
 - Discuss the role of alkali and thickener in Reactive printing of cotton. (8)
- (OR)
- Describe the Steaming Process of Printing Cotton with reactive dyes along with function of various chemicals used. (4)
 - What is the impact of pigment printing on man and environment? (8)
- III. A) Describe the method of printing silk with acid dyes along with process details and role of chemicals used. (4)
- B) Give brief outlines of Tie and Dye style of printing. (8)
- (OR)
- Describe the Thermofixation method of printing polyester with disperse dyes along with function of chemicals used. (4)
 - Explain briefly how Batik prints are produced on cotton. (8)

- IV. A) What are the objects of calendaring? Discuss the working of Schreiner Calendar with a neat diagram. (4)
- B) Give the classification of Textile Finishes with examples. (8)
- (OR)
- C) Describe the working of Sanforising Machine with a neat diagram. (4)
- D) Mention the objectives of Textile Finishing. (8)
- V. A) Describe the working of any one fabric mercerization machine with a neat diagram. (4)
- B) Mention the various water repellents used for cotton. (8)
- (OR)
- C) What is the mechanism of creasing of cotton? Describe a method of producing Anticrease finish on cotton. (4)
- D) Discuss the effect of mercerization on properties of cotton. (8)
- VI. A) Describe the use of enzymes in cotton processing. (4)
- B) Discuss the impact of banned dyes on man and environment. (8)
- (OR)
- C) List the various harmful chemicals used in wet processing of Textiles and suggest suitable alternatives. (4)
- D) Explain the procedure for identification of water soluble dyes in powder form (8)

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VENKATAGIRI

DIPLOMA IN HANDLOOM & TEXTILE TECHNOLOGY

SEMESTER EXAMINATION APRIL/MAY-2017 (2011-REGULATION)

Time : 3 Hours
VI SEMESTER

6.3 CHEMICAL PROCESSING OF TEXTILES-IV

Max.Marks : 80

PART-A

10 x 2=20 Marks

- 1 What is the role of mild oxidizing agent in polyester printing?
- 2 Write the printing sequence (only) of any method of Reactive printing for cotton.
- 3 What is the role of catalyst in pigment printing?
- 4 What are the important weighting agents used in finishing process?
- 5 What is the role of Solvent used in printing of silk using metal complex?
- 6 Write the names of states where Batik printing is practicing.
- 7 Write the process conditions for Mercerization of cotton material.
- 8 Write the names of machines used in mechanical finishes.
- 9 Write the three disadvantages for not using Eco-friendly process.
- 10 How do you identify Reactive dyes on textile material?

PART-B

12 x 5= 60 Marks

- 11 A) Write the detail process of printing using Reactive dyes with pad batch (Silicate) process of printing. (8)
- B) What are the salient features of pigment printing? (4)

(Or)

- C) Justify that where the selection of direct dyes is advantageous on cotton goods. (4)
- D) Write the detail process of pigment printing on cotton with objectives of chemical used. (8)
- 12 A) Write the process details of polyester printing with recipe and printing sequence. (8)
- B) Discuss about the steps and process details of Batik Printing. (4)

(Or)

- C) Which class of dyes most preferred for printing of silk Sarees and write method of printing with process details. (8)
- D) Discuss about process details of Kalamkari and Tie & Dye style of printing on textile materials. (4)

P.T.O.

- 13 A) Write the factors affecting the selection of finishing process. (8)
- B) Write the list of finishing chemicals used in various process of textile finishing. (4)

(Or)

- C) What is the principle of Sanforisation? Discuss working of sanforising machine with neat diagram. (8)
- D) What are the objectives different Calendars used in textile finishing? (4)
- 14 A) What are the objectives of Mercerisation for cotton material? (8)
- B) Write the application process of DMDHEU resin on cotton and discuss its merit and demerits. (4)

(Or)

- C) Write the recipe for Water proof finishing to cotton material. (4)
- D) Discuss with diagram the working of pad-chain process of mercerization for cotton fabric. (8)
- 15 A) Write the objectives of Bio-finishing. (4)
- B) Write about the detail of various harmful chemicals used in Wet processing. (8)

(Or)

- C) What are the objectives of identification of dyes in textile industry? (4)
- D) What is the concept of banned amines in export market? (8)

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DIPLOMA IN HANDLOOM & TEXTILE TECHNOLOGY

SEMESTER EXAMINATION - APRIL/MAY-2017 (2014-REGULATION)

Time : 3 Hours
VI SEMESTER

Max.Marks : 80

6.3 CHEMICAL PROCESSING OF TEXTILES-IV

PART - A

2x10=20 Marks

- 1 Write any two developing methods for reactive printing.
- 2 Give the name of two discharging agents for printing.
- 3 State the advantages and disadvantages of Kalamkari Printing.
- 4 What is the function of bees wax in batik printing?
- 5 Write any two factors affecting textile finishing.
- 6 What are the objects of Calendaring?
- 7 What is DMDHEU? Give the chemical name.
- 8 Define Buckram Finishing.
- 9 How natural dyes are influencing eco friendly wet processing? Justify it.
- 10 Which enzyme is most suitable for bio polishing?

PART-B

(4+8) x 5= 60 Marks

- 11 A) Write the advantages and disadvantages of silicate padding process for reactive printing on cotton. (4)
- B) Describe in details about printing of cotton with direct dyes along with recipe and process sequence. (8)

(Or)

- C) Why emulsion based thickener is required for pigment printing? Elaborate the reason. (4)
- D) Explain the printing of cotton with pigment dyes along with recipe and process sequence. (8)
- 12 A) Write short notes on Tie & Dye process? (4)
- B) Describe in details about direct style printing of Silk with Acid Dyes? Explain the function of chemical and process methods. (8)

(Or)

- C) How batik printing is produced on cotton fabric? Explain briefly. (4)
- D) Explain in details about printing of polyester with disperse dyes? Elaborate the various developing methods (8)

P.T.O.

- 13 A) What are the objects of textile finishing? (4)
B) What is Calendering? Explain 7 Bowl Calendering process with neat sketch. (8)
(Or)
C) Give the classification of textile finishing. (4)
D) What is zero-zero finishing? Why it is called zero-zero finishing? Explain the process with neat line diagram. (8)
- 14 A) How luster and dye uptake improved after mercerization? Explain the mechanism involved. (4)
B) Write short notes on water proof and flame retardant finishing. (8)
(Or)
C) State the advantages and disadvantages of softening. (4)
D) Describe the working principle of any one fabric mercerizing machine with neat sketch. (8)
- 15 A) Elaborate the important role of enzyme in textile wet processing. (4)
B) Discuss the impact of banned dyes on environment. (8)
(Or)
C) List out any four harmful chemicals in textile processing. How it harmful to environment? (4)
D) Explain the identification procedure of water soluble dyes in powder form. (8)

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DIPLOMA IN HANDLOOM & TEXTILE TECHNOLOGY
VI SEMESTER (2014 REGULATION) EXAMINATION- APRIL / MAY 2018
6.3 CHEMICAL PROCESSING OF TEXTILES-IV

Time : 3 Hours

Max.Marks:80

PART-A [10x2=20]

Answer all questions in ONE or TWO sentences

- 1 Write any two properties of Reactive dyes.
- 2 What are the advantages of pigment printing?
- 3 Give two examples for traditional printing.
- 4 Give two examples for thickeners.
- 5 Define-Textile finishing.
- 6 List out any two types of calendaring used in textile industry.
- 7 Write the chemicals used for mercerisation.
- 8 Name the finishes required for Apparels.
- 9 Write any two eco-friendly chemicals used in wet processing.
- 10 Write any two advantages of bio-finish.

PART-B [5x12=60]

Answer the following questions in detail either a)&b) combination or c)&d) combination

- 11 a. Write the differences between dyeing and printing. [4]
- b. How do you perform printing of cotton with Reactive dyes. [8]

(OR)

- c. Brief on various after treatments used for printed goods. [4]
- d. How do you perform printing of cotton with Pigment colours. [8]

- 12 a. Brief on Batik printing. [4]
- b. How do you perform printing of polyester with disperse dyes. [8]

(OR)

- c. Brief on Tie & dye styles of printing. [4]
- d. How do you perform printing of silk with acid dyes. [8]

- 13 a. Write the objectives of finishing. [4]
b. Explain in detail the classification of finishing with suitable examples. [8]

(OR)

- c. Write briefly about mechanical finishes. [4]
d. Explain in detail the temporary and permanent finishes with example. [8]
- 14 a. Brief on machineries used for mercerisation [4]
b. Explain on process parameters and effect on structural characteristics in mercerisation. [8]

(OR)

- c. Brief on stiff finish. [4]
d. Explain any two functional finishes used for apparels. [8]
- 15 a. Write the importance of eco-friendly processing of textiles. [4]
b. How do you identify the Reactive dyes. Explain in detail. [8]

(OR)

- c. Brief on Bio-finishing [4]
d. How do you identify the disperse dyes, explain in detail. [8]

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DIPLOMA IN HANDLOOM & TEXTILE TECHNOLOGY
VI SEMESTER (2011 REGULATION) EXAMINATION- APRIL / MAY 2018
6.3 CHEMICAL PROCESSING OF TEXTILES-IV

Time : 3 Hours

Max.Marks:80

PART-A [10 x 2 = 20]

Answer all questions in ONE or TWO sentences

- 1 What is the role of thickener used in printing.
- 2 What are all the after treatments used for Reactive dyes printing on cotton.
- 3 Write any two properties of disperse dyes.
- 4 Write any two advantages of Tie & Dye style of printing.
- 5 Give any two examples for permanent finish.
- 6 What is the object of calendaring.
- 7 Define mercerisation?
- 8 Write the objectives of water repellent finish.
- 9 Explain Eco-friendly Wet Processing of Textiles.
- 10 Give any two examples of harmful chemicals used in textile wet processing.

PART-B (4+8) x 5 = 60

Answer the following questions in detail either a) & b) combination or c) & d) combination

- 11 a. Write a brief note on selection of thickeners in printing with reactive dyes. [4]
- b. Describe the process of printing cotton with Direct dyes with process conditions and role of chemicals used. [8]

(OR)

- c. Describe advantages of Pigment printing. [4]
- d. Explain the process for printing of cotton with Reactive dyes. [8]

- 12 a. Brief on Batik printing. [4]
- b. How do you perform printing of silk with metal complex dyes? [8]

(OR)

- c. Brief on application of Kalamkari printing. [4]
- d. Explain in detail the printing of polyester fabric with disperse dyes. [8]

- 13 a. Brief on objects of textile finishing [4]
b. Explain with suitable examples for mechanical finishes [8]

(OR)

- c. Brief on compressive shrinkage process involved in finishing [4]
d. Explain with suitable examples for chemical finishes [8]
- 14 a. What do you mean by water proof finish, explain briefly. [4]
b. How do you produce antcrease finish on cotton fabric? [8]

(OR)

- c. Differ water proof and water repellent finish [4]
d. Explain on the fabric mercerisation process with various parameters involved [8]
- 15 a. Write the application of Bio-finishing process [4]
b. Prepare a list of harmful chemicals and auxiliaries used in wet processing of textiles. Suggest their suitable alternatives. [8]

(OR)

- c. Brief on concept of Eco-friendly wet processing. [4]
d. How do you identify the vat dyes? [8]