

INDIAN INSTITUTE OF HANDLOOM TECHNOLOGY

BARGARH/GUWAHATI/FULLA/ JODHPUR/SALEM/VARANASI/CHAMPA/KANNUR/KHTIGADAG/SPEM IIHT/VENKATAGIRI

DIPLOMA IN HANDLOOM AND TEXTILE TECHNOLOGY

SEMESTER EXAMINATION-NOV-DEC-2017

(Regulation-2014)

Year/Semester: IV Semester

Time: 3 Hours

Subject Code & Name: 4.3 Chemical Processing of Textiles - II

Max. Marks: 80

PART-A

(2x10=20 Marks)

Answer all the questions within two to three sentences.

1. Chemical composition of raw wool.
2. What is the object of degumming of silk .
3. Why bleaching is required for wool.
4. Briefly note the methods of scouring synthetic fibres .
5. Differentiate between Acid dyes and premetalised Acid dyes ?
6. The role of electrolyte in wool dyeing.
7. The use of padding mangles in dyeing.
8. The objects of stentering.
9. Define Natural dyes.
10. Importance of light fastness in Garments.

PART-B

(4+8) x 5 = 60 Marks)

Answer all the questions in details

11. A. Draw the microscopical views of wool and silk fibre.
B. Explain various methods of Degumming of Silk.
(Or)
C. What is Emulsion Scouring ?
D. What is Milling ? Describe the Rotary milling machine ?
12. A. The objects of setting process for woollens.
B. Describe the bleaching of wool using Hydrogen Peroxide.

(Or)

- C. Discuss about the essentiality of bleaching of silk and wool materials.
- D. Explain the methods of scouring Polyester and Acrylic materials.

13. A. Explain any one method of dyeing silk using Reactive Dyes.
B. Describe the role of temperature, electrolyte and levelling agents in silk dyeing.

(Or)

- C. Explain the dyeing of wool using Acid dyes.
- D. Classify the metal complex dyes. What are the advantages of pre-metallised Dyes over Acid Dyes?

14. A. List out the common machines used for wet processing of Textiles ?

- B. Explain with a neat diagram, the jigger dyeing machine.

(Or)

- C. Why Winch machines are mostly used for dyeing finer & delicate fabrics ?
- D. Explain the working of Cabinet Hank dyeing machine.

15. A. Briefly note the common defects in wet processing of cotton.

- B. Elaborate the advantages and disadvantages of Natural Dyes.

(Or)

- C. What is Grey scale standards?
- D. Explain how the washing Fastness of dyed fabrics are determined ?

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DIPLOMA IN HANDLOOM AND TEXTILE TECHNOLOGY

SEMESTER EXAMINATION-NOV-DEC-2017

(Regulation-2011)

Year/Semester :IV Semester

Time : 3 Hours

Subject Code & Name :4.3 Chemical Processing of Textiles - II

Max. Marks : 80

PART-A

(2x10=20Marks)

Answer all the questions within two to three sentences.

1. Chemical constitution of silk materials.
2. What is crabbing?
3. Write briefly about Dolly machine.
4. Name various methods of bleaching silk materials.
5. Compare Acrylic fibre and wool fibre.
6. pH control in silk dyeing.
7. Short notes on Hydro extractor.
8. Objects of stentering.
9. Fastness properties and its standards.
10. The role of mordant's in Natural Dyeing.

PART-B

(4+8) x 5 = 60 Marks)

Answer all the questions in details

11. A. Objects of scouring wool materials.
B. Explain any two methods of silk Degumming.
(Or)
C. What is Milling?
D. Elaborate the various methods of scouring wool.
12. A. Write the process of Decatising.
B. Explain the bleaching methods of wool using Hydrogen peroxide?

(Or)

- C. Object of scouring and bleaching for manmade fibres.
- D. Explain the process of scouring and bleaching of polyester materials.

13. A. Compare Acid Dyes and prematalised Acid Dyes.

B. Explain the Dyeing of silk using Reactive dyes.

(Or)

- C. What are the common problems in silk dyeing and its causes?
- D. Explain the importance of temperature, pH, Electrolyte in wool dyeing.

14. A. Write brief notes on yarn package Dyeing Machines.

B. Explain the working of Jigger Dyeing machine with neat diagram.

(Or)

- C. Define the role of padding Mangles in dyeing.
- D. Explain the working of Winch dyeing machine with neat sketch.

15. A. Define natural Dyes with examples?

B. Describe the Dyeing methods of any two natural Dyes?

(Or)

- C. What you mean by Fastness to Washing and Rubbing?
- D. Write the common defects in dyeing of cotton material and its remedies.

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BARGARH/GUWAHATI/FULIA/JODHPUR/SALEM/VARANASI/CHAMPA KANNUR/KHITI GADAG/SPKM VENKATAGIRI

DIPLOMA IN HANDLOOM & TEXTILE TECHNOLOGY

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

Time : 3 Hours
FOURTH SEMESTER

4.3 CHEMICAL PROCESSING OF TEXTILES - II

Max.Marks : 80

Part - A

2 x 10=20 Marks

- 1 What is Suint?
- 2 Function of Hydro extractor.
- 3 Use of low M:L ratio in case of reactive dyeing.
- 4 Two chemical properties of silk.
- 5 Importance of Fastness properties.
- 6 Function of leveling agent in dyeing.
- 7 Meaning of one dip and one nip in padding mangle.
- 8 Causes for felting of wool.
- 9 Common bleaching agents used in bleaching of synthetic material.
- 10 Function of Acid in dyeing of wool with Acid dyes.

PART-B

12 x 5= 60 Marks

- 11 A) Write down the composition of raw wool. (4)
B) What is degumming? Why it is necessary? Describe the degumming of silk with soap. (8)
(Or)
C) Write down the composition of raw silk. (4)
D) With the help of a neat sketch explain the working of Dolly Machine. (8)
- 12 A) Explain "Potting and Crabbing". (4)
B) Describe the bleaching of silk with Hydrogen Peroxide. (8)
(Or)
C) Write a short note on the need of Preparation of synthetic materials. (4)
D) Explain the process of Scouring and Bleaching for polyester. (8)
- 13 A) Differentiate between 1 : 1 metal complex and 1 : 2 metal complex dyes. (4)
B) Describe the dyeing of Woollen material with Chrome dyes mention their advantages and disadvantages. (8)
(Or)
C) Write short note on classification of Acid dyes into different groups. (4)
D) Describe the dyeing of silk with Reactive Dyes mentioning the effect of Temperature & Electrolyte. (8)

P.T.O.

- 14 A) Name the various dyeing machines used for dyeing textile material (in all forms) and mention M : L used in these machines. (4)
B) Describe the working of Hot Air Stenter and mention its advantages over vertical can drying range. (8)

(Or)

- C) What is the function of drying? Name various machines used in drying the wet textile material. (4)
D) With a neat sketch describe the working of a dyeing machine in which fabric is dyed in open form. (8)

- 15 A) Mention any two advantages and disadvantages of Natural dyes. (4)
B) Name the various fastness properties which following dyed material should have good to very good and why. (8)
(i) Curtain cloth (ii) Carpet (iii) Shirt

(Or)

- C) Name the common defects found in dyeing. Mention their causes also. (4)
D) What do you understand by "MORDANTS". Explain in brief the application of natural dyes on cotton material. (8)

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BARGARH/GUWAHATI/FULIA/JODHPUR/SALEM/VARANASI/CHAMPA/KANNUR/KHTI
GADAG/SPKM VENKATAGIRI
DIPLOMA IN HANDLOOM & TEXTILE TECHNOLOGY
ANNUAL / SEMNESTER EXAMINATION APRIL/MAY-2017 (2014-REGULATION)

Time : 3 Hours
IV SEMESTER

4.3 CHEMICAL PROCESSING OF TEXTILES-II

Max. Marks:80

PART- A

10x2=20 Marks

- 1 What do you mean by suint? How do you remove it?
- 2 What do you mean by Key & Lock mechanism in enzymatic processing?
- 3 Write any two properties of Hydrogen Peroxide.
- 4 Write two suitable bleaching agents for PET.
- 5 Write the commercial name of 1:1 and 1:2 meta complex dyes.
- 6 What is the role of electrolyte in acid dyes dyeing of silk material?
- 7 Write the principle of Hydro-Extractor.
- 8 Write the application of stenter.
- 9 Write any two names of mordants used for natural dyes dyeing.
- 10 Name at least four harmful chemicals.

PART-B

12 x 5= 60 Marks

- 11 A) Brief on the various impurities present in wool fibre. (4)
- B) Explain in detail the enzymatic degumming process with typical recipe. (8)
- (Or)
- C) Brief on the drawbacks of freezing methods of scouring of wool fibre. (4)
- D) Explain in detail the chemical aspects of protein fibres with respect to dyeing. (8)
- 12 A) Write the reason for felting of wool fibre. (4)
- B) Explain in detail the preparatory process of Acrylic fibre with typical recipe for light shades. (8)
- (Or)
- C) Differentiate between PAN and Modacrylic. (4)
- D) Explain in detail the effect of temperature and pH in Hydrogen peroxide bleaching. (8)

P.T.O.

- 13 A) Write the advantages of 1:2 Metal Complex dyes. (4)
B) How do you perform dyeing of Silk with Reactive dyes? (8)

(Or)

- C) Whether Chrome dyes are eco-friendly? Give your Comments. (4)
D) Explain the process of dyeing wool with Acid dyes giving function of chemicals and auxiliaries. (8)

- 14 A) Mention briefly the machineries used in finishing range. (4)
B) Explain the working of cheese dyeing machine with a neat diagram. (8)

(Or)

- C) Write a brief note on limitations of Jigger dyeing machine. (4)
D) Explain the machineries suitable for bulk drying of woven fabric with width wise control (8)

- 15 A) Write a brief note on limitations on natural dyes. (4)
B) Explain the requirements of grade in washing, rubbing and light fastness for handloom dress material. (8)

(Or)

- C) Write in brief about pre and post mordanting techniques with respect to difficulties involved in matching. (4)
D) Explain in detail the damages, reasons and remedies in preparatory process. (8)

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

4.3 CHEMICAL PROCESSING OF TEXTILES-II

Time : 3 Hours

Max. Marks:80

PART-A

I. Answer all questions in ONE or TWO sentences.

- i. Draw microscopic view of mulberry silk.
- ii. Name the factors responsible for felting of wool.
- iii. Why carbonization of wool is done?
- iv. What is object of crabbing?
- v. Name different types of acid dyes based on method of dyeing.
- vi. What is the basic difference between 1:1 & 1:2 metal complex dyes?
- vii. Write principle of a Hydroextractor.
- viii. What are the uses of Hot air stenter?
- ix. Name the instruments used for rubbing fastness and washing fastness.
- x. Give four examples of natural dyes.



(2x10=20)

PART-B

Answer all the questions in detail.

- 1 a. What do you understand by term degumming? What are the methods of degumming of silk? (04)
- b. Explain in detail Alkali degumming of silk. (08)
- (OR)
- c. What is the source and composition of raw wool? (04)
- d. Explain with a neat sketch emulsion scouring of wool. (08)
- 2 a. How bleaching of polyester is done? (04)
- b. Explain in detail the need of preparatory treatments for Polyester, Nylon & Acrylics. (08)
- (OR)
- c. How bleaching of silk with Hydrogen Peroxide is done? (04)
- d. Why setting process for woollens is necessary? Explain potting process in detail. (08)
- 3 a. Enumerate dyeing of wool with Acid leveling dyes. (04)
- b. Explain in detail dyeing of wool with chrome dyes. (08)
- (OR)
- c. Why metal complex dyes are preferred to Acid & Chrome dyes? (04)
- d. Explain in detail dyeing of silk with reactive dyes. (08)
- 4 a. Why winch is preferred to Jigger for processing of delicate cloth? (04)
- b. What is Padding Mangle? Explain with neat sketch working of Padding Mangle. (08)
- (OR)
- c. Draw a neat sketch of Hydro extractor. (04)
- d. Draw & explain working of vertical Can Drying Range. (08)
- 5 a. How will you find out washing fastness of dyed cotton material? (04)
- b. What are advantages & disadvantages of Natural Dyes? (08)
- (OR)
- c. Draw a neat diagram & explain rubbing fastness. (04)
- d. Explain in detail criteria for selection of dyes. (08)

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DIPLOMA IN HANDLOOM AND TEXTILE TECHNOLOGY
FOURTH SEMESTER (NEW SYLLABUS) EXAMINATION – APRIL/MAY-2016

4.3 CHEMICAL PROCESSING OF TEXTILES-II

Time: 3 Hours

Max. Marks: 80

PART-A

I. Answer all questions in One or Two sentences.

(10x2=20)

- i) Write the chemical composition of wool.
- ii) How do you remove suint from raw wool?
- iii) Write the objectives of Decatising.
- iv) Write the drawbacks of Grey stage Heat Setting of PET fabric.
- v) Write the role of electrolyte in Acid dyes dyeing of wool fabric.
- vi) Distinguish between 1:1 & 1:2 metal complex dyes.
- vii) Write the principle of Cabinet dyeing machine.
- viii) Write the type of stenter suitable for 100% synthetic fibre's Heat Setting.
- ix) Give any two examples of mordants used for natural dyes dyeing.
- x) Write any two reasons for causes of CSV in Jigger dyeing.

PART-B

Answer the following questions in details

- a) Draw the morphological structure of Wool & mention various important parts. 4
- b) How do you perform the degumming of silk by enzymatic method and write its advantages. 8
- OR
- c) Write any four chemical properties of wool fibre. 4
- d) Explain in detail the various preparatory process involved for wool fibre. 8
- III. a) Write the mechanism of felting during setting of wool. 4
- b) How do you perform the bleaching of woolen material? 8
- OR
- c) Brief on the suitable bleaching agents for synthetic fibres bleaching process. 4
- d) Write the precautions to be maintained for Acrylic pre-treatment and mention its recipe. 8
- IV. a) Brief on different methods of application of Chrome dyes dyeing technique. 4
- b) Explain in details the selection of reactive dyes for wool fibre and write its dyeing procedure. 8
- OR
- c) Distinguish between Acid dyes and Metal Complex Dyes. 4
- d) Explain in details the various critical zone of Acid dyes dyeing on wool material. 8
- V. a) Give examples for batch wise, semi-continuous dyeing machineries. Jigger, mangle. 4
- b) explain in detail the working principle of Jigger dyeing machine. 8
- OR
- c) Brief on the various machineries suitable for yarn dyeing process. 4
- d) Name the dyeing machine used in Handloom Industry & write any one machine's working procedure. 8
- VI. a) Write any four drawbacks of Natural dyeing. 4
- b) Write any four printing defects causes and remedies. 8
- OR
- c) Brief on the types of fastness property needed for apparels made from Handloom fabric. 4
- d) explain in details the dyeing of cotton fabric with any one mordant natural dyes. 8

it is used to dye with natural dyes

it is used in variation of paper staining

4.3 – CHEMICAL PROCESSING OF TEXTILES – II

Time: 3 Hrs

Max. Marks: 80

PART-A

NOTE:- ANSWER ALL QUESTIONS IN ONE OR TWO SENTENCES.

[2 x 10 = 20]

- I
- What is Scrooping of Silk?
 - Why carbonization of Wool is done?
 - What is the object of Decatising of wool?
 - Which chemicals are used for Scouring of Synthetic Fibres?
 - What is the basic difference between 1:1 & 1:2 metal complex dyes?
 - Name different types of acid dyes based on method of dyeing.
 - What are the uses of Vertical Can Drying range?
 - What is the M:L ratio in Jigger & Winch?
 - Give four examples of Natural Dyes.
 - Name the instruments used for Light fastness and washing fastness.

PART-B

Answer the following questions in details:

- II a) What do you understand by the term degumming? What are the methods of degumming of silk? 04
b) Explain in detail Enzymatic degumming of silk. 08
- OR**
- c) Why milling of Woollens are done. 04
d) Explain with a neat sketch Solvent Scouring of wool. 08
- III a) How bleaching of Nylon is done? 04
b) Explain in detail and need of preparatory treatments for Polyester, Nylon & Acrylics. 08
- OR**
- c) How bleaching of Silk with Hydrogen Peroxide is done. 04
d) Why setting process for woollens is necessary? Explain Decatising process in detail. 08
- IV a) Write about dyeing of wool with acid milling dyes. 04
b) Explain in details dyeing of wool with chrome dyes. 08
- OR**
- c) What are the difference between acid leveling and acid Super milling dyes? 08
d) Explain in detail dyeing of silk with reactive dyes 04
- V a) Why winch is preferred to Jigger for processing of delicate cloth? 04
b) What is Jigger dyeing machine? Explain with neat sketch working of Jigger dyeing machine. 08
- OR**
- c) Draw a neat sketch of Hydro extractor. 04
d) Draw & explain working of vertical Can Drying Range. 08
- VI a) How will you find out Rubbing fastness of dyed cotton material? 04
b) What are the advantages and disadvantages of Natural Dyes? 08
- OR**
- c) What are the factors affecting Fastness properties of Dyed material? 04
d) Explain in detail criteria for selection of dyes. 08

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DIPLOMA IN HANDLOOM AND TEXTILE TECHNOLOGY
FOURTH SEMESTER (2014 - REGULATION) EXAMINATION –NOV/DEC-2016

4.3-CHEMICAL PROCESSING OF TEXTILES-II

Time: 3 Hours

Max.Marks: 80

PART - A

- I. Answer the following questions in two or three sentences : (2X10=20)
- Write the chemical composition of raw Silk.
 - Write the object of crabbing of woollen fabrics.
 - What do you mean by the term Boiled- off liquor?
 - What is the need for preparatory processes of Synthetic material?
 - Why 1:1 metal complex dyes are not suitable for Silk.
 - What is the role of electrolyte in acid dyes?
 - What is the function of Hydro extractor machine?
 - Write the name of natural mordant used.
 - What is the Centre to Selvedge defect and where does it occur?
 - What is the principle of Package dyeing machine?

PART B

II. Answer all the questions in detail

- A) What are the impurities present in raw wool fibre. Explain the suitable method for removal of these impurities. (4)
- B) Draw morphological structure of Silk and mention its important parts. (8)
- (OR)
- C) What are the objectives of Milling of woollen material? Explain with diagram the working of milling machine. (4)
- D) Justify that degumming with enzymes is advantageous for Silk. (8)

- III. A) What are the impurities present in Synthetic material. Write the suitable method of Polyester bleaching. (4)
- B) Write the method of bleaching wool using Hydrogen peroxide. (8)
- (OR)
- C) What is the object of setting of woollen goods? Explain the process of Potting? (4)
- D) Discuss in detail how process of Crabbing is different from Decatising. (8)

- IV. A) Write about the classification of acid dyes according to their method of dyeing. (4)
B) Write the method of dyeing of wool with 1:1 metal complex dyes. Explain the function of chemicals used. (8)
- (OR)
- C) What is the role of leveling agent in dyeing of 1:2 metal complex dyes? (4)
Write the process details of dyeing silk using 1:2 metal complex dyes.
D) Explain how the Chrome dyes are different from metal complex dyes. (8)
- V. A) Draw a neat diagram of three bowl Padding mangle and discuss its importance in processing of textiles. (4)
B) How package dyeing machine is different from Cabinet type yarn dyeing machine - explain. (8)
- (OR)
- C) Draw a diagram of suitable dyeing machine used for processing of delicate material in textile industry and explain its working. (4)
D) Discuss about the advantages of continuous process of dyeing over semi-continuous process of dyeing of textile material. (8)
- VI. A) Write in detail the dyeing defect commonly occurred during dyeing of textile materials. (4)
B) What is mordant? Write the advantages of natural dyes. (8)
- (OR)
- C) What do you mean by term fastness of dyes? (4)
Which type of fastnesses is required for curtains.
D) Write the criteria for selection of dyes for dyeing of textiles. (8)

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

4.3-CHEMICAL PROCESSING OF TEXTILES-II

Time: 3 Hours

Max.Marks: 80

PART - A

I. Answer the following questions in two or three sentences :

(2X10=20)

- i) Write any two chemical properties of wool fibre.
- ii) Differentiate between sericin and fibroin.
- iii) Write the principle of peroxide bleaching.
- iv) How do you perform scouring of acrylic material?
- v) Write the drawbacks of chrome dyeing.
- vi) Distinguish between dyeing with acid & metal complex dyes.
- vii) Write the MLR used in various dyeing machines.
- viii) Write the functions of drying.
- ix) Natural dyes are difficult for reproducibility-Justify.
- x) Write the required fastness properties for handloom dress material.

PART B

II. Answer all the questions in detail

- A) Brief on the various chemical constituents of wool fibre. (4)
 - B) Explain the preparation of wool fibre for light shade dyeing. (8)
- (OR)
- C) Brief various chemical constituents of silk fibre. (4)
 - D) With neat line diagram, explain the working of Dolly machine for milling of wool fabrics. (8)

- III. A) Write any four properties of hydrogen peroxide. (4)
- B) How do you perform the preparatory process for synthetic material? (8)
- (OR)
- C) Describe in brief the setting of wool fibre. (4)
- D) How do you perform bleaching of silk material? Explain with suitable recipe. (8)

- IV. A) Brief about various types of Reactive dyes. (4)
- B) How do you apply Reactive dyes on silk material? Mention various process / parameters. (8)

(OR)

- C) Distinguish between Chrome dyes and premetallised Dyes. (4)
- D) Explain in detail the application of 1:2 metal complex dyes on wool material. (8)

- V. A) What are the limitations of Jigger machine? (4)
B) Explain in detail the working principle of padding mangle and write its types. (8)
(OR)
C) Explain the dyeing principle involved in cabinet dyeing machine. (4)
D) Explain the working of winch dyeing machine with a line diagram. (8)
- VI. A) Write any four advantages of Natural dyes. (4)
B) How do you assess the washing fastness property of dyed material? (8)
(OR)
C) Mention various defects encountered in jigger dyeing machine. (4)
D) Explain in detail the various selection criteria of dyes for dyeing. (8)

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DIPLOMA IN HANDLOOM AND TEXTILE TECHNOLOGY
SEMESTER EXAMINATION- April/May - 2018
(Regulation-2014)

Year / Semester: IV Semester

Time: 3 Hours

Subject Code & Name: 4.3 CHEMICAL PROCESSING OF TEXTILES-II

Max.Marks:80

PART-A

Answer all the questions within two to three sentences.

Each question carries equal marks

(2×10=20)

1. What are the two proteins present in Silk?
2. How vegetable cellulosic impurities are removed from raw wool?
3. What are the objects of Decatising?
4. Why Polyester goods need preparatory treatments?
5. What do you mean by pre-metallised dyes?
6. Which types of Dye-fiber bond between Mordant dyes and Wool?
7. Mention the Liquor ratios used in various dyeing machines (any two).
8. What are the disadvantages of Cabinet dyeing machine?
9. Classify Natural dyes in accordance with their origin.
10. What is tailing? Write its reasons and remedies.

PART-B

Answer all the questions in detail.

(4+8) x 5=60

11. A. What is Felting of wool?

B. Explain the process of emulsion scouring for wool with process conditions and precautions.

OR

C. Give composition of raw wool.

D. Describe the process of degumming silk with mild alkali. Compare its performance with Enzyme degumming.

12. A. Give sequence of operations used for preparation of Polyester goods for dyeing.

B. Why Hydrogen peroxide is known as universal bleaching agent. Write recipe, process conditions and function of chemicals used for bleaching wool with H_2O_2 .

OR

C. Mention briefly the setting processes for woolen.

D. Which of the bleaching agents is ideally used for Synthetic materials? Describe the process of bleaching Polyester. Mention clearly the recipe and process conditions.

13. A. Differentiate between and chrome and pre-metallised dyes.

B. Write the process of Dyeing Silk with premetallised dye explaining recipe, process condition and function of chemicals used.

OR

C. What is the effect of electrolytes on dyeing of Wool with acid dyes?

D. Describe the process of dyeing wool with Super milling Acid dyes with process details viz. recipe, time, temperature, pH and use of leveling agents.

14. A. What is "Expression" in padding mangles? Explain it with example.

B. Describe the working of Hydroextractor machine with a line sketch.

OR

C. What do you mean by No. of ends in jigger dyeing machine? Write briefly about heating methods used in this machine.

D. Describe the working of Cabinet type hank dyeing machine with a line sketch.

15. A. Write advantages and disadvantages of Natural Dyes.

B. What do you mean by fastness of dyed materials? Describe the process of assessing washing fastness with a brief on Ratings

OR

C. Write criteria for selection of dyes.

D. Explain different method of applying Natural dyes.

Bwa-3

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DIPLOMA IN HANDLOOM AND TEXTILE TECHNOLOGY
SEMESTER (Back Paper) EXAMINATION- April/May - 2018
(Regulation-2011)

Year / Semester: IV Semester

Time: 3 Hours

Subject Code & Name: 4.3 CHEMICAL PROCESSING OF TEXTILES-II

Max.Marks:80

PART-A

Answer all the questions within two to three sentences.
Each question carries equal marks

(2×10=20)

1. Name the impurities present in raw wool?
2. What is carbonisation?
3. What is potting?
4. Why synthetic fibers need preparatory treatments?
5. What do you mean by chrome dyes?
6. Write nature of Dye-fiber bond between Acid & Reactive dyes with Wool.
7. Name different parts of Jigger dyeing machine.
8. What are the disadvantages of Winch dyeing machine?
9. What is a Mordant?
10. Define light fastness and its ratings?

PART-B

Answer all the questions in detail.

(4+8) x 5=60

11. A. Name different varieties of Silk.

B. Explain the process of Emulsion scouring for wool with process conditions and precautions.

OR

C. What are the objectives of Milling Wool?

D. What is Felting of Wool? Write a detailed note on morphological structure of Wool with neat diagram.

12. A. Write in detail the process of scouring Polyester.

B. Describe the process of bleaching Wool with Hydrogen peroxide. Mention recipe, process conditions and function of chemicals used.

OR

C. What is crabbing?

D. What is the need of stabilizing processes for wool? Describe the Decatizing of woolens with necessary process parameters.

13. A. Differentiate between and Acid and pre-metalised dyes.

B. Write the process of Dyeing Wool with Premetalised dyes explaining recipe, process conditions and fastness properties.

OR

C. What is the function of Acids in dyeing of Wool with acid dyes?

D. Describe the process of dyeing Silk with Milling Acid dyes with process details viz. recipe, time, temperature, pH and use of leveling agents.

14. A. Define "Percentage Expression".

B. Describe the working of Winch dyeing machine with a line diagram.

OR

C. What are the disadvantages of jigger dyeing machine?

D. Describe the working of Cabinet dyeing machine with a line diagram.

15. A. Write a note on classification of Natural Dyes.

B. Write various defects and damages in dyeing with their respective reasons and remedies.

OR

C. Briefly mention about various fastness properties of dyed cotton material.

D. Explain a general method of applying Natural dyes with necessary process conditions.

INDIAN INSTITUTE OF HANDLOOM TECHNOLOGY

BARGARH/GUWAHATI/FULIA/JODHPUR/SALEM/VARANASI/CHAMPA/KANNUR/KHTI-GADAG/SPKM IIHT VENKATAGIRI

DIPLOMA IN HANDLOOM AND TEXTILE TECHNOLOGY (Regulation – 2014)
SEMESTER (BACK PAPER) EXAMINATION-NOV./DEC.- 2018

Year / Semester: **IV Semester**

Time: 3 Hours

Subject Code & Name: 4.3 CHEMICAL PROCESSING OF TEXTILES-II

Max.Marks:80

Part-A

2 X 10 =20 Marks

Answer all questions within TWO or THREE sentences.

1. Write the chemical composition of raw silk.
2. What is Carbonizing in wool?
3. What are the objects of Decatising?
4. Write the name of setting processes for woollens.
5. Define metal complex dyes.
6. Write the role of electrolyte in Acid dyeing of wool fiber.
7. Write uses of stenter.
8. What are the disadvantages of cabinet (Hank) dyeing machine?
9. Write advantages of Natural dyes.
10. What do you mean by mordanting?

PART-B

[(4+8 = 12) x5] =60 Marks

Write all the questions in detail

11. A) What are the impurities present in raw wool fiber. Explain the suitable method for removing of these impurities. (4)
B) Explain Degumming. Describe the methods of degumming silk. (8)
(OR)
C) Write the Physical & Chemical properties of wool. (4)
D) Explain in detail the milling of woollens with neat line diagram of machine used for milling. (8)
12. A) What is Potting, Crabbing, Felting and Decatising? (4)
B) Why Hydrogen peroxide is known as universal bleaching agent. Write recipe, Process conditions, functions of chemicals used for bleaching of silk with H₂O₂. (8)
(OR)
C) Why preparatory treatments are necessary for manmade fibers? (4)

D) What is Bleaching? Write recipe, process condition, function of chemicals used for bleaching of polyester fiber with Sodium Chlorite.

13. A) Write differences between chrome and pre-metalized dyes.

B) Describe the process of dyeing wool with super milling acid dyes with process details. Viz , recipe, time, temperature , PH and use of leveling agent.

(OR)

C) Write about the classification of acid dyes according to their method of dyeing.

D) What is the role of levelling agent in dyeing of 1:2 metal complex dyes? Write the process detail of dyeing of silk with 1:2 metal complex dyes.

14. A) Explain vertical can drying range.

B) Draw a diagram of winch dyeing machine and explain its working.

(OR)

C) What is Hydro extractor? Write the difference between Jigger v/s Winch fabric dyeing machine.

D) Describe the working of Cabinet type Hank Dyeing Machine with neat diagram.

15. A) What is natural dye? Write it's advantages & disadvantages?

B) Write common defects & damages in wet processing of cotton material.

(OR)

C) Write the criteria for selecting of dyes.

D) What is meant by fastness properties? Write about the different fastness properties in brief.

Bar. (56)

INDIAN INSTITUTE OF HANDLOOM TECHNOLOGY

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VENKATAGIRI

DIPLOMA IN HANDLOOM AND TEXTILE TECHNOLOGY (Regulation – 2014)
SEMESTER (REGULAR/BACK PAPER) EXAMINATION – April / May -2019

Year / Semester : IV Semester

Time: 3 Hours

Subject Code & Name: 4.3 Chemical Processing of Textiles – II

Max. Marks: 80

PART –A

Answer all the questions in brief (within two or three sentences):

2X10=20

1. Write the chemical composition of raw silk.
2. How is wool grease removed before spinning?
3. Write the objects of decatizing of wool.
4. Sodium Hypochlorite bleaching is not recommended for wool. Why?
5. Differentiate between 1:1 and 1:2 pre metalized dyes.
6. Effect of Electrolytes in dyeing of wool.
7. Mention usefulness of Hydro Extractors.
8. Give the advantages and use of winch machine.
9. Major disadvantages and use of which machine.
10. Give common defects in Azoic Dyeing on cotton materials.

(4+8=12)x5 = 60

PART-B

11. A) What do you understand with degumming?
B) Give the process of suint scouring in detail. What is the use of byproduct of the process?
(OR)
C) Write Physical and Chemical properties of wool fibre. (4)
D) Describe the setting process of potting and crabbing in wool. (8)
12. A) How is silk bleached using Hydrogen Peroxide? (4)
B) Describe the process of Scouring and bleaching of polyester materials? (8)
(OR)
C) What is the need of preparatory process for polyester and nylon? (4)
D) Give the detailed process of bleaching woolen yarn using hydrogen peroxide. (8)
13. A) What are premetallised dyes and how they differ from acid dyes? (4)

B) Describe the dyeing of silk using acid dyes on silk yarn. (8)

(OR)

C) What are chrome dyes and how they differ from the acid dyes? (4)

D) What are the effect of time, temperature , PH, and electrolytes on reactive dyes? (8)

14. A) What are hot air stenter and their use? (4)

B) Describe the working of two and three bowl padding mangles with suitable sketches.(8)

(OR)

C) What is hydro extractor write in brief with diagram. (4)

D) Explain the features of cabinet type hank dyeing machine with suitable sketches. (8)

15. A) Enlist various kind of natural dyes and their advantage and disadvantage in textiles. (4)

B) What are the criteria of selection of dyes in wet processing of textile materials? (8)

(OR)

C) What are the common defects and damages in wet processing of cotton materials. (4)

D) Give the process and assessment of washing fastness of dyed fabric samples. (8)

Rev (3)

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VENKATAGIRI
DIPLOMA IN HANDLOOM & TEXTILE TECHNOLOGY (REGULATION - 2014)
ANNUAL / SEMESTER EXAMINATION – NOV/DEC -2019

Year/Semester: IV Semester (Back Paper)
Subject Code & Name: 4.3 Chemical Processing of Textiles – II

Time: 3Hours
Max. Marks: 80

PART-A

Answer all the questions in brief (in two or three sentences):

2×10=20

1. Write four names of amino acids present in wool.
2. Why scouring of wool is required?
3. Write the objects of setting of wool.
4. What are the bleaching agents used for bleaching of Polyester?
5. What is a premetalized dye? Give examples.
6. Why acid dye is called so?
7. What is the principle of Hydro-extractor?
8. What is the use of modern day hot air stenter machine?
9. Write name of two natural mordants used for Natural dyeing method?
10. Explain the term "Fastness"?

PART-B

Answer all the questions in details:

11. A) Write about chemical properties of Silk. (4)
B) With a neat line diagram write about Emulsion Scouring method of wool? (8)
(OR)
C) Why Milling of Woollens is done? (4)
D) Explain about the Enzymatic degumming method of silk along with its merits and demerits. (8)
12. A) Write short notes on "Decatising" method for wool? (4)
B) Describe about the bleaching of Silk with H₂O₂ mentioning the recipe and function of each chemical involved. (8)
(OR)
C) What are the requirements for preparatory treatments of Nylon fibres? (4)
D) Enumerate about the scouring and bleaching process for Acrylics mentioning the recipe and function of each chemical involved. (8)
13. A) Why 1:1 Metal complex dyes are not preferred for dyeing of Silk? (4)
B) Describe about the dyeing of Wool with 1:2 Premetalized dyes along with the recipe and function of each chemical involved for dyeing. (8)
(OR)
C) What are the environmental issues with respect to application of Chrome dyes on Wool fibres? (4)
D) Write about the dyeing method of Wool with reactive dyes along with the recipe and function of each chemical involved for dyeing. (8)

14. A) What are the major advantages of Jigger dyeing machines over Winch dyeing machines? (4)
- B) Explain Hot air Stenter drying machine with a neat line diagram. (8)
- (OR)
- C) Write about Padding mangles in brief with neat line diagrams. (4)
- D) Explain Winch dyeing machine with a neat line diagram. (8)
15. A) Discuss about criteria for selection of dyes? (4)
- B) Write about the dyeing method of cotton with Natural dyes along with advantages and disadvantages of natural dyes? (8)
- (OR)
- C) Write the name of Natural dyes according to their source of origins with atleast two examples of each. (4)
- D) How rubbing fastness of dyed material is evaluated? (8)
