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INDIAN INSTITUTE OF HANDLOOM TECHNOLOGY
BARGARH/FULIA/GUWAHATI/JODHPUR/SALEM/VARANASI/CHAMPA/KANNUR/KH
TI GADAG/SPKMIHT VENKATAGIRI

DIPLOMA IN HANDLOOM AND TEXTILE TECHNOLOGY
SEMESTER EXAMINATION NOV/DEC 2017 (2014-REGULATION)

Time: 3 Hours

Max.Marks: 80

Year : **FIRST YEAR**

Subject : 1.6 WEAVING TECHNOLOGY & TEXTILE CALCULATION – I

PART – A

Answer all the questions within two to three sentences.

2x10 = 20

1. What are the objectives of weft winding?
2. Why sizing is required in warp yarn?
3. Write two important functions of reed.
4. What are the main difference between throw shuttle loom and fly shuttle loom.
5. Name all the different parts of a fly shuttle.
6. Write the importance of temple used in handloom.
7. Define the count 20^s Ne cotton of yarn numbering.
8. Calculate the weight in grams of one hank of 40^s Ne cotton yarn.
9. Write the formula to convert the count from one system to another system within indirect system of yarn numbering.
10. What do you understand from the term "conversion factor"?

PART-B

Answer all the questions in details:

(4+8) x5 = 60

11. A) Differentiate the essential characteristics of warp & weft.
B) With neat sketch, explain the different forms of yarn packages.
Or
C) What are the different sizing ingredients used in size mixture?
D) Explain the method of preparation of warp on a sectional warping machine?
12. A) Explain shortly the advantages and disadvantages of pit loom over frame loom.
B) Explain the different motions of handloom weaving.
Or
C) Draw a neat sketch the passage of warp in a frame loom.
D) Give the classification of shed & define the different shed with their line diagram.

P.T.O.

13. A) Name the different types of shuttle used in handlooms and their uses.
B) What is the objective of take-up motion? Describe the ratchet and pawl take up motion with suitable diagram.

Or

- C) Write short notes on merits and demerits of closed shed beating and cross shed beating.
D) What are the different let-off motions used in handloom? Describe rope-lever & weight let-off motion with suitable diagram.

14. A) How many hanks are contained in 45 pounds of 15^s cotton yarn.
B) (i) The count of 250 yards of worsted yarn was found to be 40^s worsted. Calculate the weight in grams.
(ii) Calculate the count in Tex system of 4 grams of cotton yarn whose length is 360 meters.

Or

- C) If one bundle of cotton yarn contains 180 Hanks and weighs 9 pounds, what is the count of yarn.
D) (i) Calculate the count of a linen yarn measuring 21600 yards and weighing 12 pounds
(ii) Calculate the weight of 10000 meters of 60 Tex polyester yarn.

15. A) Convert 40^s worsted count to Ne cotton count.
B) (i) Derive the conversion factor to convert metric system to New English system.
(ii) Convert 100^s metric count to Ne cotton count.

Or

- C) Convert 50^s linen count to Ne cotton count.
D) (i) Derive the conversion factor to convert Decimal system to Ne cotton count
(ii) Convert 60^s Decimal count to Ne cotton count.

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DIPLOMA IN HANDLOOM AND TEXTILE TECHNOLOGY
SEMESTER EXAMINATION NOV/DEC 2017 (2011-REGULATION)

Time: 3 Hours

Max.Marks: 80

Semester : II SEMESTER

Subject : 2.1 WEAVING TECHNOLOGY & TEXTILE CALCULATION – I

PART – A

Answer all the questions within two to three sentences.

2x10 = 20

1. What are the objectives of winding?
2. Why sizing is required in warp yarn?
3. Name the different types of heald reversing motions used in handloom weaving.
4. Write two important functions of lease rod.
5. Name the different types of shuttles used in handloom.
6. Write the importance of temple used in handloom.
7. If one bundle of cotton yarn contains 180 hanks length. What is the count of yarn in Ne.?
8. Define the New English system of yarn numbering.
9. Write the formula to convert the count from one indirect system to other indirect system of yarn numbering.
10. Write the formula to convert the count from one direct system to other indirect system of yarn numbering.

PART-B

Answer all the questions in details:

(4+8) x5 = 60

11. A) What are the characteristics of good warping?
B) Explain the method of preparation of warp on a sectional warping machine.
Or
C) What are the characteristics of ideal sizing?
D) Explain the method of street warp sizing with their advantages and disadvantages?
12. A) Explain shortly the advantages and disadvantages of pit loom over frame loom.
B) Explain the different motions of handloom weaving.
Or
C) What are the important functions of Reed?
D) Give the classification of shed. Define the different shed with their line diagram.

P.T.O.

13. A) Write the different types of reed and its suitability.
B) What is the objective of take-up motion? Describe any one take-up motion used in handloom with suitable diagram.

Or

- C) Write short notes on cross shed beating with its merits and demerits.
D) What are the different let-off motions used in handloom? Describe any one let off motion with suitable diagram.
14. A) How many hanks are contained in 45 pounds of 15^s cotton yarn.
B) The weight of 1000 metres of yarn is 10 grams.
What is its count in the following systems?
(i) Ne cotton system (ii) New French (Nf) system

Or

- C) What is the weight of 480 KM of 24^s Nf cotton yarn.
D) (i) The weight of 600 yards of a worsted yarn was found to be 12 grams.
What is its count?
(ii) Calculate the weight of 10000 meters of 60 Tex polyester yarns?
15. A) Derive the conversion factor for converting from New English system to metric system.
B) Convert 40^s Ne cotton count to the following systems
(i) New French system (ii) worsted

Or

- C) Derive the conversion factor for converting Decimal system to Ne cotton count.
D) (i) Derive the conversion factor for converting Ne cotton count to Tex system.
(ii) Convert 10^s Ne cotton to Tex system.

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

1.6 - WEAVING TECHNOLOGY & TEXTILE CALCULATIONS -I

Time: 3 hours

Max. Marks 80

PART-A



Answer all questions in two or three sentences.

(2x10=20)

- i. Which are the yarns wound on double flanged bobbins and marketed?
- ii. What are the objectives of sizing?
- iii. What are the different types of healds used in the Handloom Industry?
- iv. What are the functions of treadles?
- v. Mention two types of picking mechanism.
- vi. Mention the two types of let-off motion.
- vii. Mention any two systems of yarn numbering.
- viii. The count of 360 yards of worsted yarn was found to be 80^s worsted. Calculate its weight in grams.
- ix. Convert 60^s worsted count to new English cotton count.
- x. Convert 56 Denier metric to worsted system.

PART-B

Answer all questions in detail.

(4+8x5=60)

1. a. What are the advantages and disadvantages of Peg warping? (04)
b. Explain in detail the process of warp preparation on sectional warping machine. (08)
OR
c. What are the objectives and importance of sizing? (04)
d. Explain the functions of different sizing ingredients used in the size mixture for cotton yarn sizing. (08)
2. a. What are the different types of shuttles used in the Handloom Industry and mention their uses. (04)
b. Explain in detail the structure and working of frame loom. (08)
OR
c. What are auxiliary motions of weaving? (04)
d. Mention the different heald reversing motions on handloom and explain any one method in detail. (08)

3. a. Mention the different types of reeds used in the Textile Industry. (04)
b. With neat sketch explain about the rope and weight let-off motion used on handlooms. (08)

OR

- c. What are the different types of take-up motions? (04)
d. Explain in detail. (08)
i. Bamboo reed
ii. Pitch bound steel reed.

4. a. How many hanks are contained in 7 bundles of 60^s cotton yarn? (04)
b. i) Calculate the count of 390 yards of Rayon yarn which weighs 60 Denier English. (04)
ii) If the weight of 500 meters of yarn is 9.0 gms, Calculate its count in tex system. (04)

OR

- c. 60 yards of cotton yarn was found to weigh 8 grains, Calculate the count in decimal system. (04)
d. i) Calculate the length of 5 ounce 8 drams of thrown silk whose count is 200 drams. (04)
ii) Calculate the weight of 40 kilometers of terylene yarn whose count is 10 Tex. (04)
5. a. Convert 44^s New English cotton count to decimal system. (04)
b. i. Derive conversion factor for converting New French cotton count to New English cotton count. (05)
ii. Convert 80^s New English Cotton count to worsted count. (03)

OR

- c. Convert 200 Denier metric count to Denier English system. (04)
d. i. Derive conversion factor for converting Denier metric count to pounds/spindle. (05)
ii) Convert 16^s decimal count to Denier metric count. (03)



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DIPLOMA IN HANDLOOM AND TEXTILE TECHNOLOGY
FIRST YEAR (REGULAR & BACK PAPER) – APRIL/MAY-2016

1.6 – Weaving Technology & Textile Calculations - I

Time: 3 Hrs

Max Marks: 80

PART A

- I. Answer all questions within TWO to THREE Sentences. (2 x 10 = 20)
- a) List out various forms of yarn packages used in textile industry.
 - b) List out various forms of sizing.
 - c) Mention various types of healds used in weaving industry.
 - d) Brief about the types of shuttles and its uses.
 - e) List out the types of picking mechanism?
 - f) What are the types of shuttles used by both handloom and powerloom industry?
 - g) Define New English system of Yarn Numbering.
 - h) What is the weight in grams per hank of yarn of 80^s Ne.
 - i) If 240 yards of cotton yarn weigh 40 grains, what will be the count of yarn in New English System?
 - j) Calculate the length of 150 grams of 42^s Nf cotton yarn?

PART B

Answer the following questions in details.

- II.
- a) Write a note on warping and its requirements. (4)
 - b) Explain the method of preparing warp using vertical warping machine. (8)

OR

- c) Write down the objectives and importance of warp sizing. (4)
 - d) Explain the functions of various sizing ingredients used in warp sizing. (8)
- III.
- a) Write a note on Centre Closed Shed and its advantages & disadvantages. (4)
 - b) Classify the types of handlooms and explain in detail about Pit Loom. (8)

OR

- c) What is reed? List out its functions and types (4)
- d) Classify motions of weaving and explain the primary motions in detail. (8)

P.T.O

- IV. a) Briefly explain the picking mechanism of handloom with suitable sketch. (4)
b) Explain any two types of shuttles used in handloom industry with suitable diagrams. (8)

OR

- c) Write a brief note about closed shed and crossed shed beating. (4)
d) Describe ratchet & pawl and rope & weight let-off motions with suitable diagrams. (8)
- V. a) What is the weight of 480 kilometers of 24^s Nf. Cotton yarn? (4)
b) (i) The weight of 800 yards of a worsted yarn was found to be 12 grammes. What is its count? (4)
(ii) If 420 yards of Linen yarn weighs 1.0 ounce, what is its count? (4)

OR

- c) How much 1000 metres of 34^s Nf cotton yarn will weigh? (4)
d) (i) 45 yards of cotton yarn was found to weigh 5 grains, calculate the count in decimal system. (4)
(ii) A bundle contains 10 pounds of 20^s cotton yarn. What is the length of yarn in the bundle? (4)
- VI. a) Convert 42^s Nf. Cotton count to Ne. cotton count. (4)
b) (i) Derive conversion factor to convert Decimal system to Ne. cotton. (5)
(ii) Convert 40^s Decimal cotton count to Ne. System. (3)

OR

- c) Convert 60^s Ne. cotton count to Decimal count. (4)
d) (i) Derive conversion factor to convert Metric system to New English cotton. (5)
(ii) Convert 80^s Metric to Ne. cotton count. (3)

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

1.6 WEAVING TECHNOLOGY & TEXTILE CALCULATION - I

Time: 3 Hours

Max Marks: 80

PART-A

I. Answer all the questions within 2 to 3 sentences.

(2x10 = 20)

- i) What are the objectives of winding?
- ii) Why the strength of warp yarn is kept comparatively more than weft yarn?
- iii) Name the different types of Handlooms
- iv) Name the different types of shedding mechanisms used for weaving in handlooms.
- v) Name the different types of reeds.
- vi) Mention the important functions of temple used in handloom.
- vii) If one bundle of cotton yarn contains 180 hanks length, what is the count of yarn?
- viii) What is the weight unit and length unit of woolen-yarn shire skein?
- ix) Give the formula for converting the count from Indirect system to Direct system.
- x) Convert 60^s Ne cotton count to worsted count.

PART-B

Answer all the questions in detail

(4+8)x5=60

- II
- a) What are the characteristics of good warping? 4
 - b) What are the various methods of warping and explain the method of preparation of warp on a sectional warping machine? 8
- (OR)
- c) Write down the objectives of warp sizing. 4
 - d) What are the various forms of sizing and explain the method of street sizing with their advantages and disadvantages? 8
- III
- a) What are the important functions of lease rod? 4
 - b) Explain the different motions of weaving. 8
- (OR)
- c) What are the important functions of Reed? 4
 - d) Explain the different types of shed with their line diagram. 8
- IV
- a) Name the different types of shuttle used in Handlooms and their uses. 4
 - b) What are the different let-off motions used in handloom? Describe any two with suitable diagrams? 8
- (OR)
- c) Differentiate closed shed beating and crossed shed beating. 4
 - d) What is the objective of take-up motion? Describe the two take-up motions used in handloom with suitable diagrams. 8

P.T.O

- V a) If 240 yards of cotton yarn weigh 40 grains, what is the count of yarn in New English system? 4
- b) (i) The count of 250 yards of worsted yarn was found to be 40^s worsted. Calculate the weight in grams? 8
(ii) Calculate the length of 80 grams of 150 Denier silk yarn?

(OR)

- c) Calculate the count in Linen of a yarn measuring 21,600 yards and weighing 12 pounds? 4
- d) (i) Calculate the weight of 2500 metres of Acetate Rayon yarn whose count is 75 Denier? 8
(ii) Calculate the count in tex system of 4 grams of cotton yarn whose length is 360 metres?
- VI a) Derive the conversion factor to convert from New English system to metric system. 4
- b) (i) Convert the count 32^s Nf cotton to metric system. 8
(ii) Convert the count 30 tex into Ne system.

(OR)

- c) Derive conversion factor to convert from Decimal system to New English system. 4
- d) (i) Convert 42^s Nf cotton count to Ne cotton count. 8
(ii) Convert 53.15 Denier metric count to Ne cotton system?

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DIPLOMA IN HANDLOOM & TEXTILE TECHNOLOGY

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

Time :3 Hours 1.6 – WEAVING TECHNOLOGY & TEXTILE CALCULATIONS I Max. Marks:80
FIRST YEAR

PART A

Answer all the questions within two or three sentences:

10X2 = 20

1. State any two important characteristics of a cone.
2. Write any two uses of DF bobbin.
3. List any four types of handlooms.
4. What are the functions of a heald reversing mechanism in handloom?
5. Define the term "Picking"
6. Name any three temple used in fabric manufacturing process.
7. State the relationship between yarn thickness and indirect system of yarn numbering.
8. Write the formula for calculation of yarn count in Tex
9. Give the formula for conversion of yarn count from one indirect system to other indirect system.
10. Give the formula for conversion of yarn count from direct system to indirect system.

PART B

Answer all the questions in detail:

11. A. Enlist the characteristics of a good warping. (04)
B. With neat sketch, explain the various forms of yarn packages. (08)
Or
C. Give the sketch of peg warping frame. (04)
D. With suitable example, explain the various ingredients used in preparation of size paste. (08)
12. A. Write the functions of reed used in handloom. (04)
B. With suitable diagram, explain the warp yarn passage in a fly shuttle frame loom. (08)
Or
C. What are the different motions of a handloom. (04)
D. Give the classification of shed. Also write their advantages and disadvantages. (08)
13. A. List different types of shuttles and its suitability for weaving. (04)
B. Elaborate the beating up process in closed shed and crossed shed. (08)
Or
C. Give the classification of take up mechanism (04)
D. Explain any one type of letoff motions used in handloom. (08)
14. A. Find the weight of 270 yards of 60^s cotton yarn (04)
B. Convert 40 Ne English cotton count into (i) New French (ii)Worsted (04+04)
Or
C. Weight of 60 kilometre of yarn is 5 kilogrammes, find count of the yarn in Nf. (04)
D. i) Calculate the weight of 2500 metres of Acetate rayon yarn whose count is 75 Denier Metric (04+04)
ii) Convert 10 Ne into Tex

P.T.O.

15. A. Derive the Conversion factor for converting a Denier English count to Ne English. (04)
- B. Derive the Conversion factor for converting a
i) Ne to Nf system ii) Tex to Denier Metric (08)
- Or
- C. Derive the conversion factor for converting Worsted count to Ne English Cotton (04)
- D. Derive the Conversion factor for converting a
i) Tex to English cotton ii) Denier Metric to Tex (08)



2.1 - WEAVING TECHNOLOGY & TEXTILE CALCULATIONS-I

TIME: 3 HOURS

MAX. MARKS : 80

PART-A

- I. Answer all questions in two or three sentences: (2X10=20)
- Which form of yarn packages is mainly used by the Handloom Industry?
 - What are the adhesives used for cotton yarn sizing?
 - Mention the different types of Handlooms.
 - What are the functions of temples used in handloom weaving?
 - What is picking mechanism?
 - What are the disadvantages of closed shed beating?
 - Define count of yarn in terms of New English System.
 - If the weight of 80 kilometers of yarn is 8 kgs., calculate the count in New French System.
 - Convert 36^S New French to Metric count.
 - Convert 200^S woolen yorkshire skein to denier metric.

PART-B

Answer all the questions in detail:

- II. a. What are the differences between warp yarn and weft yarn? (04)
b. Explain in detail the process of warp preparation on vertical warping machine. (08)
- OR
- c. What are the advantages and disadvantages of hank yarn sizing? (04)
d. Explain the method of street warp sizing in detail. (08)
- III. a. What are different types of healds used in the Handloom Industry and mention their specific uses. (04)
b. Classify the motions of weaving and explain one in detail. (08)
- OR
- c. What are the functions of heald shafts? (04)
d. Classify the types of shedding and explain any one type in detail. (08)
- IV. a. Differentiate positive and negative picking. (04)
b. Mention the different types of shuttles used in the Handloom Industry and explain any two in detail. (08)
- OR
- c. Compare closed shed beating and crossed shed beating. (04)
d. With neat sketch explain the working of Ratchet wheel and Pawl left off motion used on handlooms. (08)

- V. a. Calculate the weight of 560 mtrs. of 17^S New French cotton yarn. (04)
- b. (i) If 1500 mtrs of silk yarn weighs 9.5 gms., what is the count of yarn in metric denier? (04)
- (ii) What is the weight of 50 kilometers of terelene yarn? (04)

OR

- c. If 8400 yds. of jute yarn weighs 2.9 lbs., what is the count of yarn? (04)
- d. (i) Calculagte the weight of 300 mtrs. of acetate rayon whose count is 270 Denier metric. (04)
- (ii) Calculate the count of 5200 yards of cotton yarn in Cotton System if it weighs 12 ounces. (04)

- VI. a. Convert 40^S Decimal Count to New English Count. (04)
- b. (i) Derive conversion Factor to convert New English Cotton count to Decimal system. (05)
- (ii) Convert 58^S Linen Count to New English System. (03)

OR

- c. Convert 1.25 lbs. per spindle count to Denier English. (04)
- d. (i) Derive conversion factor for converting Denier metric count to Denier English system. (05)
- (ii) Convert 34^S New French cotton to Denier metric system. (03)



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

2.1 - WEAVING TECHNOLOGY & TEXTILE CALCULATIONS-I

Time: 3 Hrs

Max Marks: 80

PART-A

2x10=20

I Answer all the questions within two to three sentences

- List out the objectives of weft winding.
- List out various forms of sizing.
- Mention various types of healds used in handloom industry.
- Write a short note on types of shuttles and its uses.
- What are the two types of picking mechanism?
- What are the types of shuttles used by both handloom and powerloom industry?
- Define Universal Yarn Numbering System.
- What is the weight in grams per hank of yarn of $40^S Ne$.
- If 480 yards of cotton yarn weigh 80 grains, what will be the count of yarn in New English System?
- Calculate the length of 300 grams of $42^S Nf$ cotton yarn?

PART-B

(4+8) x5=60

Answer all the questions in detail

- II (a) List out the objectives of warp winding and weft winding. 4
(b) Explain the method of preparing warp using sectional warping machine. 8
OR
(c) Write down the objectives and importance of warp sizing. 4
(d) Explain the functions of various sizing ingredients used in warp sizing. 8
- III (a) Write a note on Bottom Closed Shed and its advantages and disadvantages. 4
(b) Classify the types of handlooms and explain any one in detail. 8
OR
(c) What are the functions of heald shafts? 4
(d) Classify motions of weaving and explain any one in detail. 8
- IV (a) Briefly explain the picking mechanism of handloom with suitable sketch. 4
(b) Explain any two types of shuttles used in handloom industry with suitable diagrams. 8
OR
(c) Write a brief note about closed shed and crossed shed beating. 4
(d) Explain the rope-lever and weight let-off motion with suitable diagram. 8
- V (a) What is the weight of 180 kilometers of $24^S Nf$ Cotton yarn? 4
(b) (i) The weight of 600 yards of a worsted yarn was found to be 12 grammes, what is its count? 4
(ii) If 240 yards of Linen yarn weights 1.0 ounce, what is its count? 4
OR
(c) How much 765 metres of $34^S Nf$ cotton yarn will weigh? 4
(d) (i) 45 yards of cotton yarn was found to weigh 5 grains, calculate the count in decimal system. 4
(ii) A bundle contains 10 pounds of 40^S cotton yarn. What is the length of yarn in the bundle? 4

P.T.O.

- VI (a) Convert 24^S Nf. Cotton count to Ne. cotton count.
(b) (i) Derive conversion factor to convert Ne to Decimal system.
(ii) Convert 40^S Ne. cotton count to Decimal system.

OR

- (c) Convert 60^S Decimal count to Ne. cotton count.
(d) (i) Derive conversion factor to convert New English cotton to Metric system.
(ii) Convert 80^S Ne. cotton count to Metric System.

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DIPLOMA IN HANDLOOM AND TEXTILE TECHNOLOGY
SECOND SEMESTER (2011- REGULATION) EXAMINATION -NOV/DEC-2016
2.1 WEAVING TECHNOLOGY AND TEXTILE CALCULATION - I

Time: 3 Hours

Max.Marks: 80

PART - A

- I. Answer the following questions in two or three sentences. (2X10=20)
- Why do handlooms prefer hank yarn?
 - What are the objectives of sizing?
 - Mention important functions of the reed.
 - Name different types of shed.
 - What do mean by picking motion?
 - List down the secondary motions.
 - What are the different systems of numbering yarn?
 - What is the length and weight unit of English Cotton system of yarn numbering?
 - What do you mean by conversion factor?
 - What is the conversion factor for converting cotton yarn count in Ne system into spun silk in indirect system of yarn numbering?

PART B

- II. Answer all the questions in detail (4+8) x 5 = 60
- Discuss about various forms of yarn packages. (4)
 - Explain with a neat sketch the working of the Horizontal Sectional Warping machine (8)
- (OR)
- What are different sizing ingredients used in sizing? (4)
 - Explain the method of street sizing adopted in the handloom industry. (8)
- III. A) What are the different motions of handloom? (4)
- B) Explain with neat sketch any two sheds used in weaving. (8)
- (OR)
- Compare the advantages and disadvantages of pitloom and frameloom. (4)
 - Explain with a neat sketch the passage of warp in a loom. (8)
- IV. A) Explain in brief about the different auxiliary motions used in handloom. (4)
- B) With the neat sketch explain the take-up motion used in handloom. (8)
- (OR)
- What are the different types of picking motion used in handloom? (4)
 - With the neat sketch explain let-off motion used in handloom. (8)

- V. A) Write down the formula for calculating count, length in hanks in English Cotton system. (4)
- B) A bunch of cotton yarn contains 5 hanks of 20^s (Ne) cotton, 9 hanks of 36^s worsted, 15 hanks of 60^s spun silk. Find out the weight of the bunch of yarn in lb. (8)
- (OR)
- C) Write down the formula for calculating the count and weight in grams in the Universal Tex system of yarn numbering (4)
- D) If 1500 silk warp threads each measuring 30 meters and weighs 100 grams, what is the count in Denier Metric system? (8)
- VI. A) What is the formula for converting the cotton yarn count in Ne system into worsted yarn. (4)
- B) Convert Cotton yarn count 60^s Ne into worsted system. (8)
- (OR)
- C) Write down the formula for converting the count of the polyester yarn expressed in Tex system into Denier Metric system. (4)
- D) Convert 20 Denier Metric count into Universal Tex system (8)

Answer - 1

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DIPLOMA IN HANDLOOM AND TEXTILE TECHNOLOGY

SEMESTER EXAMINATION APRIL/MAY-2017 (2011 REGULATION)

Time : 3 Hours
II SEMESTER

Max. Marks : 80

2.1 WEAVING TECHNOLOGY & TEXTILE CALCULATION - I

Part - A

(Answer all the questions within two to three sentences)

2 x 10=20 Marks

- 1 What are the objects of pirn winding?
- 2 Name the different forms of yarn packages used in Handloom.
- 3 What are the main difference between throw shuttle pit loom and fly shuttle pit loom.
- 4 What are the two main functions of Healds used in Handloom?
- 5 Name the different types of reeds.
- 6 Mention the important functions of temple used in Handlooms.
- 7 Find out the weight in gram of one hank of 40^s Ne cotton yarn.
- 8 What is the weight unit and length unit of woolen yorkshire skein yarn numbering system?
- 9 Write the formula for converting the count from Indirect system to Direct system.
- 10 What do you mean by conversion factor?

PART-B

(4+8) x 5= 60 Marks

- 11 A) What are the characteristics of ideal sizing? (4)
B) Explain with the neat sketch the method of preparation of warp on a sectional warping. (8)
(OR)
C) Write short notes on common defects during sizing. (4)
D) What are the different sizing ingredients used in size mixture and their use? (8)
- 12 A) What are the important functions of Reed? (4)
B) Explain the different motions of Handloom weaving. (8)
(OR)
C) Draw a neat sketch of passage of warp in a Handloom. (4)
D) Explain the classification of closed shed with their advantages and disadvantages. (8)
- 13 A) Different between closed shed beating and cross shed beating. (4)
B) What are the different let of motions used in handloom? Describe rope-lever and weight let-off motion with suitable diagram? (8)
(OR)
C) Name the different types of shuttle used in handlooms and their uses. (4)
D) What is the objective of take-up motion? Describe the ratchet and pawl take-up motion with suitable diagram. (8)

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- 14 A) If one bundle of cotton yarn contains 180 hanks and weigh 9 lb, what is the count of yarn? (4)
- B) (i) The count of 280 yards of worsted yarn was found to be 40^s worsted Calculate the weight in grams? (4x2=8)
(ii) Calculate the length of 80 grams of 20 denier silk yarn?
(OR)
- C) Calculate the count in linen of a yarn measuring 21600 yards and weighing 12 pounds. (4)
- D) (i) Calculate the weight of 2500 metres of Acetate Rayon yarn whose count is 75 Denier? (4x2=8)
(ii) Calculate the count in Tex system of 4 grams of cotton yarn whose length is 360metres.
- 15 A) Convert 60^s Ne cotton count to worsted count. (4)
- B) Derive the conversion factor to convert from New English system to cotton metric system. (8)
(OR)
- C) Convert 42^s Nf cotton count to Ne cotton count? (4)
- D) Derive the conversion factor to convert from Denier metric count to Ne system? (8)

INDIAN INSTITUTE OF HANDLOOM TECHNOLOGY
BARGARH/FULIA/GUWAHATI/JODHPUR/SALEM/VARANASI/CHAMPA/KANNUR/KHTI GADAG/SPKMIHT VENKATAGIRI
DIPLOMA IN HANDLOOM AND TEXTILE TECHNOLOGY
ANNUAL/SEMESTER EXAMINATION APRIL/MAY 2018
(REGULATION -2014)

Year / Semester: **FIRST YEAR**

Time: 3 Hours

Subject: **(1.6) WEAVING TECHNOLOGY & TEXTILE CALCULATIONS-I**

Max. Mark: 80

PART A

Answer all questions within TWO or THREE sentences.

2 x 10 = 20

- 1) Mention the various form of sizing.
- 2) What are the essential characteristics of warp yarn?
- 3) List out the motions of handloom
- 4) Name any four types of shuttle used in handlooms.
- 5) Write two important functions of heald shaft.
- 6) What are the advantages of cross shed beating in handloom weaving?
- 7) Define New French (NF) System of yarn numbering.
- 8) What is the weight in grams per hank of 60^s worsted yarn?
- 9) What is the weight of one hank of 1^s Ne cotton yarn?
- 10) Write the formula for conversion of yarn count from Indirect system to Direct system.

PART B

Answer all the questions in detail

(4+8)x5=60

- 11) (A) What are the objectives of winding? 4
(B) Explain the method of preparation of warp on a sectional warping machine. 8
OR
(C) Write down the objectives and importance of warp sizing. 4
(D) Explain the various ingredients used in preparation of size paste with suitable example. 8
- 12) (A) What are the functions of sley (4 points)? 4
(B) With suitable diagram, explain the passage of warp yarn in Fly shuttle frame loom. 8
OR
(C) List out different types of Shed with line diagram. 4
(D) Explain the different motions of handloom weaving. 8
- 13) (A) Briefly explain the picking mechanism of handloom with suitable sketch. 4
(B) Explain any one type of let off motion used in handloom with suitable sketch. 8
OR
(C) What is reed? Write down its functions. 4
(D) Define take up motion, explain ratchet & pawl take up motion. 8

P.T.O.

- 14) (A) Determine the weight of 450 yards of linen yarn, whose count is 6 leas. 4
(B) The weight of 1000 metres of yarn is 10 grams. What is its count in following systems? 8
(i) Ne cotton (ii) Tex.

OR

- (C) Calculate the weight of 30 packages of yarn each containing 100 hanks of 20^s Cotton yarn. 4
(D) If 1250 meters of silk yarn weight 8 gms. What is the count of yarn in Denier metric system? 8

- 15) (A) Convert 80^s NF cotton count to Metric system. 4
(B) (i) Derive the conversion factor for converting NF cotton to Metric system. 4
(ii) Convert 60^s Decimal cotton count to Ne. cotton system. 4

OR

- (C) Convert 40^s Denier English Count to Denier Metric system. 4
(D) Derive the conversion factor for converting: 8
(i) New English cotton to Tex, (ii) Tex to Denier Metric

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BARGARH/FULIA/GUWAHATI/JODHPUR/SALEM/VARANASI/CHAMPA/KANNUR/KHTI GADAG/SPKMIHT VENKATAGIRI
DIPLOMA IN HANDLOOM AND TEXTILE TECHNOLOGY
ANNUAL/SEMESTER EXAMINATION APRIL/MAY 2018
(REGULATION-2011)

Year / Semester: **II Semester**

Subject: **(2.1) WEAVING TECHNOLOGY & TEXTILE CALCULATIONS-I**

Time: 3 Hours

Max. Mark: 80

PART A

(Answer all questions within TWO or THREE sentences)

2 x 10 = 20

- 1) What are the common defects during sizing?
- 2) What are the objectives of winding?
- 3) List out any three types of handlooms.
- 4) Name the auxiliary motions of handloom weaving.
- 5) What are the different types of shed formations?
- 6) Mention the important functions of reed.
- 7) What are the different systems of yarn numbering?
- 8) Write the formula for calculation of yarn count in Direct system.
- 9) What is the count of 100^S Ne in Tex system?
- 10) Convert 40^S worsted count to Ne cotton.

PART B

(Answer all the questions in detail)

(4+8)x5=60

- 11) (A) What are the objectives of warp winding? 4
(B) Explain various form of yarn packages in detail. 8
OR
(C) What are the different ingredients used in size mixing? 4
(D) Explain with neat sketch the method of street warp sizing. 8
- 12) (A) What are the primary motions in weaving? Explain. 4
(B) Write the name of various parts of handloom and their functions. 8
OR
(C) Write a note on centre closed shed and its advantages. 4
(D) Explain different types of shedding with line diagram. 8
- 13) (A) Name any two types of shuttles and discuss its suitability for weaving. 4
(B) What are the different types of Take-up motion used in handloom?
Describe any one Take-up motion with suitable diagram. 8
OR
(C) Name any two types of reed used in handloom industry. 4
(D) Explain in detail about auxiliary motions of handlooms. 8
- 14) (A) Calculate the length of 227 grams of 40^S cotton yarn. 4
(B) (i) If 1450 meters of silk yarn whose weight is 8 gms. What is the count of yarn in Denier Metric System? 4
(ii) Find out the length of 450 gms. of Nylon Yarn, whose count is 20 Tex. 4
OR
(C) What is the count of 600 yards of a worsted yarn, which is having weight of 12 gms. 4
(D) Calculate the weight in grams of a bunch of cotton yarn having one hank of 20^S , one Hank of 30^S and one hank of 40^S . 8

P.T.O.

- 15) (A) Convert 50 Tex count to denier metric system. 4
(B) Derive the conversion factor for converting count from Tex system to Denier metric. 8
OR 4
(C) Convert 40^s Ne cotton count in to Linen. 8
(D) Derive the conversion factor for converting Ne cotton to Linen system.

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DIPLOMA IN HANDLOOM AND TEXTILE TECHNOLOGY
SEMESTER (REGULAR & BACK PAPER) EXAMINATION-NOV./DEC.- 2018

Year / Semester: I Year

Time: 3 Hours

Subject Code & Name: 1.6 WEAVING TECHNOLOGY & TEXTILE CALCULATIONS – I Max.Marks:80

Part-A

2 X 10 =20 Marks

Answer all questions within TWO or THREE sentences.

1. Name any 4 forms of yarn packages.
2. Name any 3 types of sizing methods followed in the handloom industry.
3. Name primary motions of a handloom.
4. Name any two types of reversing motions followed in handlooms.
5. Name any two handloom products produced by using throw shuttle.
6. Name any two types of reed.
7. What are different systems of yarn numbering?
8. 1 hank of yarn weighs 1 pound. What is its count in New English system?
9. What is the conversion factor to convert from denier to tex?
10. Write the formula for conversion of yarn count from one indirect system to another.

Part-B

(4+8) X 5 =60 Marks

Answer all the questions in detail

11. A) Explain Winding of hank yarn by using charka. (4)
B) Explain the method of preparation of a warp by using horizontal sectional warping machine. (8)
(Or)
C) Write down the objectives of warp sizing. (4)
D) Explain street warp sizing followed in the handloom industry. (8)
12. A) Write short note about reed & its function. (4)
B) With a neat sketch explain the passage of warp in a multi – treadle handloom. (8)
(Or)
C) Name one handloom product each produced by using throw shuttle & fly shuttle handloom. (4)
D) Explain different types of shed formation and shedding devices. (8)

13. A) Draw the sketch of any two types of pickers used on handloom. (4)
B) Draw the sketch of a warp beam used on multi-treadle frame loom for producing furnishing fabrics and name their parts. (8)

(Or)

- C) Name one handloom product each produced by using closed shed beating up & crossed shed beating up technique. (4)
D) Draw the sketch of a fly shuttle handloom sley used for producing fine handloom products and name the parts. (8)
14. A) Determine the weight of 300 yards of linen yarn, whose count is 6 leas. (4)
B) The weight of 1000 metres of yarn is 10 grams. What is its count in following systems?
(i) New French system (NF) (ii) Tex system. (8)

(Or)

- C) Calculate the weight in pound of 10 hanks of 20^s Cotton yarn. (4)
D) Calculate the weight of 20 denier silk yarn in 30 packages. Each package containing 300mts of silk yarn. (8)
15. A) Convert 40^s Ne Cotton count to worsted system. (4)
B) (i) Derive the conversion factor for converting Ne cotton to NF system. (8)
(ii) Convert 80^s Denier polyester yarn to tex systems.

(Or)

- C) What is the resultant count of 2/80^s Ne cotton yarn. (4)
D) Derive the conversion factor for converting:
(i) New English Cotton to linen (ii) Tex to Denier metric (8)

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

Year / Semester : I Year

Time: 3 Hours

Subject Code & Name: 1.6 Weaving Technology & Textile Calculation – I

Max. Marks: 80

PART -A

10 x 2 = 20 Marks

1. State any two important characteristics of a cone .
2. Why sizing is required in warp yarn.
3. List any four types of handlooms.
4. Name any two types of reversing motions followed in handlooms.
5. Define the term Beating-up.
6. Write the uses of Poker rod in take -up motion in handloom.
7. Define indirect system of yarn numbering.
8. Define Milli Tex.
9. Write the formula to convert the count from Indirect system to Direct system of yarn numbering.
10. Convert 20 Tex into Denier.

PART-B

(4 +8) x 5 = 60 Marks

11. (A) Enlist the characteristics of good warping . (4)
(B) Explain the various ingredients used in preparation of size paste. (8)

(OR)

- (C) Explain pirn winding process from hank by using Charka . (4)
- (D) Explain method of preparation of warp sheet on a sectional warping machine. (8)

12. (A) Draw a sketch of the passage of warp in a frame loom. (4)
(B) Explain the different motions of handloom. (8)

(OR)

- (C) Name two handloom products each produced by using throw shuttle and fly shuttle handloom. (4)
- (D) Explain different types of sheds and shedding devices. (8)

P.T.O.

13. (A) List different types of shuttles and its suitability for weaving. (4)
(B) What is the objective of take up motion? Describe the Ratchet and pawl in take-up motion with suitable diagram. (8)

(OR)

- (C) Write short notes on merits and demerits of closed shed beating and cross shed beating. (4)
(D) What is the objective of let off motion? Draw the sketch of warp beam used on multi treadle frame loom for producing furnishing fabrics and name their parts. (8)
14. (A) Determine the weight of 300 yards of linen yarn whose count is 6 linen. (4)
(B) Calculate the weight of 20 Denier silk yarn in 30 packages. Each package containing 300 Meters of silk yarn. (8)

(OR)

- (C) Weight of 100 KM of yarn 10 kilograms find out count of yarn in Tex. (4)
(D) (i) Calculate the weight of 2500 meters of polyester yarn whose count is 60 Denier. (4)
(ii) Calculate the weight of 20000 yards of cotton yarn whose count is 30^s Ne. (4)
15. (A) Derive the conversion factor for converting Denier count to Ne English count. (4)
(B) Derive the conversion factor for converting a (i) Ne to Nf system (ii) Tex to Denier System. (8)

(OR)

- (C) Derive the conversion for converting worsted count to Tex system. (4)
(D) Derive the conversion factor for converting (i) Ne to Tex system (ii) Ne to Denier. (8)

Row (3)

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DIPLOMA IN HANDLOOM & TEXTILE TECHNOLOGY (REGULATION - 2014)

ANNUAL / SEMESTER EXAMINATION – NOV/DEC -2019

Year/Semester: I Year Back Paper

Time: 3Hours

Subject Code & Name: 1.6 WEAVING TECHNOLOGY & TEXTILE CALCULATIONS - I

Max. Marks: 80

PART-A

Answer all the questions within two to three sentences

(2×10=20 marks)

- 1 List the advantages of cone package.
- 2 State the importance of sizing of warp yarn.
- 3 What are the objectives of a lease rod?
- 4 What are auxiliary mechanisms in weaving process?
- 5 Write the advantages of metal reed.
- 6 List the different types of temple used in loom.
- 7 Define the term "Indirect yarn Count system"
- 8 Write the length and weight unit for milli tex.
- 9 Write the formula to convert the yarn count from one indirect system to direct system.
- 10 Covert 40 Ne into Denier system.

PART-B

(4+8) ×5=60 marks)

Answer all the questions in detail

- 11 A Draw the warp yarn preparatory process flow chart. (4)
B With schematic diagram, explain the pirn winding process using charka. (8)
(OR)
C Explain the characteristics of good warping (4)
D Discuss the various ingredients and their roles in sizing of warp yarn (8)
- 12 A Compare throw shuttle and fly shuttle handloom. (4)
B With schematic diagram, explain the process of fabric formation in fly shuttle loom. (8)
(OR)
C Explain the advantages and disadvantages of center closed shed and bottom closed shed. (4)
D With suitable diagram, explain any two types of heald reversing motions used in handloom. (8)

- 13 A List any four types of shuttles and its suitability for weaving into fabric. (4)
B Write short notes on different types of reed used in handloom with their suitability (8)

(OR)

- C List the merits and demerits of crossed-shed beat up (4)
D Explain the ratchet and pawl take up mechanism used in handloom. (8)
- 14 A Find the weight of 270 yards of 60s cotton yarn in gram. (4)
B If 240 yards of cotton yarn weigh 40 grains, what is the count of the yarn in (8)
(1) New English System (2) Nf system (3) Tex (4) Denier

(OR)

- C Calculate the count of yarn in Nf. If 100 metre of cotton yarn weighs 4 gram. (4)
D Calculate the count of polyester filament yarn in Tex and Denier system. (8)
If one meter length of yarn weighs 2 milligram.
- 15 A Derive the conversion factor to convert from metric count system to Decimal system. (4)
B Derive the conversion factor for the following (4+4)
i. Metric count system to Nf system.
ii. Worsted to Spun Silk system

(OR)

- C Derive the conversion factor to convert from New English count to Tex (4)
D Derive the conversion factor for the following (4+4)
i. Woollen Yorkshire Skein to spun silk.
ii. New French cotton count to Spun Silk system
