

INDIAN INSTITUTE OF HANDLOOM TECHNOLOGY  
DIPLOMA IN HANDLOOM AND TEXTILE TECHNOLOGY

BARGAR/GUWAHATI/FULLA/JODHPUR/SALEM/VARANASI/CHAMPA/KANNUR/KHITIGADAG/SPKM IIT/ VENKATAGIRI

ANNUAL/SEMESTER EXAMINATION-NOV/DEC-2017

(Regulation-2011)

Year / Semester : FIRST YEAR Time: 3 Hour  
Subject Code & Name : 2 4 FIBER AND YARN TECHNOLOGY Max.Marks: 80

**PART-A**

2 × 10 = 20 marks

**Answer all the questions within two to three sentences**

- 1 Give any two examples of animal fiber.
- 2 List the objectives of blowroom.
- 3 Write any two important physical properties of polyester fiber.
- 4 Write any two important chemical properties of acrylic fiber.
- 5 What is sorting and grading of wool fiber.
- 6 Define the term "reeling"
- 7 State the principle of open end yarn formation.
- 8 List the advantages of friction spinning system
- 9 What is textured yarn?
- 10 State any two types of fabric cutting machine.

**PART-B**

(4+8) × 5 = 60 marks

**Answer all the questions in detail**

- 11 A Discuss any four physical properties of wool fiber (4)  
B Write the process sequence for production of carded ring spun cotton yarn. (8)  
(Or)  
C Write the functions of unilap machine. (4)  
D Describe the physical and chemical properties of cotton fiber. (8)
- 12 A Draw a longitudinal and cross sectional view of PET fiber. (4)  
B Describe the manufacturing process of viscose rayon (8)  
(Or)  
C Draw a longitudinal and cross sectional view of acrylic fiber. (4)  
D Describe the manufacturing process of nylon fiber. (8)
- 13 A Describe the three types silk reeling process. (4)

- B List the sequence of process involved in production of filament silk yarn (8)  
(Or)
- C Write short notes on baling press. (4)
- D Explain the passage of material through ring doubler. (8)
- 14 A State the raw material requirement for open end yarn production system. (4)
- B Explain the principle and working of rotor spinning system. (8)  
(Or)
- C Compare the yarn properties of ring spun yarn and rotor yarn. (4)
- D With suitable diagram explain the yarn production process of friction spinning system. (8)
- 15 A Write short notes on crepe yarn. (4)
- B Explain the process of sewing thread manufacturing. (8)  
(Or)
- C Write short notes on carpet manufacturing. (4)
- D Explain the process sequence of garment making process. (8)

INDIAN INSTITUTE OF HANDLOOM TECHNOLOGY  
DIPLOMA IN HANDLOOM AND TEXTILE TECHNOLOGY  
BARGAR/GUWAHATI/FULLA/JODHPUR/SALEM/VARANASI/CHAMPA/KANNUR/KHITIGADAG/SPKM IIT/ VENKATAGIRI  
**ANNUAL/SEMESTER EXAMINATION-NOV/DEC-2017**  
(Regulation-2014)

Year / Semester : FIRST YEAR Time: 3 Hour  
Subject Code & Name : 1.5 FIBER AND YARN TECHNOLOGY Max.Marks: 80

**PART-A**

(2×10=20 marks)

**Answer all the questions within two to three sentences**

- 1 Give any two examples of vegetable fiber.
- 2 List the objective of carding machine.
- 3 Write any two important physical properties of viscose fiber.
- 4 Write any two important chemical properties of nylon fiber.
- 5 What is carbonization of wool?
- 6 Define the term "Stiffling" in silk yarn process.
- 7 State the principle of rotor yarn formation.
- 8 List the advantages of airjet spinning system.
- 9 What are the two types of knitting process?
- 10 What is crepe yarn?

**PART-B**

(4×8) ×5=60 marks)

**Answer all the questions in detail**

- 11 A Write any four essential properties required for textile fiber. (4)  
B Give the classification of textile fibers (8)  
(OR)  
C Write the objective of comber and flyframe. (4)  
D With suitable diagram, explain the principle and working of ringframe. (8)
- 12 A List out any four important physical properties of acetate rayon. (4)  
B Describe the manufacturing process of viscose rayon. (8)  
(OR)  
C List out any four important physical properties of acrylic fiber (4)  
D Describe the manufacturing process of polyester fiber. (8)

- 13 A List the sequence of process involved in production of woolen yarn. (4)  
B Describe the various production stages involved in worsted yarn manufacturing. (8)

(OR)

- C Draw the life cycle of a silkworm. (4)  
D Describe the process of reeling, bundling and baling. (8)

- 14 A State the raw material requirement for open end yarn production. (4)  
B With suitable diagram explain the principle of yarn formation in rotor spinning system (8)

(OR)

- C Compare the yarn properties of ring spun yarn and airjet spun yarn. (4)  
D With suitable diagram explain the principle of yarn formation in airjet spinning system (8)

- 15 A Write short notes on spot yarn. (4)  
B Explain the various types of nonwoven bonding process. (8)

(OR)

- C Write short notes on tyre-cord manufacturing (4)  
D Explain the process sequence of garment making process (8)

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

1.5 FIBER & YARN TECHNOLOGY

Time: 3 hours

PART-A



Max. Marks 80

- I Answer all questions in 2 or 3 sentences. 2x10=20
- Write two physical properties of cotton.
  - Draw the cross section and longitudinal views of cotton and wool.
  - Write any two uses of Viscose yarn.
  - Write two physical properties of Acetate Rayon.
  - What is meant by "Degumming of Silk".
  - What are the objectives of doubling?
  - Write any two uses open end yarn.
  - Compare the tenacity of Ring Spun yarn and rotor spun yarn.
  - Name two industrial yarns.
  - Name two types of knitted fabric categories.

PART – B

- Answer all questions in detail.
- II a. What are the objectives of carding and comber in cotton spinning processes. (4)  
b. Explain the operating principle of Carding Engine. (8)  
OR  
c. What are the basic properties required for Textile Fiber. (4)  
d. Define Textile fiber? Draw the flow diagram showing the classification of Textile Fiber (8)
- III a. Write the main properties and uses of Viscose Rayon fiber. (4)  
b. Explain the production process of Polyester Fibers with help of flow chart diagram. (8)  
OR  
c. Write the properties and uses of Polyacrylic fiber. (4)  
d. Explain the production process of Nylon – 6 with help of flow chart diagram. (8)
- IV a. Write the life cycle of Silk worm with neat diagram. (4)  
b. Explain the manufacturing process sequence of spun Silk yarn. (8)  
OR  
c. Enlist objects and uses of "Doubling" (4)  
d. Explain passage of material in ring doubles with neat diagram. (8)
- V a. Write basic principle of open end spinning. (4)  
b. Explain the production of cotton yarn in open end spinning. (8)  
OR  
c. Write the principle of Friction Spinning. (4)  
b. Enlist the comparison between Ring Spun and open end spun yarn. (8)
- VI a. Enlist the steps involved in manufacturing of Garments. (4)  
b. Explain the different types of cutting machines. (8)  
OR  
c. Enlist the different methods of bonding of fibers in web form. (4)  
d. Explain the production of Polyester/cotton blended yarn with flow chart diagram. (8)

**PART A**

I. Answer all questions within TWO to THREE Sentences.

(2 x 10 = 20)

- a) Define the term "Textile fiber".
- b) Draw the longitudinal and cross sectional view of cotton fiber.
- c) Write any two physical properties of acetate rayon.
- d) Write any two chemical properties of polyester.
- e) Define the term sorting and grading of wool.
- f) State the principle of rotor spinning.
- g) List the advantages of friction spinning.
- h) Mention the different types of weft knitting.
- i) Categorize the nonwoven manufacturing method.

Answer the following questions in details.

II.

- a) Discuss any four important properties of silk filament yarn. (4)
- b) Elaborate the importance of physical properties required for textile fiber. (8)

**OR**

- c) Write the process flow chart of ring spun yarn production (4)
- d) With neat sketch explain the principal and working of carding machine. (8)

III.

- a) Write any two important physical properties of acetate rayon. (4)
- b) Elaborate the viscose rayon manufacturing process flow chart. (8)

**OR**

- c) Describe any two important physical properties of nylon 6 fiber. (4)
- d) Describe the both physical and chemical properties of acrylic fiber. (8)

- IV. a) List the various processes involved in woolen yarn manufacturing system. (4)  
b) Elaborate the manufacturing process of silk filament yarn. (8)

**OR**

- c) Explain the process of bundling of reeled cotton. (4)  
d) Explain the material passage and working of reeling machine. (8)
- V. a) Discuss the rotor spun yarn characteristics. (4)  
b) With neat diagram, explain the principle of yarn formation mechanism of rotor spinning. (8)

**OR**

- c) Discuss the raw material requirement of air jet spinning system. (4)  
d) With neat sketch explain the principle and working of friction spinning system. (8)
- VI. a) Write a short note on Tyre cord yarn manufacturing. (4)  
b) Explain anyone method of nonwoven manufacturing process. (8)

**OR**

- c) Name the different types of cutting machines. (4)  
d) Draw the process flow chart of garment making process. (8)

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DIPLOMA IN HANDLOOM & TEXTILE TECHNOLOGY  
FIRST YEAR (2014 REGULATION) EXAMINATION-NOV/DEC.-2016

1.5 FIBRE AND YARN TECHNOLOGY

TIME: 3 Hours

Max. Marks: 80

"PART-A"

- I. Answer all the questions within **two to three** sentences. 2x10=20
- Define 'Textile Fibre'.
  - Write two properties of Silk.
  - List the two properties of viscose rayon.
  - Write two properties of Nylon-6.
  - What are objectives of manufacturing blended yarn?
  - List out the types of silk yarn.
  - Define 'open-end' spinning.
  - What are the advantages of Air Jet Spinning?
  - What are the different types of Industrial Textile units?
  - List the two methods used in knitting technique.

PART-B

- Answer All questions in details. (4+8)x5=60
- II. a) Discuss any Four important properties of wool fiber. 4  
b) Elucidate the basic properties required for textile fiber. 8  
OR  
c) Explain in brief about the objectives of carding? 8  
d) Describe the Ring spinning technology used for manufacturing cotton yarn with suitable sketch. 8
- III)a) Discuss in brief any Four important properties of Viscose Rayon. 4  
b) Explain the manufacturing of Polyester yarn with suitable flow chart. 8  
OR  
c) Discuss any Four important properties of poly acrylic. 4  
d) Explain the manufacturing of Nylon-6 with suitable flow chart. 8
- IV)a) Discuss in brief about the manufacturing process worsted yarn. 4  
b) Explain the process of manufacturing Spun Silk yarn. 8  
OR  
c) Discuss the objectives of 'Bundling of yarns'. 4  
d) Explain the manufacturing method adopted in 'Doubled Yarn' with a suitable diagram. 8
- V)a) Discuss in brief about the 'Basic Principle of Yarn Formation' in Open-End spinning process. 4  
b) Explain in details about the process of manufacturing of yarn in Air jet spinning with suitable diagram. 8  
OR  
c) Discuss in brief the process of manufacturing yarn in 'Friction Spinning technology'. 4  
d) Compare the manufacturing process of the Ring spun yarn with Open-End Spun Yarn. 8
- VI)a) Discuss in brief about the production process of 'Crepe yarn'. 4  
b) Explain in detail about Garment Making process. 8  
OR  
c) Discuss in brief about different method of manufacturing 'Non-woven fabrics'. 4  
d) Explain in details any Four 'Methods adopted' in the manufacture of Non-woven fabrics. 8

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# INDIAN INSTITUTE OF HANDLOOM TECHNOLOGY

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

## DIPLOMA IN HANDLOOM & TEXTILE TECHNOLOGY

ANNUAL / SEMISTER EXAMINATION APRIL/MAY-2017 (2014-REGULATION)

Max.Marks:80

Time:3Hours  
FIRST YEAR

### 1.5 FIBRE AND YARN TECHNOLOGY

#### PART-A

2x10=20

Answer all the questions within **two to three** sentences.

- 1) What are basic properties of Textile fibre?
- 2) List two physical properties of cotton.
- 3) What are end uses of Viscose Rayon?
- 4) Define manmade fibre.
- 5) Write two physical properties of wool.
- 6) Name four stages in life cycle of silk worm.
- 7) What is open end spinning?
- 8) What are advantages of Air-jet spinning?
- 9) Name any two industrial yarns.
- 10) Write two different methods adopted in knitting.

#### PART-B

(4+8) x 5=60

**Answer all questions in details.**

- |     |  |   |
|-----|--|---|
| 11) | A) Write functions of carding?   | 4 |
|     | B) Explain operating principle of carding machine.                                 | 8 |
|     | OR   |   |
|     | C) What are basic objectives of combing?   | 4 |
|     | D) Explain principle of ring frame operation with diagram.                         | 8 |
| 12) | A) Discuss in brief any four important properties of polyester yarn.               | 4 |
|     | B) Explain the manufacturing of Acetate Rayon with suitable flow chart diagram.    | 8 |
|     | OR   |   |
|     | C) Discuss four important properties of Nylon-6.                                   | 4 |
|     | D) Explain the manufacturing of polyacrylic with suitable flow chart diagram.      | 8 |
| 13) | A) What is carbonisation of wool fibre?  | 4 |
|     | B) Explain the manufacturing process of Filament silk yarn.                        | 8 |
|     | OR   |   |
|     | C) Write objects of doubling.  | 4 |
|     | D) Explain passage of material in a ring doublers.                                 | 8 |
| 14) | A) Write end uses of Open end and Ring spun yarn.                                  | 4 |
|     | B) Explain Friction spinning process with neat diagram.                            | 8 |
|     | OR   |   |
|     | C) Discuss in brief the process of manufacturing yarn in Air jet spinning machine. | 4 |
|     | D) Compare the properties of Ring spun yarn with open end spun yarn.               | 8 |
| 15) | A) Write short note on knitting.   | 4 |
|     | B) Explain tyre cord manufacturing process.  | 8 |
|     | OR   |   |
|     | C) Explain the purpose of blending.  | 4 |
|     | D) Briefly explain the steps involved in manufacturing of garment.                 | 8 |
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# INDIAN INSTITUTE OF HANDLOOM TECHNOLOGY

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

## DIPLOMA IN HANDLOOM & TEXTILE TECHNOLOGY

ANNUAL / SEMISTER EXAMINATION APRIL/MAY-2017 (2014-REGULATION)

Time:3Hours  
FIRST YEAR

### 1.5 FIBRE AND YARN TECHNOLOGY

Max.Marks:80

#### PART-A

2x10=20

Answer all the questions within **two to three** sentences.

- 1) What are basic properties of Textile fibre?
- 2) List two physical properties of cotton.
- 3) What are end uses of Viscose Rayon?
- 4) Define manmade fibre.
- 5) Write two physical properties of wool.
- 6) Name four stages in life cycle of silk worm.
- 7) What is open end spinning?
- 8) What are advantages of Air-jet spinning?
- 9) Name any two industrial yarns.
- 10) Write two different methods adopted in knitting.

#### PART-B

(4+8) x 5=60

**Answer all questions in details.**

- |     |  |   |
|-----|--|---|
| 11) | A) Write functions of carding?   | 4 |
|     | B) Explain operating principle of carding machine.                                 | 8 |
|     | OR   |   |
|     | C) What are basic objectives of combing?   | 4 |
|     | D) Explain principle of ring frame operation with diagram.                         | 8 |
| 12) | A) Discuss in brief any four important properties of polyester yarn.               | 4 |
|     | B) Explain the manufacturing of Acetate Rayon with suitable flow chart diagram.    | 8 |
|     | OR   |   |
|     | C) Discuss four important properties of Nylon-6.                                   | 4 |
|     | D) Explain the manufacturing of polyacrylic with suitable flow chart diagram.      | 8 |
| 13) | A) What is carbonisation of wool fibre?  | 4 |
|     | B) Explain the manufacturing process of Filament silk yarn.                        | 8 |
|     | OR   |   |
|     | C) Write objects of doubling.  | 4 |
|     | D) Explain passage of material in a ring doublers.                                 | 8 |
| 14) | A) Write end uses of Open end and Ring spun yarn.                                  | 4 |
|     | B) Explain Friction spinning process with neat diagram.                            | 8 |
|     | OR   |   |
|     | C) Discuss in brief the process of manufacturing yarn in Air jet spinning machine. | 4 |
|     | D) Compare the properties of Ring spun yarn with open end spun yarn.               | 8 |
| 15) | A) Write short note on knitting.   | 4 |
|     | B) Explain tyre cord manufacturing process.  | 8 |
|     | OR   |   |
|     | C) Explain the purpose of blending.  | 4 |
|     | D) Briefly explain the steps involved in manufacturing of garment.                 | 8 |
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2.4 - FIBRE & YARN TECHNOLOGY

TIME: 3 HOURS

MAX. MARKS : 80

PART-A

- I. Answer all the questions within two or three sentences: (2X10=20)
- Give the name of two vegetable fibres and their origin.
  - What are the basic objectives of combing?
  - Pick out the odd one out - cotton, silk, wool, polyester and state its specialty.
  - Differentiate wet spinning with melt spinning of fibres and give two examples of melt spun fibres.
  - What are the advantages of double yarn over single yarn?
  - What are the objectives of blending of fibres to make blended yarns?
  - How will you identify Ring yarn and Rotor yarn visually?
  - Write any two uses of open end yarn.
  - What is difference between woven and knitted fabrics?
  - Give two examples of industrial yarns and their uses.

PART B

- II. Answer all questions in detail:
- Explain briefly any four essential properties required for a textile fibre to make yarn. (04)
  - Explain any four physical properties and four chemical properties of Cotton fibre and uses of Cotton fibre. (08)
- OR
- Make a Flow Chart of Ring spinning technology of combed Cotton yarn. (04)
  - What are objectives of Blow room? Explain briefly working of Hopper Bale Breaker with neat sketch. (3+5)
- III. a. Draw the Flow Chart for manufacturing of Polyester fibre. (04)
- Briefly explain the physical, chemical properties and end uses of Nylon-6 fibre. (08)
- OR
- Draw the Flow Chart for manufacturing of Nylon-6 fibre. (04)
  - Briefly explain the physical, chemical properties and end uses of Nylon 66 fibre. (08)

- IV. a. Differentiate woolen yarn with worsted yarn. (Any four points) (04)  
b. Explain Polyester Cotton blended yarn, popular blend ratio and their end uses. (08)

OR

- c. What are the advantages of polyester and wool blending? (04)  
d. Explain briefly reeling, bundling and baling of cotton yarn. (08)

- V. a. What is basic principle of yarn formation in open end spinning? (04)  
b. Explain friction spinning process with neat sketch. (08)

OR

- c. Comparison of Ring spun yarn with open end spun yarn. (Any four points) (04)  
d. Explain Air Jet spinning process with neat sketch. (08)

- VI. a. Explain briefly type of knitted fabrics. (04)  
b. Write short note on any two type of yarns: (04-04)  
i. Crepe yarn ii. Spot yarn iii. Crimped yarn



OR

- c. Explain briefly type of carpets. (04)  
d. Explain the process of non-woven fabric production steps with neat sketch and end uses of non-woven fabrics. (08)

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# INDIAN INSTITUTE OF HANDLOOM TECHNOLOGY

ARGARHAT/FULIA/GUWAHATI/JODHPUR/SALIMA/ARANASE/CHAMPA/KANNUR/KHITLG/ADAG/SPKMIIIH/VENKATAGIRI

DIPLOMA IN HANDLOOM AND TEXTILE TECHNOLOGY  
SECOND SEMESTER (BACK PAPER) - APRIL/MAY-2016

## 2.4 - FIBRE AND YARN TECHNOLOGY

Time: 3 Hrs

Max Marks: 80

### PART-A

Answer all the Questions within two to three sentences:

- I a) Define the term "Man made fibre".
- b) State the purpose of combing process in yarn production.
- c) Write any two physical properties of acetate rayon.
- d) Write any two chemical properties of polyester.
- e) Define the terms sorting and grading of wool.
- f) Write the different types of twist given to double yarn.
- g) List the advantages of rotor spun yarn.
- h) List the advantages of friction spun yarn.
- i) State the properties of industrial yarns.
- j) State the properties of sewing thread.

### PART-B

Answer all the questions in detail.

- II a) Elaborate important physical properties of cotton fiber. 4
- b) Give the classification of textile fibers. 8
- OR
- c) State objective of drawframe and flyframe in spun yarn production. 4
- d) With neat sketch explain the principal and working of combing machine. 8
- OR
- III a) Write the important properties of viscose rayon. 4
- b) Explain the viscose rayon manufacturing process with flow chart. 8
- OR
- c) Differentiate nylon 6 and nylon 66. 4
- d) Describe both physical and chemical properties of nylon 66 fiber. 8
- IV a) Write short notes on spun silk yarn production. 4
- b) Elaborate the life cycle of a silkworm. 8
- OR
- c) Write short notes on reeling machine. 4
- d) Explain the material passage and working of a ringdoubing machine. 8

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- V a) Discuss in detail about the friction spun yarn characteristics. 4  
b) With neat diagram, explain the principle of yarn formation mechanism of rotor spinning. 8

OR

- c) Discuss the raw material requirement for air jet spinning system. 4  
d) With neat sketch explain the principle and working of airjet spinning system. 8

- VI a) Write short notes on crepe yarn. 4  
b) Describe the manufacturing process of textured yarn from undrawn yarn. 8

OR

- c) Differentiate single jersey and double jersey knitted fabric. 4  
d) Explain anyone method of nonwoven manufacturing process. 8

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# INDIAN INSTITUTE OF HANDLOOM TECHNOLOGY

BARGARH/GUWAHATI/FULIA/JODHPUR/SALEM/VARANASI/CHAMPA/KANNUR/KHTIGADAG/SPKMIHTVENKATAGIRI

## DIPLOMA IN HANDLOOM AND TEXTILE TECHNOLOGY SECOND SEMESTER (2011 - REGULATION) EXAMINATION -NOV/DEC-2016 2.4 – FIBRE & YARN TECHNOLOGY

Time: 3 Hours

Max.Marks: 80

### PART – A

I. Answer all the questions within two to three sentences.

(2X10=20)

- i) Define synthetic fibre.
- ii) What is drawing process?
- iii) Write any two properties of Viscose Rayon.
- iv) Write any two properties of Acrylic.
- v) What is carbonization in Woolen yarn manufacturing?
- vi) What is a doubled yarn?
- vii) State count range of ring spun and open end spun yarns.
- viii) List the advantages of friction spun yarn.
- ix) What is texturing?
- x) Name a few applications of Non woven fabrics.

### PART-B

II. Answer all the questions in detail

(4+8) x 5 = 60

- A) Explain the properties of wool. (4)
  - B) Explain the passage of material in a Draw frame with neat diagram. (8)
- (OR)
- C) State objectives of Comber and Ring frame in cotton yarn production. (4)
  - D) With a neat chart write classification of fibres. (8)

III. A) Explain the properties of polyester. (4)  
B) With a neat diagram explain manufacturing of Acetate Rayon. (8)

(OR)

- C) Explain the properties of Acetate Rayon. (4)
- D) Explain manufacturing of Acrylic fibre with a neat diagram. (8)

IV. A) Explain the ring spinning process. (4)  
B) Explain production of Silk Filament yarn. (8)

(OR)

- C) Explain the process of bundling and baling. (4)
- D) Explain passage of material in a ring doubler. (8)

- V. A) Explain Rotor spun yarn characteristics. (4)
- B) Explain Friction spinning with a neat diagram. (8)
- (OR)
- C) Distinguish between ring spun and Rotor spun yarn. (4)
- D) Explain Air Jet Spinning with neat diagram. (8)
  
- VI. A) What is crepe yarn? (4)
- B) Explain needle punching method of non woven production. (8)
- (OR)
- C) What is Chenille yarn? (4)
- D) Explain method of manufacturing of Tufted carpet. (8)

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INDIAN INSTITUTE OF HANDLOOM TECHNOLOGY

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

DIPLOMA IN HANDLOOM AND TEXTILE TECHNOLOGY

SEMESTER EXAMINATION APRIL/MAY-2017 (2011 REGULATION)

Time : 3 Hours

Max. Marks : 80

II SEMESTER

2.4 FIBRE AND YARN TECHNOLOGY

PART - A

(Answer all the questions within two to three sentences)

2 x 10=20 Marks

- 1 Define Textile fibre.
- 2 Write any two properties of silk.
- 3 Write any two properties of polyester.
- 4 Write end uses of Acetate Rayon.
- 5 What is scouring process in woolen yarn manufacturing?
- 6 State two objects of bundling.
- 7 Write two end uses of Ring spun yarn.
- 8 What is Rotor Spun Yarn?
- 9 What is crepe yarn?
- 10 Write purpose of blending.

PART-B

(4+8) x 5= 60 Marks

- 11 A) Write objects of blow room. (4)  
B) Explain drafting process in draw frame. (8)  
(OR)  
C) Write properties of Jute. (4)  
D) Classify textile fibre. (8)
- 12 A) Write four properties of Viscose Rayon. (4)  
B) Explain manufacturing process of polyester yarn with neat flow chart diagram. (8)  
(OR)  
C) Discuss four properties of Nylon-66. (4)  
D) Explain the manufacture process of Nylon-6 with help of neat flow chart diagram. (8)
- 13 A) What is silk degumming process? (4)  
B) Explain the manufacture process of spun silk. (8)  
(OR)  
C) Write objects of bundling. (4)  
D) Explain the function of bundling press. (8)

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- 14 A) Write about Basic Principle of yarn formation in open end spun yarn. (4)  
 B) Compare the properties of Ring spun yarn with Spun yarn. (8)
- (OR)
- C) Explain the working principle of Rotor spinning. (4)  
 D) Explain friction spinning process with neat diagram. (8)
- 15 A) Write Short note on Tyre card. (4)  
 B) Explain Knitting technique of fabric production. (8)
- (OR)
- C) Write short note on cutting. (4)  
 D) Enlist the steps involved in manufacturing of garment briefly. (8)

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1) Flaxnet spinning  
 2) Principle of rotor yarn  
 3) what is OES  
 4) advantages of rotor yarn / open end  
 5) friction spinning  
 6) How to identify ring yarn / rotor yarn  
 7) Ring spun yarn uses

INDIAN INSTITUTE OF HANDLOOM TECHNOLOGY  
DIPLOMA IN HANDLOOM AND TEXTILE TECHNOLOGY  
BARGAR/GUWAHATI/FULIA/ JODHPUR/SALEM/VARANASI/CHAMPA/KANNUR/KHTIGADAG/SPKM IIHT VENKATAGIRI

**ANNUAL/SEMESTER EXAMINATION-APRIL/MAY-2018**  
**(Regulation-2014)**

Year/Semester : FIRST YEAR TIME: 3 Hours  
Subject Code & Name : 1.5 FIBRE AND YARN TECHNOLOGY Max. Marks: 80

“PART-A”

(2x10=20 marks)

**Answer all the questions within two to three sentences.**

- 1) Define textile fibre.
- 2) Write two physical properties of cotton.
- 3) Which man made fibre is known as artificial silk? why?
- 4) Write any two uses of viscose yarn.
- 5) What are the objectives of doubling?
- 6) What is meant by “Degumming of Silk”?
- 7) What is open end spinning?
- 8) What is the principle of “Airjet Spinning”?
- 9) Name two industrial yarns.
- 10) What is crepe yarn?

“PART-B”

**Answer all questions in details.**

(4+8)x5=60

- 11)
- A) Write any four important properties of wool fibre. 4
- B) Define Textile fibre. Draw the flow chart diagram showing the classification of textile fibres. 8
- (OR)
- C) Write the objectives of Blow room. 4
- D) With neat sketch explain the principle and working of carding machine. 8
- 12)
- A) Write any two physical properties & uses of viscose rayon fibre. 4
- B) Explain the production process of polyester fibres with help of flow chart diagram. 8
- (OR)
- C) Write the properties and uses of nylon-6. 4
- D) Explain the production process of nylon-66 with help of flow chart diagram. 8
- 13)
- A) Write the life cycle of silk worm with neat line diagram. 4
- B) Explain the manufacturing process of filament silk yarn. 8
- (OR)
- C) Write the objectives of reeling machine. 4
- D) Explain the passage of material in a reeling machine. 8

- 14)
- A) Write the basic principle of open end spinning. 4
  - B) With neat sketch explain the formation of "ROTOR SPUN YARN". 8
- (OR)
- C) Write the principle of friction spinning. 4
  - D) Enlist the comparison between ring spun and open end spun yarn. 8
- 15)
- A) Write a Short note on "Spot yarn". 4
  - B) Explain the construction and sizes of sewing thread? 8
- (OR)
- C) Enlist the steps involved in garment making process. 4
  - D) Explain "Non-woven production" with neat sketch. 8

**SEMESTER EXAMINATION-APRIL/MAY-2018**

**(Regulation-2011)**

Semester : SECOND SEMESTER TIME: 3 Hours  
Subject Code & Name : 2.4 FIBRE AND YARN TECHNOLOGY Max. Marks: 80

**“PART-A”**

**(2x10=20 marks)**

**Answer all the questions within two to three sentences.**

- 1) Write two physical properties of cotton.
- 2) Draw the cross sectional and longitudinal views of cotton and wool.
- 3) Define manmade fibre.
- 4) Write two end uses of Acetate Rayon.
- 5) What are post spinning processes?
- 6) Write the functions of Reeling machine.
- 7) What is open end spun yarn?
- 8) Write the principle of Rotor Spinning?
- 9) Describe the classification of Knitted Fabrics?
- 10) What do you mean by the term “Blending”.

**“PART-B”**

**Answer all questions in details.**

**(4+8)x5=60**

- 11)
- |  |   |
|--|---|
| A) Write the functions of carding.                     | 4 |
| B) Explain basic properties of textile fibres.         | 8 |
| (OR)   |   |
| C) Write the main properties and uses of wool fibre.   | 4 |
| D) Explain the “Principle of operation” of ring frame. | 8 |
- 12)
- |  |   |
|--|---|
| A) List out any four important properties of polyester.                      | 4 |
| B) Describe manufacturing process of Acetate Rayon with flow chart diagram.  | 8 |
| (OR)   |   |
| C) Write the four main properties of Nylon 66.                               | 4 |
| D) Explain the production process of Nylon-6 with help of flowchart diagram. | 8 |
- 13)
- |  |   |
|--|---|
| A) Write short note on “Silk reeling”.                 | 4 |
| B) Explain woollen yarn manufacturing process.         | 8 |
| (OR)   |   |
| C) Write objects of Doubling.                          | 4 |
| D) Explain the passage of material in a ring doublers. | 8 |

- 14)
- A) What is friction spun yarn? 4
  - B) Compare ring spun yarn with open end spun yarn. 8
- (OR)
- C) Write short note on "Rotor Spinning". 4
  - D) Explain the process of yarn manufacture in Air jet spinning machine. 8
- 15)
- A) Write a short note on "Crimped yarn." 4
  - B) Explain the manufacturing process of "Tyre cord". 8
- (OR)
- C) Write a short note on "Knitting". 4
  - D) Briefly explain the steps involved in manufacturing of garment. 8

Bargarh 11

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)  
ANNUAL/SEMESTER (BACK PAPER) EXAMINATION NOV./DEC.-2018**

Year/Semester: I Year

Time: 3 Hours

Subject Code & Name: 1.5 Fibre and Yarn Technology

Max.Marks: 50+30

**PART-A**

(2 x 10 = 20)

Answer all the question within two or three sentences

1. Name two Vegetable fibres with their origin.
2. What are the basic objectives of combing?
3. Pick the odd one out- Nylon 6, Viscose, Polyester, Acrylic. ---State reason.
4. Write one trade name of Polyester and Acrylic Fibre.
5. What is Dupion Silk?
6. Draw the cross-sectional and longitudinal view of Wool fibre.
7. Write the principles of open end spinning?
8. State two differences between Rotor Spun and Ring Spun Yarn.
9. Name four uses of industrial textiles?
10. What is 'Course and Wale'?

**PART-B**

(4+8) x 5 = 60

Answer all the questions in details

11. a) Write the classification of fibres .  
b) Draw the flow chart for manufacturing of cotton yarn starting from fibre stage.

**OR**

- c) Write the objectives of Carding.  
d) Explain briefly the essential properties of a fibre forming polymer.
12. a) Write the main properties and uses of Acrylic fibre.  
b) Explain the manufacturing process of viscose with the help of flow chart.

**OR**

- c) Draw the Flow Chart for manufacturing of Polyester fibre.  
d) Explain the manufacturing process of Nylon-6,6 with the help of flow chart.
13. a) What is the difference between spun silk and filament silk?  
b) Explain in detail the manufacturing process of Worsted Yarn.

**OR**

- c) What are the basic difference between worsted and woollen yarn?  
d) Explain in detail the manufacturing process of Filament Silk Yarn.

P.T.O.

14. a) State the difference between Dref-2 and Dref-3.  
d) Compare Ring, Rotor, Friction and Air-jet Spinning system.

**OR**

- c) State the advantages of open end spinning system over Ring Spinning System.  
d) Explain the Mechanism of Yarn formation in Rotor Spinning in details with neat sketch.
15. a) State the Classification of Carpet in details.  
b) Write Short notes : (i) Textured Yarn (ii) Tyre Cord

**OR**

- c) Classify the Non-woven Textile.  
d) Explain the details of Garment Manufacturing process.

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INDIAN INSTITUTE OF HANDLOOM TECHNOLOGY  
BARGARH/GUWAHATI/FULIA/JODHPUR/SALEM/VARANASI/CHAMPA/KANNUR/KHTIGADAG/SPKMIHTVENKATAGIRI  
DIPLOMA IN HANDLOOM & TEXTILE TECHNOLOGY (Regulation-2014)  
SEMESTER (REGULAR & BACK PAPER) EXAMINATION – APRIL / MAY 2019

Year/Semester: FIRST YEAR

Time: 3 Hours

Subject Code & Name: 1.5 Fibre & Yarn Technology

Max.Marks:80

PART -A

Answer all the questions within two to three sentences:

2x10=20

- 1) What are the objectives of carding in spinning process?
- 2) List two physical properties of cotton.
- 3) Define manmade fibre.
- 4) Write down two properties of Nylon-6 fibre.
- 5) Write down two physical properties of silk.
- 6) Enlist two differences between the woollen and worsted yarn.
- 7) What is open end spinning?
- 8) Name any two spinning techniques.
- 9) Enlist the various types of carpets.
- 10) Write two different methods adopted in knitting.

PART-B

Answer all the questions in details.

(4+8) X5=60

- 11) a) Write functions of Blow room. 4
- b) Explain the operating principle of carding machine. 8
- OR
- c) Write any four physical properties of wool fibre. 4
- d) Define textile fibre. Draw the flow diagram showing the classification of textile fibre. 8
- 12) a) Discuss briefly any four properties of viscose rayon. 4
- b) Explain the manufacturing process of acetate rayon with a suitable flow chart diagram. 8
- OR
- c) Write any two chemical properties & uses of Nylon-66 fibre. 4
- d) Explain the manufacturing process of Nylon-6 with the help of flow chart diagram. 8
- 13) a) What is carbonisation of wool fibre? 4
- b) Explain the manufacturing process of spun silk. 8
- OR
- c) Write the objects of doubling. 4
- d) Explain the passage of material in ring doubler with suitable line diagram. 8
- 14) a) Write four differences of ring spun and open end spun yarn. 4
- b) Explain the formation of rotor spun yarn with neat sketch. 8
- OR
- c) Write the principle of friction spinning. 4
- d) Explain the air jet spinning process with neat diagram. 8
- 15) a) Write short note on "Crepe Yarn". 4
- b) Explain the manufacturing process of Tyre cords. 8
- OR
- c) Enumerate the purpose of blending. 4
- d) Explain the process of production of non woven fabric with neat sketch. 8

Bar 8

**INDIAN INSTITUTE OF HANDLOOM TECHNOLOGY**

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

**DIPLOMA IN HANDLOOM & TEXTILE TECHNOLOGY (REGULATION - 2014)**

**ANNUAL / SEMESTER EXAMINATION – NOV/DEC -2019**

**Year/Semester: I Year Back Paper**

**Time: 3Hours**

**Subject Code & Name: 1.5 Fibre & Yarn Technology**

**Max. Marks: 80**

**PART-A**

**Answer all the questions within two or three sentences:**

**2x10=20**

- 1) Define textile fibre.
- 2) Write any two physical properties of wool fibre.
- 3) Write any two physical properties of polyester.
- 4) Name the Two components used to make polyester.
- 5) Define carbonization.
- 6) What do you mean by Throwing of silk?
- 7) What is the air vortex's angular velocity employed in Air-jet spinning?
- 8) What is the maximum transmission ratio that can be employed in friction spinning?
- 9) Write the expansion for PDY.
- 10) What is the Blend Proportion and Yarn Counts used to manufacture P/C suiting fabric.

**PART-B**

**Answer all the questions in detail.**

**(4+8) x 5 = 60**

- 11) a) What are the objectives of carding process? Write the passage of material in card. (4)  
b) Explain the operating principle of Comber machine. (8)  
OR  
c) Write any 4 chemical properties of wool fibre. (4)  
d) Explain the manufacturing process of Combed Cotton yarn with flow chart diagram. (8)
- 12) a) Discuss briefly any 4 physical properties of Nylon 6. (4)  
b) Explain the manufacturing process of acetate rayon with suitable diagrams. (8)  
OR  
c) Explain the manufacturing method of Acrylic fibre. (4)  
d) Discuss the manufacturing process of Nylon 6 with suitable diagrams. (8)
- 13) a) Briefly explain about the life cycle of silk worm with diagram. (4)  
b) Discuss in detail about the manufacturing process of Woolen yarn. (8)  
OR  
c) What are the objectives of bundling & baling process? (4)  
d) What are the objectives of reeling? Explain the process of reeling yarns with suitable diagram. (8)

- 14) a) Define open-end spinning. List the tasks of rotor spinning machine. (4)  
b) Explain the working principle of Murata Air-jet spinning system. (8)
- OR
- c) List any four differences between ring spun yarn and open-end spun yarn. (4)  
d) Explain the working principle of rotor spinning machine with diagram. (8)
- 15) a) Explain briefly about the purpose of blending fibres in yarn manufacture. (4)  
b) Explain in detail about the construction of sewing threads and its ticket numbering system. (8)
- OR
- c) Write a note about garment making process in steps. (4)  
d) Explain the methods of manufacturing of various tufted carpets with diagram (8)

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