INDIAN INSTITUTE OF HANDLOOM TECHNOLOGY

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

DIPLOMA IN HANDLOOM & TEXTILE TECHNOLOGY

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

Time : 3 Hours **Max.Marks : 80**

I SEMESTER **1.1 ENGLISH**

Note :- This question paper has two parts, Answers of Part A should be written in the question paper itself and Part B in the answer book.

PART A (MARKS 60)

GRAMMAR

I. A) Underline the Nouns in the following sentences (5x ½ =2 ½)

i) Kindness is a noble virtue.

ii) India is populous country.

iii) The moon shines at night.

B) Insert suitable Adjectives in the following sentences: (5x ½ =2 ½)
(good, this, wild, several, young)

i) _____ elephants live in forests.

ii) Dhoni is a _____ cricketer.

iii) _____ book is very interesting.

iv) The manager has sent _____ letters.

v) _____ _____ boys are going towards the stadium.

C) Pick out the Pronouns in the following sentences: (5x ½ = 2 ½)

i) She will not sing in the function. _____

ii) They are looking forward for help. _____

iii) John and I will do the work together. _____

iv) It is ten o' clock now. _____

v) Try to complete the task yourself. _____

Contd.... 2

II. A) Fill in the blanks with correct Verbs: (5x ½ = 2 ½)

i) The pair of gloves _____ in the box. (is/are)

ii) Henry and Michel _____ good friends. (was/were)

iii) Hundred rupees _____ not enough for them. (is/are)

iv) Either Sheela or her sister _____ present here. (is /are)

v) The Captain as well as soldiers _____ in the parade. (was/were)

B) Identify the Adverbs in the following sentences: (5x ½ =2 ½)

i) My uncle drives the car carefully. _____

ii) You have not worked any sum today. _____

iii) It is too hot to go out. _____

iv) We should always speak the truth. _____

v) The students are fully prepared to face their exam. _____

C) Combine the following sentences with proper Conjunctions: (5x1=5)

i) He was very poor. He was happy.

_____

ii) We should walk fast. We may miss the train.

_____

iii) She must search the bag again. She cannot get back her lost key.

_____

iv) You were absent from the class many days. The Principal demanded an explanation.

_____

v) He is both honest and diligent.

_____

III. A) Choose the correct Prepositions: (8x ½ =4)

i) Our shoes are made _____ leather. (of/from)

ii) Prof. Sen has written a book _____ economics. (in/on)

iii) The old man died _____ pneumonia. (from/of)

iv) Please distribute the chocolates _____ the children. (between/among)

v) Rice sells _____ kilogram. (by/in)

vi) My uncle is _____ the Indian Army. (at/in)

vii) She has cut the bread _____ pieces. (into/in)

viii) They will return _____ 7 O' clock. (by/at)

Contd.... 3

B) Change the Voice of the following sentences: (6x1=6)

i) The Indian has won the match.

_____

ii) The work will be finished by us tonight.

_____

iii) Please take your seat.

_____

iv) Miss Jane teaches us English.

_____

v) They are playing football in the field.

_____

vi) Let your health be taken care of.

_____

C) Fill in the blanks with Articles (a, an, the) wherever necessary: (6x ½ =3)

i) She is _____ university student.

ii) _____ tea of Assam is famous.

iii) He lives at _____ Curzon Street.

iv) My father gave me _____ one-hundred rupee note this morning.

v) Dr. Ahmed is _____ M.S.

vi) Water is _____ liquid substance.

IV. A) Identify the following sentences as Simple/ Complex/ Compound: (6x ½ =3)

i) Health is wealth. _____

ii) God helps those who help themselves. _____

iii) Shakespeare was not only a poet but was a great dramatist also. _____

iv) We read so that we may learn. _____

v) Opening her bag she found the lost key. _____

vi) You have to study hard otherwise you may not succeed. _____

Contd.... 4

B) Underline the Verbs and state whether they are Transitive or Intransitive: (6x ½ =

i) The children are sleeping. _____

ii) My mother is cleaning the floor. _____

iii) She drives her car to office. _____

iv) He pushed the door from inside. _____

v) The birds flew away. _____

vi) My grandmother is very happy. _____

C) Identify the Parts of Speech of the underlined words in the following sentences: (10x ½ =5)

i) She is fond of classical music.

_____

ii) Rick spoke nicely while we listened.

_____

iii) Hurrah! We have won the match.

_____

V. A) Fill in the blanks with the Plural form of the nouns given within brackets: (5x ½ =2 ½)

i) The _____ (leaf) of this plant are very colourful.

ii) The _____ (knife) should always be kept out of reach from the children.

iii) We have seen many _____ (bus) in the terminus.

iv) There are many _____ (deer) in the zoo.

v) _____ (dictionary) are very helpful especially for the students.

B) Rewrite the following sentences using the correct form of the Verbs: (5)

i) We will visited the science exhibition tomorrow.

_____

ii) She speaks English fluently, does she?

_____

iii) A sports training camp have been inaugurated.

_____

iv) They are not playing cricket now, aren't they?

_____

v) Where is you going?

_____

Contd.... 5

VOCABULARY

C) Give the Synonyms of the given words: (5x ½ =2 ½)

i) Elevate : _____

ii) Knit : _____

iii) Yarn : _____

iv) Amend : _____

v) Weave : _____

VI. A) Write down the Antonyms of the given words: (5x ½ =2 ½)

i)Passive : _____

ii) Beautiful : _____

iii) Include : _____

iv) Coarse : _____

v) Fine : _____

B) Match the words in column A with their meanings in column B: (6)

A	B
i) conserve	a)reduce greatly
ii) incessant	b) small pieces
iii) ultra	c) preserve
iv) brittle	d) advanced
v) deplete	e) weak
vi) particles	f) continual

Contd.... 6

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FIRST SEMESTER **1.2 APPLIED MATHEMATICS**

Part – A

2 x 10=20 Marks

1 Evaluate the determinant $\begin{vmatrix} 2 & 4 & 2 \\ -1 & 2 & -1 \\ 3 & 5 & 3 \end{vmatrix}$

2 If $A = \begin{bmatrix} 1 & 3 \\ 1 & 4 \end{bmatrix}$ and $B = \begin{bmatrix} 1 & 2 \\ 3 & 4 \end{bmatrix}$, then find AB

3 Find the value of $\tan 75^0$

4 Find the value of $\frac{2\tan 15^0}{1+\tan^2 15^0}$

5 Find $\frac{dy}{dx}$, if $y = (x-1)^2$

6 Find $\frac{dy}{dx}$, if $y = \ln(\sqrt{x} + 1)$

7 Integrate : $\int e^{3x}\, dx$

8 Evaluate : $\int \cos ax\ dx$

9 If the distance between the points (3, a) and (6,1) is 5 then find the value of a.

10 Find the mode of the data
5, 3, 4, 3, 4, 5, 6, 4, 7, 6

PART-B **12 x 5= 60 Marks**

11 A) Evaluate $\begin{vmatrix} \sin^2\theta & \cos^2\theta & 1 \\ \cos^2\theta & \sin^2\theta & 1 \\ -10 & 12 & 2 \end{vmatrix}$ **(4)**

B) Solve by Cramer's Rule. **(8)**
$x + 2y + 3z = 6,\ 2x + 4y + z = 7,\ 3x + 2y + 9z = 14$

(Or)

C) Verify that $(AB)^T = B^T A^T$ where **(4)**
$A = \begin{bmatrix} 1 & 2 \\ 2 & 3 \\ 3 & 4 \end{bmatrix}$ $B = \begin{bmatrix} 2 & 3 & 0 \\ 1 & 2 & 3 \end{bmatrix}$

D) Find the inverse of the matrix $\begin{bmatrix} 1 & 2 & 3 \\ 2 & 1 & 1 \\ 1 & 1 & 2 \end{bmatrix}$ **(8)**

12 A) Prove that, $\frac{\cos A - \sin A}{\cos A + \sin A} = \sec 2A - \tan 2A$ **(4)**

B) Prove that, if $A + B + C = 180^0$ then, $\cot A \cdot \cot B + \cot B \cdot \cot C + \cot C \cdot \cot A = 1$ **(8)**

(Or)

C) Prove that, $\cot A - \tan A = 2\cot 2A$ **(4)**

D) Prove that, if $A + B = 45^0$, than $(1 + \tan A)(1 + \tan B) = 2$ **(8)**

P.T.O

13 A) Find the derivative of $\sqrt{x}\,(\sqrt{x} + 1)$ (4)

B) Find $\frac{dy}{dx}$, where y = In tan $(\frac{\pi}{4} + \frac{x}{2})$ (8)

(Or)

C) Fine the derivative of $\sqrt{ax^2 + bx + c}$ (4)

D) Find $\frac{dy}{dx}$, where y = $\frac{(x+1).\ln x}{\sqrt{x+2}}$ (8)

14 A) Evaluate: $\int (x^2 + \sqrt{x})^2\, dx$ (4)

B) Integrate : $\int x^2 \quad e^{ax} \quad dx$ (8)

(Or)

C) Evaluate: $\int (x+3)(2-x)dx$ (4)

D) Evaluate: $\int_{-1}^{2} (2x+1)(x-2)dx$ (8)

15 A) Solve the following simultaneous liner equation (4)
$5x - 3y = -30$
$2x + 4y = 70$

B) Show that the points (0, -1), (-2, 3), (6, 7) and (8, 3) are vertices of a rectangle. (8)

(Or)

C) Find the value of a, so that the points (1, 4), (2, 7), (3, a) are collinear (4)

D) Find the mean of the following distribution. (8)

C.I	4-8	8-12	12-16	16-20	20-24	24-28	28-32	32-36	36-40
Frequency	11	13	16	14	10	9	17	6	4

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I SEMESTER

1.3 APPLIED PHYSICS

PART-A (2x10=20 marks)

Answer all the questions within two or three sentences.

1) Write the dimensional formula of Force.
2) Convert 2.5 kg into milligrams.
3) What are the variable properties of a gas, which are measurable?
4) Convert 38^0 C into Kelvin.
5) What is the velocity of light in vacuum?
6) What is frequency of oscillation of a simple harmonic oscillator?
7) Define electrical capacity of a substance.
8) State Kirchhoff's first law for electrical circuits.
9) How the resistance change in conductors and semi conductors with rise in temperature.
10) Write truth table of 'OR' logical operation.

PART-B (4+8)x5=60 marks)

Answer all the questions in detail

11) A. What is derived physical quantity? Give 2 examples of it with their dimensions. (4)

B. Convert Newton into Dyne using dimension. (8)

(OR)

C. Write the fundamental units in MKS and CGS system of units. (4)

D. Check the correctness of the formula $v^2 = u^2 + 2as$ using dimensional analysis. (8)

12) A. Define coefficient of linear expansion of a solid due to rise in its temperature. (4)

B. State and explain Boyle's law for the expansion of gases. (8)

(OR)

C. Derive the ideal gas equation using Boyle's law and Charles's law. (4)

D. Derive the relation among the coefficient of linear, superficial and cubical expansion. (8)

P.T.O.

13) A. What is total internal reflection? (4)

B. With a neat diagram describe the formation of image and magnification in a simple microscope. (8)

(OR)

C. What is simple harmonic oscillation? Define its time period and amplitude of oscillation. (4)

D. Derive expression for the refractive index of the material of a prism. (8)

14) A. State Ohm's law. Describe the nature of the V-I curve for a pure resistor. (4)

B. Derive the expression for equivalent capacity of a group of capacitor connected in series. (8)

(OR)

C. Explain how Kirchhoff's law is used in Wheatstone bridge to find out unknown resistance. (4)

D. What is the equivalent resistance of a group of resisters connected in parallel? Derive the expression. (8)

15) A. What is the difference between a conductor and a semi conductor on the basis of their electrical conductivity. (4)

B. Explain with circuit diagram, how a P-N Junction diode is used as a full wave rectifier. (8)

(OR)

C. What are intrinsic and extrinsic semi conductors? (4)

D. Using a circuit diagram describe how a PNP transistor works in common base operation. (8)

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I SEMESTER **1.4 APPLIED CHEMISTRY**

Part – A

2 x 10=20 Marks

1 Define hardness of water. Mention its types

2 Write a short note on Catalyst with suitable example

3 Mention the two uses of Caustic Soda.

4 Write the chemical formula for Glauber's salt

5 Mention the two uses of bleaching powder.

6 Give the chemical formula of Sodium chlorite.

7 Sketch the structure of benzene.

8 Give the Saturated and Unsaturated compounds with suitable example.

9 Define Polymerisation

10 Define soap.

PART-B

(4+8) x 5= 60 Marks

11 A) Discuss about water softening process by calgon's method. (4)

B) Write in detail about Permutit (or) Zeolite process. (8)

(Or)

C) List out the general characteristics of catalyst. (4)

D) Mention the disadvantages of hard water. (8)

12 A) Write about the uses of H_2SO_4. (4)

B) Elaborate the properties and uses of sodium carbonate. (8)

(Or)

C) Write about the uses of caustic soda. (4)

D) Elaborate the physical and chemical properties of Na_2SO_4. (8)

13 A) Brief note on manufacturing of sodium hypo chlorite. (4)

B) Discuss about the detail manufacturing process of Hydrogen peroxide. (8)

(Or)

C) Discuss about the detail manufacturing process of Bleaching powder. (4)

D) Define solute, equivalent weight, atomic weight and molecular weight. (8)

PTO

14	A)	Give an example of following reactions, i) Substitution, ii) Addition.	(4)
	B)	Write the physical and chemical properties with uses of Naphthalene.	(8)
		(Or)	
	C)	Explain Cyclic and Acyclic compounds with suitable example.	(4)
	D)	Write the physical and chemical properties with uses of Benzene.	(8)
15	A)	Define Condensation polymerisation with suitable example.	(4)
	B)	Define Carbohydrates with its classification & example.	(8)
		(Or)	
	C)	Define addition polymerisation with suitable example.	(4)
	D)	Explain the cleaning action of soap.	(8)

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II SEMESTER **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)

PTO

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? (ii) Calculate the length of 80 grams of 20 denier silk yarn?	(4x2 =8)
		(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? (ii) Calculate the count in Tex system of 4 grams of cotton yarn whose length is 360metres.	(4x2 =8)
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)

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II SEMESTER

2.2 FABRIC STRUCTURE AND ANALYSIS - I

PART - A

(Answer all the questions within two to three sentences) **2 x 10=20 Marks**

1 Name any four draft orders used in Handloom.

2 How the chambre effect is produce in plain woven fabric.

3 What is warp face twill?

4 What change is required to produce the weave wavy twill along the cloth in the loom run with 2/2 regular twill.

5 Write the draft order followed to produce a diamond weave repeats on 8 ends & 8 picks.

6 Differentiate between satin & sateen weaves (any two).

7 The ends and picks required to produce a repeat of Devon Huck-a-back weave.

8 Which weave is formed perforation in the fabric?

9 What is the purpose of cloth analysis?

10 Give construction particulars of a Bed sheet or cotton saree.

PART - B

(4+8) x 5= 60 Marks

11 A) Write short notes on graphical representation of structure of a woven fabric. **(4)**

B) Construct the following weaves with their interlacing diagram. **(8)**

(i) 2/1 Warp Rib (ii) 3/3 Weft rib
(iii) 2/2 Mat (iv) 3/2 mat

(OR)

C) Write short notes on derivatives structure of plain weave. **(4)**

D) Construct a regular warp rib and a regular mat weave with drafting and peg plan. **(8)**

12 A) Construct all possible twill weaves on 4 threads. **(4)**

B) Construct a design repeat of wavy twill across by taking 3/3 twill as base with drafting and peg plan. **(8)**

(OR)

C) Construct a equal face twill on 6 thread. **(4)**

D) Construct a design repeat of a 3/3 Herringbone twill with drafting and peg plan. **(8)**

PTO

13	A)	Difference between regular satin and irregular satin weaves.	(4)
	B)	Construct a design of a diaper weave on 2/2 twill base with drafting and peg plan.	(8)
		(OR)	
	C)	Differentiate between Honey comb and Brighton Honey comb.	(4)
	D)	Construct a design of a brighton Honey comb on (16x16).	(8)
14	A)	Draw a repeat of a Huck-a-back weave on (6x6)	(4)
	B)	Construct a repeat of warp corkscrew weave on (9x9).	(8)
		(OR)	
	C)	Draw a repeat of Mock-leno weaves on (6x6).	(4)
	D)	Construct a repeat of a weft corkscrew weave on (9x9).	(8)
15	A)	Write any two methods to identify the direction of warp and weft.	(4)
	B)	Extract the Ends per inch & picks per inch, warp pattern & weft pattern from the sample supplied to you.	(8)
		(OR)	
	C)	Calculate the crimp percentage of warp and weft.	(4)
	D)	Extract a repeat of the weave, draft & peg plan from the sample supplied to you.	(8)

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II SEMESTER **2.3 MATERIAL SCIENCE & ENGINEERING MECHANICS**

Part – A

2 x10 = 20 Marks

1 Write down % of carbon in High Carbon Steel.

2 Define Alloy.

3 What is meant by equilibrium of body under action of three co-planner forces?

4 Define Newton's third law of motion.

5 Define Hooks law.

6 Define power and write down it's unit in MKS system.

7 Write down one example of Fusion welding.

8 Write down composition of Soft solder.

9 Write down formula for Mechanical advantage of Simple Machine.

10 Define Co-efficient of Friction.

PART-B **12 x 5= 60 Marks**

11 A) Write down quality of good Timber. **(4)**

B) Define seasoning of wood. Discuss Air or Natural seasoning in detail. **(8)**

(OR)

C) Write down difference between Thermo Plastic and Thermo setting plastics. **(4)**

D) Write down property and use of Cast iron. **(8)**

12 A) State Law or polygon of forces. **(4)**

B) Two forces T=12 Kgf and Q= 05 Kgf acting on a particle at an angle of 90° then find out magnitude of resultant force. **(8)**

(OR)

C) Explain Distance, Velocity and Acceleration and write down their units. **(4)**

D) A body start from rest then find out distance covered by body in 4th second of its journey if acceleration of body is 20 cm/sec^2. **(8)**

PTO

13 A) Define Elasticity and Plasticity. (4)

B) A Brass rod of 2 cm dia. and 150 cm length subjected to an axial pull of 400 Kg. Find out Stress, Strain and change in length if young modulus of rod material is 2×10^6 Kg/cm^2. (8)

(OR)

C) A force 40 N is applied on a body to move in 10 mtrs. in the direction of force, calculate the work done. (4)

D) Calculate the time required to raise 200 Kg mass up to a height of 100 mets. by a crane of power 20 Kilo watts. (8)

14 A) Write down name of important tools & equipments used in Electric Arc Welding. (4)

B) Define Green sand moulding in detail with neat diagram of various stages/steps. (8)

(OR)

C) Write down property of moulding sand. (4)

D) Discuss column Drilling machine with neat block diagram and give name of major parts. (8)

15 A) Define Velocity ratio of open belt drive system. (4)

B) In a lifting machine of efficiency 80% when an effort is applied by 10 mtrs. the load is lifted by 1 mtr. What effort will be required to lift a load of 700 Kg? (8)

(OR)

C) Define Levers and give type of Levers with example. (4)

D) A pulley 40 cm in diameter running at 1200 rpm is connected by means of open belt to another pulley of diameter 80 cm then calculate the speed of this pulley considering total slip of 5%. (8)

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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)

PTO

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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INDIAN INSTITUTE OF HANDLOOM TECHNOLOGY

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DIPLOMA IN HANDLOOM & TEXTILE TECHNOLOGY

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

Time : 3 Hours **Max.Marks : 80**

THIRD SEMESTER

3.1 WEAVING TECHNOLOGY & TEXTILE CALCULATIONS - II

Part – A **2 x 10=20 Marks**

1 What are the different types of dobbies used in Handloom?

2 Write the advantages of pit loom in Handloom weaving.

3 What are the objects of auxiliary motions?

4 What do you understand from reversing motions used in power loom?

5 What is eccentricity of slay.

6 Why seven wheel take up motion is preferred than five wheel take-up motion in power loom weaving.

7 What is the resultant count of 2/60's Ne cotton yarn.

8 What is the count of reed used, if the Ends per inch on reed 72 and denting 3 ends/dent.

9 A single worm of 350 r.p.m. drives a worm wheel of 40 teeth. Find the speed of worm wheel.

10 Importance of consideration of belt slippage in pulleys and belt drive calculation.

PART-B **12 x 5= 60 Marks**

11 A) With a neat sketch explain the passage of warp in a frame loom. (4)

B) Explain the working of barrel dobby with a neat sketch. (8)

(Or)

C) Prepare a lay-out of an Industrial Handloom unit with 50 looms. (4)

D) Explain the working of Lattice dobby with a neat sketch. (8)

12 A) Name the type of creel and their uses. (4)

B) With a neat sketch explain the passage of yarn in a Barber Colman spooler machine. (8)

(Or)

C) Write the advantages and disadvantages of early shedding. (4)

D) Explain the primary, secondary and Auxiliary motions of a power loom. (8)

P.T.O.

13 A) Compare the under pick and over pick mechanism. (4)

B) Explain the mechanism and working principle of a under pick mechanism with a neat sketch. (8)

(Or)

C) Write short notes on seven wheel take-up motion. (4)

D) Explain the timing & synchronization of primary motions. (8)

14 A) Calculate the count of the unknown component thread of a 2 fold yarn, if the count of the folded yarn is 18 tex, and that of the known component is 9 tex. (4)

B) A warp is composed of 36^s, $2/40^s$ and 40^s cotton yarn in the following proportion (8)

16 Hanks of 36^s yarn
2 Hanks of $2/40^s$ yarn
6 Hanks of 40^s yarn
What is the average count of the yarn.

(Or)

C) Write the short notes on Reed counting system. (4)

D) Calculate the total number of ends in the warp of the following particulars, (8)

Reed count = 40^s ST
Denting (Body) - 2 per dent
(Selvedge)- 4 per dent
Reed width = 50 inches (including 0.5 inches selvedge on each side)

15 A) A line shaft of a weaving shed makes 130 rpm. The diameter of the line shaft drum is 14 inches. If the diameter of the loom pulley is 10 inches, calculate the rpm of the loom. (4)

B) A wheel 'A' of 60 teeth is driven by a wheel 'B' of 40 teeth. On the same stud of 'B' a wheel 'C' is fixed of 80 teeth. The wheel 'C' is driven by a wheel 'D' of 30 teeth, fixed on a shaft making 240 rpm. Find the speed of wheel 'A'. (8)

(Or)

C) A double worm of 300 rpm drives a worm wheel of 300 teeth; calculate the speed of worm wheel. (4)

D) A pulley 'A' of 15 inches diameter having a speed of 200 rpm drives another pulley 'B' of 20 inches diameter by means of a belt. On the same shaft of pulley 'B' is fixed a pulley 'C' of 8 inches diameter driving another pulley 'D' of 123 inches diameter. Find the speed of the pulley 'D'. (8)

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

Time : 3 Hours **Max.Marks : 80**

THIRD SEMESTER **3.2 FABRIC STRUCTURE AND ANALYSIS - II**

Part – A

2 x 10=20 Marks

1 What is the difference between colour check and weave check?

2 Why distorted thread effect is called as imitation gauze or leno?

3 What is crepon bed ford cord?

4 Differentiate between bed ford cord and welt structure?

5 Write the order of picking of double width plain cloth?

6 How many shuttles are used for the manufacturing of plain tubular cloth?

7 What are the different methods of stitching in center stitch double cloth?

8 What are all the different effects, which can be created by using the principles of thread interchanging double cloth?

9 Write about the objectives of cloth analysis?

10 Write any two methods to identify the direction of warp and weft of a given sample?

PART-B **12 x 5= 60 Marks**

11 A) Create a stripe effect design by combining plain weave with twill weave? **(4)**

B) Make a design, draft, and peg plan for colour and weave effect produced by the combination of 4 dark and 4 light order of colouring for both warp and weft with a 2 Up and 2 down ($\frac{2}{2}twill$) weave? **(8)**

(Or)

C) What are all the effects produced by simple colour and weave combinations? **(4)**

D) Give the design, draft, peg plan for a warp way distorted design on a repeat of 14x14. Assume 4th & 11th ends are to be distorted over the respective picks? **(8)**

12 A) Write a short note on welt structures and its types? **(4)**

B) Create a design, draft, peg plan and cross section for a plain faced Bedford cord on alternate picks. The ratio of face cord ends to plain ends are 4:2? **(8)**

(Or)

C) Write about bed ford cord structures and its types? **(4)**

D) Draw the design, draft, peg plan and cross section for an ordinary welt structure with a repeat size of 6x10. Assume that the stitching ends float over 2 picks? **(8)**

P.T.O.

13	A)	Write about double width plain cloth?	(4)
	B)	Write detailed notes on double cloth and its classification with a line diagram?	(8)
		(Or)	
	C)	Explain about tubular cloth and its method of manufacturing?	(4)
	D)	Create a design, draft and peg plan for self stitched double cloth using following particulars Face weave – $\frac{2}{2}$ twill, Back weave- $\frac{3}{1}$ twill Ratio of face to back ends – 1:1, Ratio of face to back picks- 1:1	(8)
14	A)	Give short notes on center stitched double cloths?	(4)
	B)	With the help of suitable design explain about cloth interchanging double cloth?	(8)
		(Or)	
	C)	Differentiate between thread interchanging and cloth interchanging double cloth?	(4)
	D)	Write a short notes on center stitched double cloth and also construct graph design of center stitched double cloth using 2/2 twill design both for face and back?	(8)
15	A)	Write a short note on the method of cloth analysis and extracting technical details from a cloth sample	(4)
	B)	Analyze the given cloth sample and furnish the design , EPI and PPI?	(8)
		(Or)	
	C)	Give the construction particulars of a bed sheet?	(4)
	D)	Analyze the given cloth sample and mark design, draft and peg plan?	(8)

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DIPLOMA IN HANDLOOM & TEXTILE TECHNOLOGY
SEMNESTER (BACK PAPER) EXAMINATION-APRIL/MAY-2017 (2011-REGULATION)

Time : 3 Hours **Max.Marks:80**
III SEMESTER

3.3 CHEMICAL PROCESSING OF TEXTILES–I

PART– A

10x2=20 Marks

1 Write any two chemical properties of cellulosic fibers.
2 Define scouring and its need.
3 Define affinity and solubility.
4 Differentiate between dyes and pigments.
5 Define percentage expression.
6 Briefly write about percentage shade and M:L ratio.
7 Give classification of Vat dyes according to chemical constitution.
8 Differentiate between Vat and solublised Vat dyes.
9 What do you mean by M, H and ME brands in reactive dyes?
10 Write two advantages of bi-functional reactive dyes.

PART-B

12 x 5=60 Marks

11 A) What is the need of preparing grey cotton goods for dyeing and printing? (4)

B) Describe in detail the process conditions used for bleaching cotton with Hypo-chlorites. (8)

(Or)

C) Draw morphological structure of cotton with proper labeling. (4)

D) Write in detail about scouring of cotton with specific mention of chemical reactions involved. (8)

12 A) Define Chromophore and Auxochrome. (4)

B) Describe the sequence of operations generally used for preparation of cotton goods for dyeing and printing (8)

(Or)

C) Why some dyes are banned? (4)

D) Describe the working of J-box used for continuous bleaching of cotton goods to produce full white material. (8)

P.T.O.

13 A) What do you mean by In-grain dyes? (4)

B) Describe in detail the steps for dyeing of cotton with ice colours.)

(Or)

C) What do you understand by sulphur black tendering? (4)

D) Why the direct dyed goods suffer from poor washing fastness? Write notes on after treatments for improving fastness properties. (8)

14 A) Classify Vat dyes according to their method of application. (4)

B) Write in detail the method of applying solublised Vat dyes on cotton with functions of chemicals used. (8)

(Or)

C) How the presence of caustic soda and sodium hydro-sulphite is checked during vatting of Vat dyes? (4)

D) Describe in detail the steps used for application of Vat dyes on cotton with functions of chemicals used. (8)

15 A) What do you understand by the term hydrolysis of reactive dyes? (4)

B) Explain the pad-batch method of dyeing cotton fabrics with reactive dyes. (8)

(Or)

C) Briefly write about function of using cationic fixing agent for cotton dyed with reactive dyes. (4)

D) How will you apply bi-functional reactive dyes on cotton? Clearly write about time, temperature, pH and function of chemicals used. (8)

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DIPLOMA IN HANDLOOM & TEXTILE TECHNOLOGY

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

Time : 3 Hours **Max.Marks : 80**

THIRD SEMESTER **3.4 ECOLOGY AND POLLUTION CONTROL IN TEXTILE INDUSTRY**

Part – A

2 x 10=20 Marks

1 Mention the different layers of Atmosphere.

2 Define Radiation Pollution

3 What are the sources of air pollution in a Textile Industry?

4 What are secondary pollutants?

5 Define BOD.

6 What is TDS ?

7 What is coagulant? Give an example

8 What is sledge?

9 Define noise pollution.

10 Elaborate EMS and ISO.

PART-B **12 x 5= 60 Marks**

11 A) Write briefly about Stratosphere. **(4)**

B) Explain possible pollution in Textile industry. **(8)**

(Or)

C) Write briefly about Photochemical Smog and its consequences. **(4)**

D) Explain Greenhouse Effect and its consequences. **(8)**

12 A) Write short notes on causes of air pollution. **(4)**

B) Explain Air Quality Standards. Give the air quality standards in India. **(8)**

(Or)

C) Give the various sources of Air Pollution in Textile Mill. **(4)**

D) Explain the sources and the hazardous effect on man and environment for any four important air pollutants. **(8)**

13 A) How will you determine BOD? **(4)**

B) Explain the sources of waste water in wet processing. **(8)**

(Or)

C) What is the various measures to reduce water consumption in textile industry? **(4)**

D) Give the characteristics of waste water from Textile industries. **(8)**

P.T.O.

14	A)	Give two methods of removal of colour from Textile dye waste water.	(4)
	B)	Explain the design and working of effluent treatment plant.	(8)
		(Or)	
	C)	Discuss Solid Waste Management.	(4)
	D)	Describe briefly the various methods involved in sledge treatment.	(8)
15	A)	Define the term "Eco labels" with reference to textiles with suitable example.	(4)
	B)	Give the various sources of Noise pollution in textile industry and its ill effects.	(8)
		(Or)	
	C)	Write the objectives of ISO 14000.	(4)
	D)	Explain the new challenges towards achievements of rigid standards in Textile Processing Effluents.	(8)

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DIPLOMA IN HANDLOOM & TEXTILE TECHNOLOGY

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

Max. Marks : 80

Time : 3 Hours
IV SEMESTER

4.1 WEAVING TECHNOLOGY & TEXTILE CALCULATIONS - III

Part – A

2 X 10 = 20 Marks

1. Mention the function of weft-fork motion in a powerloom.
2. List out the object of auxiliary mechanism.
3. What is the object of Multiple Box Motion?
4. What are the different types of Drop Wire used in Warp Stop Mechanism?
5. Calculate the efficiency of a warping machine if its calculated rate of warping is 920 mtrs/minute, but actually producing 736 mtrs/minute of warp.
6. Total number of ends in a warp is 3000, calculate the number of sections to be made, if creel capacity is 250 bobbins.
7. 100 units of yarn found to weigh 130 units after sizing. What is the percentage of size put in the yarn?
8. Write a general formula for calculating an efficiency in the term of production.
9. Write the formula for calculating actual production of a power loom in meters.
10. What is the advantage of using sectional warping machine for warp preparation?

PART-B **12 x 5= 60 Marks**

11 A) Compare Loose Reed Motion and Fast Reed Motion. (4)

B) With neat diagram, explain the working principle of Loose Reed Motion. (8)

(OR)

C) List out the advantages of Centre Weft-Fork Motion with respect of Side Weft-Fork Motion. (4)

D) Explain the working principle of Side Weft-Fork Motion with suitable line diagram. (8)

12 A) Explain the principle of Cop Changing Mechanism of an automatic loom. (4)

B) Explain the working principle of Mechanical Warp Stop Motion with neat sketch. (8)

(OR)

C) Write short notes on an Automatic Loom and also mention the mechanism which makes its an automatic loom. (4)

D) Prepare a comprehensive lay out plan for a loom shed accommodating 50 power looms. Also mention the facilities which are necessary for the shed. (8)

13 A) A warping Beam made on a super speed warper contains 200 kgs. of warp wound on it. If the length of warp is 20,000 mtr and the total number ends in it is 400, calculate the Beam- count of the warp yarn. (4)

PTO

B) Calculate the quantity of yarn in pounds which will be required for a set of 6 Back-Beams to be produced on a Modern High Speed Beam Warper. The length of warp on each Back Beam is 24,000 yards and there are 462 ends on each Back Beam. The count of the yarn is 36^s cotton. Allow 1.5% for waste during warping. **(8)**

(OR)

C) The weight of warp on a beam made on a Modern High Speed Beam Warper is found to be 814 pounds. If the number of ends in the warp is 462 and the count of the yarn is 30^s cotton, calculate the length of the warp in yards on the beam. **(4)**

D) A Modern High Speed Beam Warping Machine is required to supply 50,000 mtrs. of warp with 3234 ends for a set of warp of Back Beams. The count of warp is 20 Tex. If the capacity of warping creel is 480, calculate the following: **(8)**

i) No. of Back Beams to be made
ii) No. of ends on each Back Beam.
iii) Weight of warp yarn on each Back Beam.

14 A) If 6 sections are to be made from a warp, which 27.5 inches wide in the reed, calculate the width Of each section. **(4)**

B) A warp containing 2800 ends is required to be sized to 20%. The length of the sized warp on the beam is required to be 1080 yards. If the count of unsized warp yarn is 40^s cotton, calculate the following: **(8)**

i) Weight of size to be put on the warp.
ii) The weight of sized warp.
iii) The count of the sized yarn.

(OR)

C) The total number of ends in a warp is 2700. Calculate the number of sections to be made and number of ends in each section, if creel capacity is 500 bobbins. **(4)**

D) An unsized warp of 800 mtrs. long is required to be sized to 25% on its weight. If the total number of ends in the warp is 3000 and the count of the yarn is 15 Tex. Calculate the following: **(8)**

i) The weight of size to be put on the warp.
ii) The weight of the sized warp.
iii) The count of the sized warp yarn.

15 A) Calculate the time required to wind 400 pounds of 12^s cotton yarn on 10 drums. The actual production per drum per minute is 560 yards. **(4)**

B) Calculate the length of the cloth which could be woven from a pirn containing 32 grams of 25 Tex. weft yarn, if the picks per centimeter in the cloth is 16 and the width of the warp in the reed is 80 centimeter. **(8)**

(OR)

C) Calculate the length of cloth produced in 9 hours on a loom which makes 200 picks per minute. The picks per inch in the cloth is 80 and the loom has an efficiency of 78%. **(4)**

D) The calculated rate of winding of a fully automatic Super Speed Winder is 980 yards per minute. Calculate the number of spindle that would be required to wind 30204 hanks of 20^s cotton yarn in 4 hours. Ignore wastage and assume that the efficiency is 90%. **(8)**

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DIPLOMA IN HANDLOOM & TEXTILE TECHNOLOGY

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

Time : 3 Hours **Max.Marks : 80**

4.2 FABRIC STRUCRURE & ANALYSIS

Part – A

10 x 2 =20 Marks

1 Draw thread interlacing diagram for Treble width cloth.

2 What type of wadding threads are introduced in Wadded double cloth?

3 How many series of ends and picks are used in Warp backed cloth.

4 How many ends and picks are required to construct Imitation Warp Backed cloth with $\frac{2}{2}$ twill as base weave.

5 How many picks are loose picks & fast picks in 4 pick terry?

6 Whether Velveteen is loop pile or cut pile.

7 What are the two techniques used in Terry Pile weaving?

8 Draw a repeat of thread interlacing diagram for 3 pick Terry.

9 Whether Corduroys are warp pile or weft piles?

10 What is the formula for calculating crimp percentage?

PART-B

12 x 5= 60 Marks

11 A) What are the different types of stitches used in Treble cloth? (4)

B) Construct Warp Wadded double cloth with $\frac{2}{2}$ twill for face & back cloth. (8)

(OR)

C) How many series of ends and picks are used in Weft Wadded Double cloth and what are they? (4)

D) Construct a stitched treble cloth with $\frac{2}{2}$ twill for face, centre and back. (8)

12 A) How many series of ends and picks are required for constructing a Imitation Backed cloth & what are they? (4)

B) Construct a Weft Wadded Warp backed cloth with 4 thread twill for face & back. (8)

(OR)

C) How many series of ends and picks are required for constructing warp Wadded Weft Backed cloth and What are they? (4)

D) Construct a Imitation Warp backed cloth with base 2/2 twill weave. (8)

PTO

13	A)	What are the classification of pile fabrics?	(4)
	B)	Construct a Velvet weave for insertion of pick & wire simultaneous with thread interlacing diagram	(8)
		(OR)	
	C)	What is the production technique followed for manufacturing Velveteen fabrics?	(4)
	D)	Construct Velvet weave to produce Velvet with 'W'-binding with thread interlacing diagram.	(8)
14	A)	Construct Corduroy weave.	(4)
	B)	Construct Twill Backed Velveteen with thread interlacing diagram.	(8)
		(OR)	
	C)	Construct design of 5 pick Terry structure.	(4)
	D)	Explain Terry pile formation on both sides with the help of three pick terry.	(8)
15	A)	What are the objectives of cloth analysis?	(4)
	B)	Analyze the weave in the given sample.	(8)
		(OR)	
	C)	10 cm x 10 cm sample weighs 2 gms. Calculate the GSM of fabric.	(4)
	D)	Extract the ends and picks per inch from the given sample.	(8)

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DIPLOMA IN HANDLOOM & TEXTILE TECHNOLOGY

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

Time : 3 Hours **Max.Marks : 80**

FOURTH SEMESTER **4.3 CHEMICAL PROCESSING OF TEXTILES - II**

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. (i) Curtain cloth (ii) Carpet (iii) Shirt	(8)
		(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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DIPLOMA IN HANDLOOM AND TEXTILE TECHNOLOGY

SEMESTER EXAMINATION APRIL/MAY-2017 (2011 REGULATION)

Time : 3 Hours **Max. Marks : 80**

IV SEMESTER 4.4 PROFESSIONAL ETHICS & PERSONALITY DEVELOPMENT

Part – A

(Answer all the questions within two to three sentences) **2x10 = 20 Marks**

1 Define – Profession & professional?

2 What is Moral dilemma?

3 What is the meaning of Safety Engineering?

4 Give two differences between Power & Authority.

5 What is discrimination?

6 Define Communication.

7 What is Body language?

8 What are the two main channel of Communication?

9 What is Self Esteem?

10 Define Multi National Corporate (MNC)

PART-B

(4+8) x 5= 60 Marks

11 A) Explain the Responsibilities of an employee in an Organization. (4)

B) What is ethics? Explain different types of Ethics. (8)

(Or)

C) State the difference between Moral, Values & Ethics. (4)

D) What is Civic Virtue? Explain its importance. (8)

12 A) Write short Notes on: (4)
1. Courage 2. Accountability.

B) Explain - Respect for others & Respect for Self. (8)

(Or)

C) Explain the Work place Spirituality. (4)

D) Explain the Moral Development theory of Lawrence Kohlberg & Caral Gilligan? (8)

13 A) Explain Safety & Risk? (4)

B) What are the different types of Accidents? Explain one in detail. (8)

(Or)

C) Explain the Relation between the LAW & ETHICS. (4)

D) Explain the Role of Morally Responsible Engineer? (8)

PTO

14	ı	A)	A)	difference between Attitude & Values.	(4)
	I	B)	B)	ıaracteristics of Attitudes?	(8)
				(Or)	
	(	C)	C)	ıportance of Goal setting in One's life.	(4)
	I	D)	D)	·e steps towards the active Career Planning.	(8)
15	/	A)	A)	Barriers to Effective Communication?	(4)
	E	B)	B)	ıportance of communication?	(8)
				(Or)	
	(	C)	C)	ıntage & disadvantage of Written Communication.	(4)
	I	D)	D)	Essential qualities of a good Business Letter?	(8)

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DIPLOMA IN HANDLOOM & TEXTILE TECHNOLOGY

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

Time : 3 Hours **Max. Marks : 80**

FIFTH SEMESTER

5.1 WEAVING TECHNOLOGY & TEXTILE CALCULATION – IV

Part – A

2 x 10=20 Marks

1 Name a few shuttle less looms.

2 What is the form of weft yarn used in shuttle less looms?

3 What is the type of shed formed in single lift Single Cylinder Jacquard?

4 What is the functions of lingoe in jacquard weaving.

5 How many threads being operated by a hook in Inverted Hook Jacquard in weaving figured terry weave?

6 What are the advantages of Cross Border Jacquard in Fabric weaving?

7 Write down the Pierce's formula for calculating diameter of cotton yarn in inch.

8 What do you understand by the term 'Relative Diameters' of yarns?

9 What do you mean by 'Balanced Cloth'?

10 Differentiate 'Fractional Cover' with that 'Total Cover' of a fabric.

PART-B

12 x 5= 60 Marks

11 A) Write a brief note on advantages of shuttle less weaving. (4)

B) Discuss in sequence the weft insertion technique in Air Jet Loom. (8)

(Or)

C) Compare the advantages of shuttle less weaving with that of Shuttle Weaving in Powerloom Weaving. (4)

D) With a neat line diagram explain the mechanism of weft insertion in a Rapier loom. (8)

12 A) Discuss in brief the merits and demerits of Double Lift Double Cylinder Jacquard with that of Single Lift Single Cylinder Jacquard Weaving. (4)

B) With a suitable sketch explain the working mechanism of Single Lift Single Cylinder Jacquard Weaving. (8)

(Or)

C) Narrate the advantages of use of Comber Board in Figured Double cloth weaving. (4)

D) With a neat sketch explain the working principle of Double Lift Double Cylinder Jacquard Weaving. (8)

P.T.O.

13 A) Compare the mechanism of Inverted Hook Jacquard weaving with that of Double Lift Double Cylinder Jacquard. **(4)**

B) With a neat diagram explain the working principle of Cross Border Jacquard Weaving. **(8)**

(Or)

C) Explain the main features of an electronic jacquard. **(4)**

D) With the help of a line sketch explain the working principles of inverted hook jacquard weaving. **(8)**

14 A) By taking the specific volume of yarn as 1.1 cubic cm. per gram derive the constant for calculating cotton yarn diameter in inch as per Peirce's Rule. **(4)**

B) Calculate the diameter in inch of the following yarns as per Asherhurst's Rule: **(8)**

i) 60^s cotton yarn ii) 60^s worsted yarn

(Or)

C) By taking the specific volume of yarn as 0.6713 cubic inch per gram derive the constant for calculating cotton yarn diameter in inch as per Peirce's Rule. **(4)**

D) Calculate as per the Peirce's Rule the count of the following cotton yarns, whose diameter are as under. **(8)**

i) $\frac{1}{89}$ inch ii) $\frac{1}{280}$ inch

15 A) Derive the formula for calculating warp and weft fractional cover and cover factor as per Peirce's Rule under Indirect system. **(4)**

B) A cloth is made of 30^s cotton warp and weft yarns contain 50 ends and picks per inch. Assuming that it is required to produce a new texture, but to be $1/10^{th}$ higher, what count of yarns and threads per inch will be required. **(8)**

(Or)

C) With a suitable line diagram explain the term "square plain structure". **(4)**

D) A cloth is made of 60^s warp and weft yarns with 84 ends and picks per inch. Assuming that it is required to produce a new texture but to be $1/10^{th}$ heavier, what count of yarns and threads per inch will be required. **(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**

V SEMESTER **5.2 FABRIC STRUCRURE & ANALYSIS- IV**

PART - A

(Answer all the questions within two to three sentences) **2 x 10=20 Marks**

1 Name the special heald used for leno weaving.

2 Name the fabric produced by using leno weaving.

3 What are the two series of warp used in leno weaving?

4 Mention the denting order/method for leno weaving

5 What is the suitable count of graph paper for weaving 100 EPI & PPI?

6 What is the special jacquard system used in Damask weaving ?

7 How many series of warp and weft used to produce Patent satin?

8 Name the series of warp and weft used to produce Pique fabric.

9 Write the formula for calculating Crimp percentage

10 Write any two factors involved in costing of fabric

PART - B

(4+8) x 5= 60 Marks

11 A) Draw the different doup healds with neat sketch (4)

B) Explain the different shed formation in leno weaving with neat sketch (8)

(OR)

C) Draw the pointed draft in leno weaving. (4)

D) Explain the method of producing crossover effect in leno weaving. (8)

12 A) Explain the functions of Easer motion in leno weaving. (4)

B) Explain the method of producing check effect in leno weaving (8)

(OR)

C) Explain the type's leno fabrics. (4)

D) Explain the differences between Gauze and Leno (8)

13 A) Draw the different counts of point paper with figure (4)

B) Construct the figured weft backed structure on 40 ends and picks by using 5 thread twill for both side binding (8)

(OR)

C) Write the differences between warp and weft backed fabrics. (4)

D) Explain the method of producing Damask by using healds and jacquard combination. (8)

PTO

14 A) Describe the production of Patent satin. (4)

B) Explain the method of producing Patent satin with working comber board method. (8)

(OR)

C) Write the differences between loose and fast back pique structures (4)

D) Construct the structure of figured pique on 36 x 36 by using 12 x 9 guide design. (8)

15 Analyse the given sample and give the following details -

A) EPI &PPI (4)

B) Weave (8)

(OR)

C) Crimp percentage of warp and weft (4)

D) Estimate the weight per square metre of the given sample (8)

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DIPLOMA IN HANDLOOM AND TEXTILE TECHNOLOGY

SEMESTER EXAMINATION APRIL/MAY-2017 (2011 REGULATION)

Time : 3 Hours **Max. Marks : 80**

V SEMESTER **5.3 CHEMICAL PROCESSING OF TEXTILES-III**

PART - A

(Answer all the questions within two to three sentences) **2 x 10=20 Marks**

1 Write the conditions required for PET Heat setting using Hot air stenter

2 Write the role of thickener in thermosol dyeing technique.

3 Write the limitation of Beam dyeing machine.

4 Draw the sequence of process for P/C preparatory process.

5 Write any two properties of disperse dyes.

6 List out the dyes suitable for Acrylic fibre.

7 Name any two discharging agent used in printing.

8 List out the various methods of Transfer Printing.

9 Name the chemicals used for screen making for flatbed screen printing machine.

10 Write the conditions required for curing of pigment printed goods.

PART - B

(4+8) x 5= 60 Marks

11 A) Brief on various techniques of PET dyeing. **(4)**

B) Explain in detail the dyeing of PET fabric using HTHP technique with recipe. **(8)**

(OR)

C) Write the various objectives of Heat Setting process. **(4)**

D) PET is difficult to dye: Justify the reason based on chemical and physical structures. **(8)**

12 A) Brief on machinery suitable for synthetic fibre knitted fabric **(4)**

B) Explain in detail the working process of Beam Dyeing machine with neat line diagram. **(8)**

(OR)

C) How do you prepare P/V fabric for dyeing with good dimensional stability property? **(4)**

D) Explain on various dyeing defect's causes and remedies in Jet dyeing machine. **(8)**

13 A) Write the conditions required for dyeing of Nylon 6 with Reactive dyes. **(4)**

B) How do you perform dyeing of Nylon with metal complex dyes? Give typical recipe. **(8)**

(OR)

C) Listed out the properties of cationic dyes **(4)**

D) Differentiate Nylon 6 & 66 with respect to structure and dyeability. **(8)**

PTO

14	A)	Brief on styles and methods of printing.	(4)
	B)	Explain in detail the advantages and limitation of Rotary printing.	(8)
		(OR)	
	C)	List out the limitations of Transfer Printing.	(4)
	D)	Differentiate Resist and Discharge style of printing.	(8)
15	A)	Brief on various stages of screen making for rotary	(4)
	B)	Explain in detail the various methods of fixation technique in printing	(8)
		(OR)	
	C)	Write the importance of soaping in printing.	(4)
	D)	Explain on role and impact of concentration in urea and thickeners usage in printing	(8)

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DIPLOMA IN HANDLOOM AND TEXTILE TECHNOLOGY

SEMESTER EXAMINATION APRIL/MAY-2017 (2011 REGULATION)

Time : 3 Hours **Max. Marks : 80**

V SEMESTER **5.4 PRINCIPLES OF TEXTILE TESTING**

PART - A

(Answer all the questions within two to three sentences) **2 x 10=20 Marks**

1 Define standard deviation.

2 Arrange the following in ascending orders of standard moisture regain:-
Cotton, Silk, Nylon, Jute, Polyester, Viscose and Wool

3 40^s cotton yarn in wet state will appear as 36^s or 44^s. Justify your answer.

4 Show S and Z directions of twist.

5 Why the dials of pendulum lever tensile testing instruments are unevenly spaced?

6 Define the terms; stress and strain.

7 Name and outline a process which is used for controlling pilling tendency in cotton fabrics.

8 Name two varieties of textiles were measurement of "bursting strength" is essential.

9 Outline the process of shrinkage in cotton fabrics.

10 Differentiate between quality control and quality assurance.

PART - B

(4+8) x 5= 60 Marks

11 A) Mention necessary precautions to be observed during sampling for fabric tensile strength. **(4)**

B) Describe with a suitable example the steps involved in determination of CV percentage. **(8)**

(OR)

C) Differentiate between absolute and relative humidity's. **(4)**

D) Explain the impact of moisture regain on mechanical and electrical properties of textiles with **(8)**

12 A) What are the advantages of using Knowles Balance for measurement of count? **(4)**

B) Describe the Process of determining warp and weft count in fabric swatches. **(8)**

(OR)

C) What are the functions of twist in yarn structure? **(4)**

D) Explain measurement of twist using "Straightened Fiber Method". **(8)**

13 A) Define the terms – elastic limits and work of rupture. **(4)**

B) Describe the principle of "IP testers" for tensile measurements. **(8)**

(OR)

C) Describe the analysis of "Load – Elongation Curves" **(4)**

D) Describe the working of "Lea Strength Tester" with suitable diagram. **(8)**

PTO

14	A)	Differentiate between tensile and tearing strengths.	(4)
	B)	What do you mean by serviceability? Explain different types of abrasion	(8)
		(OR)	
	C)	Prepare a list of factors affecting pilling tendency in woolen fabrics.	(4)
	D)	Describe mechanism of crease formation in cotton fabrics along with the process of CRA	(8)
15	A)	Describe the role of yarn crimp in fabric structure.	(4)
	B)	Explain measurement of crimp percentage using Shirley crimp tester.	(8)
		(OR)	
	C)	Define TQM.	(4)
	D)	Write a note on inspection and grading in a Garment export house.	(8)

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DIPLOMA IN HANDLOOM AND TEXTILE TECHNOLOGY

SEMESTER EXAMINATION APRIL/MAY-2017 (2011 REGULATION)

Time : 3 Hours **Max. Marks : 80**

VI SEMESTER 6.1- WEAVING TECHNOLOGY AND TEXTILE CALCULATION-V

PART – A

(Answer all the questions within two to three sentences) **2 x 10=20 Marks**

1 Name any two traditional silk handloom sarees.

2 Name any two traditional tie & dye fabrics.

3 Mention any two differences between London harness tie and Norwich harness tie.

4 Name any two design harness ties.

5 Name any two factors that are responsible for increasing or decreasing the weight of the fabric.

6 If the count of the fabric is changed into coarser, how will you maintain the same level of the compactness?

7 Write the formula to calculate total number of ends in the body of the warp sheet.

8 Mention two examples of wastage in weaving.

9 What do you mean by costing of fabric?

10 What is the difference between cost price and selling price of the fabric?

PART-B

12 x 5 = 60 Marks

11 A) Describe briefly warp tie and dye weaving technique. (4)

B) With the help of diagram explain technique used in Traditional Banaras Saree weaving. (8)

(OR)

C) Describe briefly weft tie and dye weaving technique. (4)

D) Explain in detail about the technique used in weaving Traditional Kancheepuram Saree. (8)

12 A) Briefly explain the London tie used in harness building on handloom. (4)

B) With a suitable diagram explain **any one of** the design harness tie used in handloom. (8)

(OR)

C) A 400 hook jacquard is mounted on 50 inches wide loom. The proposed harness sett is 40. How many harness cords are to be tied up on each hook? (4)

D) A harness is tied up with 72 sett on a 400 hundred hook jacquard loom and it is required to produce 64 warp sett. Prepare casting out plan. (8)

13 A) A cloth is woven with 72 ends per inch of 60^s cotton. Calculate ends per inch in the new fabric if the count is to be changed into 80^s cotton so as to maintain same level of the compactness. (6)

B) A cloth is woven with 28 ends per cm of 10 Tex yarn. Calculate ends per cm in the new fabric if the count is to be changed into 20 Tex. (6)

(OR)

C) A cloth is woven with 32 ends per inch using 10^s cotton yarn. What count of the yarn is to be used to have 24 ends per inch to get the same compactness? (6)

D) A cloth is woven with 12 ends per cm using 60 Tex yarn. What count of yarn is to be used to have 20 ends per cm? (6)

14 A) Calculate the weight of warp and weft in lb required to produce 1000 yards of fabric with the following particulars :- (12)

Count of warp and weft - 40^s x 40^s
Ends per inch and picks per inch – 60 x 52
Warp crimp and weft crimp – 5% & 6% respectively
Width of the fabric – 36"
Selvedge - ½ inch on both sides 4 ends are drawn per dent

(OR)

B) Calculate the weight of warp and weft required in kg to produce silk fabric measuring 100 metres with following particulars :- (12)

Count of warp and weft - 20 Denier x 20 Denier.
Ends per cm and picks per cm – 48 x 40
Warp crimp and weft crimp – 5% & 6% respectively
Width of the fabric – 90 cm
Selvedge - 0.5 cm on both sides 4 ends are drawn per dent

15 Calculate selling price per metre of the fabric by considering the following particulars :- (12)

Cloth length – 100 meters	
Weight of warp consumed including wastage	- 3.350 kg
Weight of weft consumed including wastage	- 3.515 kg
Cost of warp yarn	- Rs. 280 per kg
Cost of weft yarn	- Rs. 250 per kg.
Warp preparatory charges	- Rs. 50/- per kg
Weft preparatory charges	- Rs. 40/- per kg.
Dyeing charges for warp and weft	- Rs. 80.00 per kg.
Weaving charges	- Rs. 15 per metre.
Overhead charges	- @ 15% on the base cost
Margin profit	- 30%

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DIPLOMA IN HANDLOOM & TEXTILE TECHNOLOGY

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

Time : 3 Hours
VI SEMESTER

6.2 – FABRIC STRUCTURE - Analysis **Max.Marks : 80**

PART– A

10x2=20 Marks

1 Name two different colours of warp and weft to produce 4 colour effects of Double cloth

2 What is the total ends per repeat achieved if 240 needle inverted hook jacquard with healds is used for producing Figured Terry?

3 What is the use of Reversible and Non - Reversible Tapestry?

4 Name the jacquard technique used for weaving modern Tapestry.

5 What are the different styles of arranging Extra Warp and Extra Weft figuring .

6 What are the different methods of anchoring Spot effect of Extra Warp and Extra Weft .

7 How do you identify Banaras Saree and Kancheepuramsaree?

8 How do you identify PaithaniSaree and Jamdhanisaree?

9 How do you calculate total ends per repeat of jacquard fabric sample supplied?

10 How do you calculate total picks per repeat of jacquard fabric sample supplied?

PART-B

12x5=60 Marks

11 A) Name different jacquard techniques used for producing figured Terry Pile fabric (4)

B) Explain the loom technique and drafting order (any one) used for weaving Figured Double cloth. (8)

(Or)

C) Name different jacquard techniques used for producing figured Double cloth (4)

D) Explain the loom technique and drafting order (any one) used for weaving Figured Terry Pile fabric. (8)

12 A) Indicate any two weaves of 3 picks Weft Tapestry. (4)

B) Draw weft interlacing diagram of any two weaves of 4 picks Weft Tapestry. (8)

(Or)

C) Indicate any two weaves of 4 picks Weft Tapestry. (4)

D) Draw weft interlacing diagram of any two weaves of 3 picks Weft Tapestry. (8)

P.T.O.

13	A)	Explain different methods of anchoring of Extra Weft figuring (any two).	(4)
	B)	Taking guide graph in 16 X 16, indicate its complete structure of Extra Warp figuring with 1 Ground and 1 Figuring order in 32 ends X 16 picks.	(8)
		(Or)	
	C)	Explain different methods of anchoring of Extra Warp figuring (any two).	(4)
	D)	Taking guide graph in 16 X 16, indicate its complete structure of Extra Weft figuring with	(8)
14	A)	Mention Count, Threads/", Dimension and weaves of Dress material woven in your region.	(4)
	B)	Write down 8 salient features of Banaras Saree (or) Kancheepuram Saree.	(8)
		(Or)	
	C)	Mention Count, Threads/", Dimension and colours of Furnishing woven in your region.	(4)
	D)	Write down 8 salient features of PaithaniSaree (or) JamdhaniSaree.	(8)
15		Analyze the give sample to extract the following particulars: A. Ends per inch and Picks per inch B. Weave, Draft and Peg-plan	(2) (6+2+2)

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DIPLOMA IN HANDLOOM & TEXTILE TECHNOLOGY

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

Time : 3 Hours **Max.Marks : 80**

VI SEMESTER

6.3 CHEMICAL PROCESSING OF TEXTILES-IV

PART– A

10 x 2=20 Marks

1 What is the role of mild oxidizing agent in polyester printing?

2 Write the printing sequence (only) of any method of Reactive printing for cotton.

3 What is the role of catalyst in pigment printing?

4 What is the important weighting agents used in finishing process?

5 What is the role of Solvent used in printing of silk using metal complex?

6 Write the names of states where Batik printing is practicing.

7 Write the process conditions for Mercerization of cotton material.

8 Write the names of machines used in mechanical finishes.

9 Write the three disadvantages for not using Eco-friendly process.

10 How do you identify Reactive dyes on textile material?

PART-B

12 x 5= 60 Marks

11 A) Write the detail process of printing using Reactive dyes with pad batch (Silicate) process of printing. **(8)**

B) What are the salient features of pigment printing? **(4)**

(Or)

C) Justify that where the selection of direct dyes is advantageous on cotton goods. **(4)**

D) Write the detail process of pigment printing on cotton with objectives of chemical used. **(8)**

12 A) Write the process details of polyester printing with recipe and printing sequence. **(8)**

B) Discuss about the steps and process details of Batik Printing. **(4)**

(Or)

C) Which class of dyes most preferred for printing of silk Sarees and write method of printing with process details. **(8)**

D) Discuss about process details of Kalamkari and Tie & Dye style of printing on textile materials. **(4)**

P.T.O.

13 A) Write the factors affecting the selection of finishing process. (8)

B) Write the list of finishing chemicals used in various process of textile finishing. (4)

(Or)

C) What is the principle of Sanforisation? Discuss working of sanforising machine with neat diagram. (8)

D) What are the objectives different Calendars used in textile finishing? (4)

14 A) What are the objectives of Mercerisation for cotton material? (8)

B) Write the application process of DMDHEU resin on cotton and discuss its merit and demerits. (4)

(Or)

C) Write the recipe for Water proof finishing to cotton material. (4)

D) Discuss with diagram the working of pad-chain process of mercerization for cotton fabric. (8)

15 A) Write the objectives of Bio-finishing. (4)

B) Write about the detail of various harmful chemicals used in Wet processing. (8)

(Or)

C) What are the objectives of identification of dyes in textile industry? (4)

D) What is the concept of banned amines in export market? (8)

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DIPLOMA IN HANDLOOM & TEXTILE TECHNOLOGY

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

Time : 3 Hours **Max. Marks : 80**

VI SEMESTER **6.4 PRINCIPLES OF MANAGEGENENT & ENTERPRENURSHIP**

Part – A

10 x 2=20 Marks

1 What is Management?

2 What is ACASH?

3 What is Geographical indication?

4 What is handloom mark?

5 Name the 8 P's of marketing mix.

6 Name some of the brand names.

7 What is pricing?

8 Name the methods of data collection.

9 What is the full form of NABARD?

10 What is the meaning of e-commerce?

PART-B

12 x 5= 60 Marks

11 A) Show the organizational structure of the handloom industry with suitable diagram. **(4)**

B) Brief the history of handloom industry. **(8)**

(OR)

C) What are the objectives of society? **(4)**

D) What are the functions of society? **(8)**

12 A) Briefly write on mill gate price subsidy scheme. **(4)**

B) What is the importance of value addition and how to improve value addition of handloom products? **(8)**

(OR)

C) Brief the services of HEPC and HHEC. **(4)**

D) What are the functions of WSC & IIHT? **(8)**

PTO

13 A) What is micro and macro marketing? (4)

B) What are the objectives of marketing? (8)

(OR)

C) What is the importance of marketing? (4)

D) Explain elements of marketing mix. (8)

14 A) What is single price and variable price? (4)

B) Brief the objectives of marketing research. (8)

(OR)

C) Classify market research. (4)

D) What are the pricing policies for handloom industry? (8)

15 A) What is the significance of rural marketing? (4)

B) What is the roll of entrepreneurship in economic development of a country? (8)

(OR)

C) What are the financial institutions? Name some of them. (4)

D) What are promotional institutions? Name some of them and explain about any one institution. (8)

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DIPLOMA IN HANDLOOM AND TEXTILE TECHNOLOGY

ANNUAL EXAMINATION APRIL/MAY – 2017 (2014 REGULATION)

Time: 3 Hours Max. Marks: 80

FIRST YEAR **1.1 ENGLISH & COMMUNICATION SKILLS**

The question paper has two parts. Answer to Part-A should be written in the question paper itself and Part-B in the Answer Book.

PART – A (60 Marks)

I. (a) Pick out the nouns in the following sentences. (½ x5 =2½)

1. Deepa is good dancer. _____
2. Gold is precious thing. _____
3. Mumbai is a big place. _____
4. The army marched forward. _____
5. The Whale is a largest living being. _____

(b) Pick out the pronoun. (½ x5 =2½)

6. Riyaz must give his book. _____
7. Sita is her mother. _____
8. The students were entered their classes. _____
9. My name is Alexander. _____
10. Our teachers are good. _____

II. (a) Fill in the blanks with plural forms of the words given in the brackets. (½ x5 =2½)

11. The _____ (student) are in the class.
12. The_____ (box) are the plastic.
13. There are_____ (knife) on the floor.
14. The _____ (tree) are in the garden.
15. The _____ (bus) are in the depot.

(b) Fill in the blanks with the adjectives. (½ x5 =2½)

(either, cruel, interesting, big, easy)

16. Reading is an _____ hobby.
17. Lion is a _____ animal.
18. Which is the _____ way to the bus stand.
19. Varanasi is a _____ city.
20. On _____ side of the road tall green trees.

III (a) Pick out the verbs in the following sentences. (½ x 4 = 2)

21. I want a new battery. _____
22. The mechanic repaired my car. _____
23. Mr. Arun broke the window. _____
24. What are your plans for success? _____

III (b) Pick out the adverbs in the following sentences. (½ x 4 = 2)

25. The train leaves hourly. _____
26. It is hot to stay in the room. _____
27. We are extremely happy.. _____
28. She went to Paris yesterday. _____

IV. (a) Underline the correct sentences from the given pair. (½ x 4 = 2)

29. (i) He is addicted to drugs.
    (ii) He is addicted at drugs.
30 (i) Employees receive salary at the end of month.
    (ii) Employees receive salary in the end of month.
31. (i) . Our house is in the sea.
    (ii) Our house is near the sea.
32. (i) We go walk along the river.
    (ii) We go walk in the river

(b) Combine the sentences with the conjunctions. (½ x 4 = 2)

(When, so, but, and)

33. It was very hot _____ he opened the window
34. My father bought a newspaper____ he did not read it.
35. I turned off the TV____ the programme ended,
36. You pass the exam_____ you get a certificate.

V. (a) Say whether the following sentences are simple, compound or complex. (1 x 8 = 8)

37. The Earth is round. _____
38. I have no advice to you. _____
39. He should not be late otherwise he should miss the train. _____
40. Where you were born. _____
41. Unless you study hard, you will not pass. _____
42. He finished his work and returned home. _____
43. He is exhausted to walk. _____
44. Because of their poverty they often suffered great hardship_____

VI (a) Say what type of sentences (Whether, assertive, interrogative, imperative or exclamatory) (½ x 6 = 3)

45. He came to me again. _____

46. What is your name? _____

47. Robert will return soon. _____

48. May I help you? _____

49. Get out from the class. _____

50. Sorry for the disturbances. _____

51. Which is your native? _____

52. Oh! god he is no more. _____

(b) Change into passive voice.

53. Seeta eat a fruit. _____

54. Rama killed Ravana. _____

55. Some one pulled the bell. _____

56. He wrote a letter. _____

57. Rashmi posted the letter. _____

58. I read a lesson. _____

VII (a) Use correct preposition. (½ x 6 = 3)

(to, by, on, in, at)

59. Rakesh go to the school_____ cycle)

60. She wants to live_____ Hyderabad.

61. The bank opens _____ 10.00 A.M.

62. The book is_____ the table.

63. The teacher is sitting _____ a chair.

64. He go _____ Chennai.

VIII (a) Use proper articles. (½ x 6 = 3)

(a, an, the)

65. _____ Mahabharat is an epic.

66. _____ cat is sitting on the table.

67. _____ elephant is a big animal.

68. I will come within _____ hour.

69. _____ Kaveri river flows in Karnataka.

70. It is _____ interesting book.

(b) Give the opposite of (½ x 7 =3½)

71. Much X _____

72. Beauty X _____

73. Rise X _____

74. Early X _____

75. Ancient X _____

76. Fat X _____

77. Accept X _____

(c) Give the plurals of (½ x 8 = 4)

78. boy - _____

79. idea - _____

80. bunch – _____

81. Piano – _____

82. calf – _____

83. thief – _____

84. cat – _____

85. day – _____

(d) Fill in the blanks (½ x 8 = 4)

86. Can you ____ the dog? (sea, see)

87. Our _____ is a good man (principle, principal)

88. He is _____ doing. (rung/wrong)

89. He can _____ the sound.

90. I don't _____ him (no, know)

91. He may _____ come (knot, not)

92. I am _____ upon him (hungry, angry)

93. I _____ a Bubble gum (chews, choose)

IX (a) Match the following: (½ x 8 = 4)

A	B	
94. small	Beat	
95. ambition	Cannot see	
96. blind	Middle	
97. between	Not alive	
98. dead	Not worker	
99. lazy	Aims	
100. practicing	little	
101. blow	Drilling	

(b) Pick out the adverbs (½ x 8 = 4)

102. Barking dog seldom bite. _____
103. She is weak in maths. _____
104. He came to me again. _____
105. They received us kindly. _____
106. Go fast and back. _____
107. She frequently visits us. _____
108. He will return soon. _____
109. I met him thrice. _____

X. Divide main verb and auxiliary verbs. Make list. (½ x 11 = 5½)

110. Drink _____
111. do _____
112. has _____
113. eat _____
114. sit _____
115. is _____
116. have _____
117. teach _____
118. jump _____
119. kick _____
120. dump _____

INDIAN INSTITUTE OF HANDLOOM TECHNOLOGY

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DIPLOMA IN HANDLOOM & TEXTILE TECHNOLOGY

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

Time : 3 Hours **Max. Marks : 80**

FIRST YEAR 1.2 APPLIED MATHEMATICS

Part – A

10 x 2=20 Marks

1 Solve $\begin{vmatrix} 4 & 5 \\ 3 & x \end{vmatrix} = 1$

2 If $A = \begin{bmatrix} 2 & 3 & 1 \\ 0 & -1 & 5 \end{bmatrix}$, $B = \begin{bmatrix} 1 & 2 & -1 \\ 0 & 1 & 3 \end{bmatrix}$ Find A - 2B

3 Find the value of $\frac{\cos 30^\circ + \sin 60^\circ}{1 + \cos 60^\circ + \sin 30^\circ}$

4 Find the value of $\frac{\tan 4A - \tan 3A}{1 + \tan 4A \tan 3A}$

5 If $= 5\, sinx - e^x + \log x$, find $\frac{dy}{dx}$

6 Differentiate $\log(x^3 + 1)$ with respect to x

7 Evaluate : $\int \sec 2x \tan 2x \, dx$

8 Integrate : $\int (x^6 + x^2 + 2)\, dx$

9 Find the Median of the observation 4, 7, 3, 6, 8, 5, 9

10 Let A(3, -2) and B (6 , 2) then find $|AB|$

PART-B **12 x 5= 60 Marks**

11 A) 11) A. Show that $\begin{vmatrix} 1 & 1 & 1 \\ a & b & c \\ a^3 & b^3 & c^3 \end{vmatrix} = (a - b)(b - c)(a - b)(a + b + c)$ **(4)**

B) B. Solve the following using Cramer's rule : $x + y + z = 3$, $2x - y + z = 2$, $3x + 2y - 2z = 3$ **(8)**

(Or)

C) C. If $A = \begin{bmatrix} 1 & 2 & 2 \\ 2 & 1 & 2 \\ 2 & 2 & 1 \end{bmatrix}$,Prove that $A^2 - 4A - 5I = 0$ **(4)**

D) D. Find the inverse of matrix $\begin{bmatrix} 1 & 2 & 3 \\ 2 & 1 & 4 \\ 1 & 0 & 2 \end{bmatrix}$ **(8)**

12 A) Prove that $\sin(45 + A)\sin(45 - a) = \frac{\cos 2A}{2}$ **(4)**

B) If $A + B + C = 180^\circ$ Prove that Cot A.Cot B + Cot B . Cot C + Cot C . Cot A = 1 **(8)**

(Or)

C) If $(A + B) = 45^\circ$, Prove that $(1 + \tan A)(1 + \tan B) = 45^\circ$ **(4)**

D) Prove that $\sin 20 \sin 40 \sin 60 \sin 80 = \frac{3}{16}$ **(8)**

13 A) Differentiate $y = e^x \log x$ with respect to x **(4)**

B) Find $\frac{dy}{dx}$, when $y = \frac{\sqrt{x}-1}{\sqrt{x}+1}$ with respect to x **(8)**

(Or)

C) If $y = \frac{1}{1+x^2-2x}$ then find $\frac{dy}{dx}$ **(4)**

D) Differentiate , $\frac{e^x + \cos x}{1-\sin x}$ with respect to x **(8)**

14 A) Evaluate $\int (4x^3 - 5x^2 + 6x)dx$ **(4)**

B) Evaluate $\int \frac{\cos x}{3+5\sin x} dx$ **(8)**

(Or)

C) Evaluate : $\int \frac{1}{4x^2-9} dx$ **(4)**

D) Evaluate : $\int \frac{x+2}{x^2+4x-3} dx$ **(8)**

15 A) Solve the following simultaneous linear equations **(4)**

$8x + 5y = 9, 3x + 2y = 4$

B) Show that the points (2, 2), (8, 4), (5, 7) and (-1, 1) are the verities of a rectangle. **(8)**

(Or)

C) Find the value of ' a ' So that the points (1,4) , (2, 7) , (3, a) are collinear **(4)**

D) Find the mean of the following grouped frequency distribution : **(8)**

Marks	0 - 20	20 - 40	40 - 60	60 - 80	80 - 100
Number of Students	7	11	10	9	13

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DIPLOMA IN HANDLOOM & TEXTILE TECHNOLOGY

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

Time : 3 Hours **Max. Marks : 80**

FIRST YEAR 1.3 Applied Physics

Part – A

10 x 2=20 Marks

1 What is the unit of momentum in C.G.S. system?

2 Write an example of physical quantity having no dimensions.

3 State Boyle's law for an ideal gas.

4 Convert 100^0 Kelvin to centigrade scale.

5 Define refractive index of a medium with respect to other medium.

6 What is the relation between frequency and time period of oscillation?

7 State the Coulomb's law for electrostatic force between two charges.

8 If r_1 and r_2 are the resistances of 2 resistors connected in parallel, then what will be their collective resistance?

9 Which type of material is added with Germanium to create an N-type semiconductor?

10 Write the logic operation or truth table for 'NOT' logical operation.

PART-B

12 x 5= 60 Marks

11 A) Classify physical quantities on the basis of their dimensions. **(4)**

B) Prove that the kinematic equation $S = ut + \frac{1}{2} at^2 + d$, is dimensionally correct if 'd' **(8)**

(OR)

C) Write on any two uses of dimensional formula. **(4)**

D) Convert 50 Joule into erg using dimension. **(8)**

12 A) A mass of gas occupies 100 cm^3 at temperature of 50^0 C. At what temperature its volume will get doubled if the pressure is kept consant. **(4)**

B) What are variable properties of a gas? State and explain the Charle's Law for expansion of gases. **(8)**

(OR)

C) What is the volume coefficient of expansion of gases? Define Charle's law on the basis of that. **(4)**

D) Derive ideal gas equation using Boyle's law and Charle's law. **(8)**

Contd....2...

13 A) What is total internal reflection? Define the critical angle. (4)

B) Derive the expression for the refractive index of a prism. (8)

(OR)

C) Define transverse and longitudinal waves. (4)

D) Derive expression for magnification in a simple microscope using a ray diagram. (8)

14 A) Define Ohm's law and state the nature of the V~I curve for a pure resistor. (4)

B) State Kirchoff's laws for electrical circuits. Describe how it is used in wheat stone bridge to find unknown resistance. (8)

(OR)

C) What is Coulumb's law of electrostatics? Write it's mathematical form indicating the meaning (4)

D) What is grouping of resistances? Find the equivalent resistance when resistors are connected in series and when they are connected in parallel. (8)

15 A) What are extrinsic ad Intrinsic semiconductors? (4)

B) Using diagrams describe how a P-N junction is used as a full wave rectifier. (8)

(OR)

C) Differentiate among conductors, insulators and semiconductors. (4)

D) With a diagram describe how an N-P-N transistor works in common base mode. (8)

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DIPLOMA IN HANDLOOM AND TEXTILE TECHNOLOGY

ANNUAL EXAMINATION APRIL/MAY-2017 (2014 REGULATION)

Time : 3 Hours **Max. Marks : 80**

FIRST YEAR

1.4 APPLIED CHEMISTRY

Part – A

2 x 10=20 Marks

1 What is soft water?

2 What is reducing agent?

3 Define Atomic weight

4 Write the chemical formula of Glauber's salt

5 Define Soap.

6 Write the chemical name of Rongalite-C

7 What is addition reaction?

8 Sketch the structure of Aniline.

9 Define polymerization

10 Define solvent and solute.

PART-B

(4+8) x 5= 60 Marks

11 A) Mention the disadvantages of using hard water in Textile Industry (4)

B) Write about the water softening process by Permutit method. (8)

(Or)

C) Explain Oxidation and oxidising agents with example. (4)

D) Define catalysis and explain the different types of catalysts. (8)

12 A) Write the uses of Glauber's salt. (4)

B) Describe the chemical properties of Sodium hydrosulphite. (8)

(Or)

C) Write the uses of caustic soda. (4)

D) Describe the properties and uses of sulphuric acid. (8)

13 A) Write the uses of Hydrogen peroxide. (4)

B) Explain the manufacturing process of Bleaching powder. (8)

(Or)

C) How is Sodium hypochlorite prepared? (4)

D) Write the properties and uses of Sodium sulphoxylate formaldehyde. (8)

PTO

14	A)	Explain saturated and unsaturated compounds with examples.	(4)
	B)	Discuss the physical and chemical properties with uses of benzene.	(8)
		(Or)	
	C)	Give suitable example for the following reactions: i) Substitution ii) Hydrolysis.	(4)
	D)	Write the physical and chemical properties with uses of Naphthalene	(8)
15	A)	What are synthetic detergents? Give its uses.	(4)
	B)	What are carbohydrates and give their classification.	(8)
		(Or)	
	C)	Draw the structure of Nylon.	(4)
	D)	What is polymerization? Give an example for Addition polymerization and Condensation polymerization.	(8)

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DIPLOMA IN HANDLOOM & TEXTILE TECHNOLOGY

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

Time:3Hours **Max.Marks:80**

FIRST YEAR

1.5 FIBRE AND YARN TECHNOLOGY

PART-A

Answer all the questions within **two to three** sentences. 2x10=20

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

Answer all questions in details. **(4+8) x 5=60**

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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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 ii) Convert 10 Ne into Tex (04+04)

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)

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DIPLOMA IN HANDLOOM AND TEXTILE TECHNOLOGY

ANNUAL EXAMINATION APRIL/MAY-2017 (2014 REGULATION)

Time : 3 Hours **Max. Marks : 80**

FIRST YEAR

1.7 FABRIC STRUCTURE - I

Part – A

2 x 10=20 Marks

1 Show warp up and weft up thread interlacing diagram (Flat view)

2 Minimum how many ends and picks are required for constructing a weave?

3 What is the technique used for weaving mat weaves?

4 Give one example of warp face, weft face and equal face twill.

5 What type of effect sateen & satin weave produce in fabric?

6 Name possible moves for constructing regular sateen on 5 threads.

7 Name two important qualities required for a toweling fabric.

8 Name any two colour and weave effects.

9 What type of effect mock-leno weave produce in fabric?

10 What type of effect honey comb weave produce in fabric?

PART-B

(4+8) x 5= 60 Marks

11 A) Draw thread interlacing diagram (flat view) for 1/2 twill. (4)

B) What are derivatives of plain weave? Mark one weave for each derivative. (8)

(OR)

C) Name any four different methods of ornamenting a plain weave with illustration. (4)

D) Taking an example of 4 thread twill draw draft and peg plan also. (8)

12 A) Differentiate (4 –points) wavy twill across the cloth & wavy twill along the cloth. (4)

B) Construct design, draft and peg plan for wavy twill across the cloth with base twill 3/3. (8)

(OR)

C) Name any four different types of twill weaves? (4)

D) Construct a Herring bone design with $\frac{3}{2}\ \frac{1}{2}$ base twill, also furnish drafting order. (8)

13 A) Construct diamond weave with $\frac{2}{2}$ base twill. (4)

B) Construct possible sateen design on 8 threads. (8)

(OR)

C) Construct diaper weave with $\frac{2}{2}$ base twill. (4)

D) Construct irregular sateen design on 4 and 6 threads. (8)

PTO

14	A)	Construct honey comb weave on 6 threads.	(4)
	B)	Construct design for double stitched honey comb, also furnish drafting and denting order.	(8)
		(OR)	
	C)	Construct mock-leno design on 6 x 6.	(4)
	D)	Construct Huck-a back design on 10 x10 and furnish drafting and peg plan.	(8)
15	A)	What are the four different methods of constructing crepe weave.	(4)
	B)	Constructing corkscrew weave on 7 threads and furnish drafting order.	(8)
		(OR)	
	C)	What is the base and move used for constructing corkscrew weaves.	(4)
	D)	Show colour and weave effect with following weave and colouring order Weave : 2/2 Twill Warp colour pattern : 2 dark & 2 light Weft colour pattern : 2 dark & 2 light	(8)

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DIPLOMA IN HANDLOOM & TEXTILE TECHNOLOGY

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

Time : 3 Hours **Max.Marks : 80**

THIRD SEMESTER

3.1 WEAVING TECHNOLOGY & TEXTILE CALCULATIONS - II

Part – A **2 x 10=20 Marks**

1 Which type of shed is formed on barrel dobby and vertical dobby shedding mechanism?

2 Which type of handloom is preferable for producing heavy furnishing fabrics? Why?

3 Define the terms 'traverse' and 'double traverse' in winding?

4 Write about the necessity of reversing motions in shedding?

5 What do you understand the term Eccentricity of sley?

6 Why seven wheel take up motion is preferred on powerloom than five wheel take up motion?

7 What is the resultant count of 50/2 tex yarn?

8 What will be the number of ends per inch of a $2/60^s$ stock port reed?

9 A double threaded worm of 300 rpm drives a worm wheel of 50 teeth. Find the speed of worm wheel?

10 State the merit and demerits of countershaft arrangements for driving the looms?

PART-B **12 x 5= 60 Marks**

11 A) Write about the design, features and suitability of pit looms? (4)

B) With a neat sketch Explain about the working of a lattice dobby ? (8)

(Or)

C) Write about the design, features and suitability of frame looms? (4)

D) Prepare a lay out for accommodating 25 frame looms and also discuss the minimum facilities required in an industrial handloom unit? (8)

12 A) Write about the different types of creels used for sizing? (4)

B) With the help of a neat sketch explain the working of cone winding machine? (8)

(Or)

C) Write about early shedding and late shedding with its merits and demerits? (4)

D) Enumerate the working of multi cylinder sizing machine with a neat sketch? (8)

13 A) Compare Over pick mechanism with under pick mechanism? (4)

B) Explain in detail the steps of constructing a shedding tappet suitable for plain weave by assuming necessary measurements and other relevant data's? (8)

(Or)

C) Discuss the necessity of parallel motion in under pick mechanism. (4)

D) With a neat sketch explain the working of seven wheel take up mechanism. (8)

P.T.O.

14 A) What is the resultant count of a folded yarn made by twisting together 60^s, 80^s, and 70^s cotton yarn ? Ignore contraction due to twisting? **(4)**

B) A warp is comprised of 2400 ends in the ratio of 2 threads of $2/40^s$Ne yarn in every thread of $2/24^s$ worsted. The warp weighs 540 pounds. Find out the average count of warp and also the weight of individual yarn. **(8)**

(Or)

C) A twofold loop yarn of 91 tex is composed of two threads, of which one is 10 tex without any significant take-up during twisting. If the other component thread has a take-up of 50%, calculate the count of this unknown component thread. **(4)**

D) Calculate the cost per kg. of a two fold yarn produced by twisting together two threads, one of 40 tex and the other of 20 tex. The cost of per kg of 40 tex and 20 tex yarns being Rs.100/- and Rs.150/- respectively. Twisting charges Rs.50/- per kg. Ignore waste and contraction due to twisting. Add 10% for cost fluctuation? **(8)**

15 A) Write about the spur gears and its relations to size, direction of rotations? **(4)**

B) A grooved pulley A, having a radius of 8 inches from the centre of the pulley to the apex of the groove, is running at a speed of 420 r.p.m. Another grooved pulley B of 3 inches diameter is being driven by the pulley 'A' by means of a cotton rope ½ inch in diameter. Assuming that there is a loss of 6 % of speed by slippage, what is the speed of the pulley B ? **(8)**

(Or)

C) A wheel A of 40 teeth is driven by a wheel B of 60 teeth. On the same stud of B is fixed a wheel C of 100 teeth. The wheel C is driven by a wheel D of 30 teeth, fixed on a shaft making 320 r.p.m. Find out the speed of A? **(4)**

D) i) Calculate the size of the loom pulley required to impart a speed of 250 r.p.m. to a loom which is driven from a line shaft of 150 r.p.m. The line shaft drum has a diameter of 15 inches? **(8)**
ii) A pinion of 14 teeth making 320 r.p.m., drives a mangle wheel of 141 teeth. Find the speed of the mangle wheel.?

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DIPLOMA IN HANDLOOM AND TEXTILE TECHNOLOGY

SEMESTER EXAMINATION APRIL/MAY-2017 (2014 REGULATION)

Time : 3 Hours **Max. Marks : 80**

III SEMESTER

3.2 FABRIC STRUCTURE – II

PART - A

(Answer all the questions within two to three sentences) **2 x 10=20 Marks**

1 Name any two weaves which can be combined to form stripe effect?

2 Name two different varieties of Distorted Thread Effect.

3 What are the main features of Bedford cord structure?

4 Name any two varieties of Bedford cord weave?

5 What are the main features of Welt structure?

6 Name different series of warp and weft used in the Pique structure.

7 Name any two different stitching method adopted in Double Cloth Structure?

8 What are objectives of Double Cloth structure?

9 How many series of warp and weft used in Thread Interchanging Double cloth structure?

10 What are objectives of wadded thread in a cloth structure

PART - B

(4+8) x 5= 60 Marks

11 A) Construct Design for warp distorted structure on 14 ends x 14 picks. **(4)**

Warp threads order – 3 ground 1 distorted 6 ground 1 distorted and 3 ground

Distorted ends floats over all picks except 4th and 11th pick.

B) Construct Design, Draft and pegplan for warp stripe pattern using $\frac{2}{2}$ twill with plain weave considering the following details. **(8)**

Number of ends per repeat of the warp stripe pattern – 16 ends of $\frac{2}{2}$ twill & 8 ends of plain weave.

Number of picks per repeat of the design – 4

(OR)

C) Construct Design for warp stripe pattern using $\frac{1}{3}$ twill and $\frac{3}{1}$ twill. **(4)**

Number of ends per repeat of the warp stripe pattern – 16 ends of $\frac{1}{3}$ twill & 16 ends of $\frac{3}{1}$ twill.

Number of picks per repeat of the design - 4

D) Construct Design, Draft and pegplan for warp stripe pattern using with plain and $\frac{2}{2}$ twill weave considering the following details. **(8)**

Number of ends per repeat of the warp stripe pattern – 16 ends of plain & 8 ends of $\frac{2}{2}$ twill weave.

Number of picks per repeat of the design – 4

PTO

12 A) What are the main features of the Bedford cord structure? (4)

B) Construct Design, draft & pegplan for Plain faced Bedford cord structure on 16 ends x 4 picks. (8)

(OR)

C) Construct the design for twill based Bedford cord structure. (4)

D) Construct Design, draft & pegplan for Plain faced Bedford cord structure with alternate picks (1:1) on 16 ends x 4 picks. (8)

13 A) Construct Loose Back Welt structures on 6 ends x 8 picks? (4)

B) Construct Design, Draft and Pegplan for Fast Back Welt structure on 6 ends x 12 picks. The wadded picks are 3 &4 and 9 & 10. (8)

(OR)

C) What are the difference between Welt and Pique Structure? (4)

D) Construct design for Pique structure repeating on 24 ends x 24 picks (20 ground pick and 4 wadded pick). (8)

14 A) What are steps followed in designing Double Cloth structure (4)

B) Construct design draft and pegplan for Self Stitched Double cloth considering the following particulars (8)

Face weave $\frac{1}{3}$ twill, Back weave $\frac{3}{1}$ twill

Arrangement of face and back threads of warp and weft is 1 : 1

(OR)

C) Classify Double cloth structure. (4)

D) Construct design draft and pegplan for Self Stitched Double cloth considering the following particulars. (8)

Face weave and back weave using $\frac{2}{2}$ down twill.

Arrangement of face and back threads of warp and weft is 1 : 1

15 A) What is the difference between Thread Interchanging Double cloth and Cloth Interchanging Double Cloth? (4)

B) Construct Design, Draft and Peg plan for the Cloth Interchanging Double cloth using plain weave for face and back. (8)

(OR)

C) Briefly explain wadded double cloth. (4)

D) Construct Design, Draft and Peg plan for the thread Interchanging Double cloth using plain weave for face and back. (8)

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DIPLOMA IN HANDLOOM & TEXTILE TECHNOLOGY

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

Time : 3 Hours **Max.Marks : 80**

THIRD SEMESTER **3.3 CHEMICAL PROCESSING OF TEXTILES - I**

Part – A

2 x 10=20 Marks

1 What is singeing?

2 Define Enzyme desizing?

3 Define saponification in scouring?

4 Explain banned dyes ?

5 What are the importance of M:L in Dyeing ?

6 Write main objects of after treatments of direct dyed materials?

7 Classify vat dyes?

8 Importance of soaping in vat dyeing?

9 Why reactive dyes are called as reactive?

10 Define bi-functional Reactive dyes.

PART-B **12 x 5= 60 Marks**

11 A) Explain the fabric preparatory processes in a textile mill? **(4)**

B) Describe the working of gas singeing machine with neat diagram. **(8)**

(Or)

C) Write short notes on chemical composition of raw cotton fibres? **(4)**

D) Describe the bleaching of cotton materials using hydrogen peroxide? **(8)**

12 A) Write short notes on emulsification and saponification reactions in scouring? **(4)**

B) Explain types of kiers and the working of Kier boiling carried out for cotton materials with neat diagram of Kier. **(8)**

(Or)

C) Write on J-Box method of scouring and bleaching? **(4)**

D) How the Dyes and Pigments are Classified? **(8)**

13 A) Explain the terms of percentage shade and percentage exhaustion ? **(4)**

B) How direct dyes are classified ? what are the various process conditions in direct dyeing ? **(8)**

(Or)

C) Explain the defect "tendering of sulphur dyed fabrics" ? **(4)**

D) Describe the method of dyeing cotton materials using naphthol dyes ? **(8)**

P.T.O.

14	A)	How the vat dyes are classified as per its chemical constitution?	(4)
	B)	Explain the vatting process and the method of dyeing IN Class of vat dyes on cotton ?	(8)
		(Or)	
	C)	What do you mean by Solubilised vat dyes ?	(4)
	D)	Explain the process of dyeing of cotton with solubilised vat dyes.	(8)
15	A)	How the reactive dyes are classified ?	(4)
	B)	Describe the dyeing method of Vinyl sulphone dyes ?	(8)
		(Or)	
	C)	What is the process conditions normally applicable to reactive dyeing ?	(4)
	D)	Describe the Pad Batch Dyeing process using reactive dyes ?	(8)

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DIPLOMA IN HANDLOOM & TEXTILE TECHNOLOGY

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

Time : 3 Hours **Max.Marks : 80**

THIRD SEMESTER

3.4 MATERIAL SCIENCE & ENGINEERING MECHANICS

Part – A

2 x 10=20 Marks

NOTE: 1. Answer all question.
2. Assume standard values of physical constants where ever necessary

1 Write down % of carbon in Low Carbon Steel.

2 Define Exogenous Tree and Endogenous Trees.

3 Define Law of Triangle of Forces.

4 Define Distance and write down it's unit in MKS system.

5 Define Stress.

6 Define Work and write down it's unit.

7 Define Forging.

8 Write down name of two types of Carpentry joint.

9 Write down formula for Velocity ratio of simple machine.

10 Define Friction.

PART-B

12 x 5= 60 Marks

11 A) Write down common defects of Timber with neat diagram. **(4)**

B) Define metal and write down Physical properties of metals. **(8)**

(Or)

C) Define non ferrous metal and discuss Aluminium in brief. **(4)**

D) Discuss structure of wood with neat diagram. **(8)**

12 A) Two forces P = 10 Kgf and Q = 06Kgf acting on a particle at an angle of 180^0 then find out magnitude of resultant force. **(4)**

B) A body thrown vertically upward with velocity 30m/sec. find how much height it gains and in what time it will reach to its initial position. **(8)**

(Or)

C) A body start motion with velocity 04 m/sec and comes to rest after 0.05 seconds then find how much distance it covers before coming to rest? **(4)**

D) Find out magnitude of Resultant of two forces P and Q acting on a particle at an angle "α" by Law of Parallelogram of force? **(8)**

P.T.O.

13 A) Define Work, Power & Energy and give their units? (4)

B) Discuss Stress – Strain diagram for test piece of ductile metal? (8)

(Or)

C) Define Stress, Strain and also define Young modulus? (4)

D) Prove that total energy of freely falling body is constant every where?

14 A) Write down name of important tools & equipment used in Foundry/Casting work? (4)

B) Give the neat block diagram of Lathe machine with name of major parts? Write down name of four operations which can be performed on lathe machine. (8)

(Or)

C) Explain Soldering operation? (4)

D) Discuss gas welding and write down name of equipments used in gas welding method? (8)

15 A) Define open belt and Cross belt drive system indicating clearing direction of rotation of driver and driven pulley. (4)

B) In a weight machine load of 1000 kg is lifted by an effort of 25 kg. load moves up by 10 cm and effort moves by 800 cm then find out Mechanical efficiency of machine. (8)

(Or)

C) Define simple machines and establish the relation between Mechanical advantage, Velocity ratio and mechanical efficiency of simple machine? (4)

D) A pulley of 30 cm in diameter running at 200 rpm is connected by means of open belt to another pulley of diameter 60 dm then calculate the speed of this pulley neglecting slip? (8)

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DIPLOMA IN HANDLOOM AND TEXTILE TECHNOLOGY

SEMESTER EXAMINATION APRIL/MAY-2017 (2014 REGULATION)

Time : 3 Hours **Max. Marks : 80**

IV SEMESTER 4.1 WEAVING TECHNOLOGY & TEXTILE CALCULATIONS-III

Part – A

(Answer all the questions within two to three sentences) **2 x 10=20 Marks**

1 What are the objectives of warp-protection mechanism?
2 What do you understand by the term 'loom Banging-off'?
3 What is the principle of Drop-Box motion?
4 What is the objective of Warp Stop motion?
5 Write down the formula for calculating percentage of size.
6 If six sections are to be made for a warp, which is 27.5 inches wide in the reed, calculate the width of each section.
7 List out the factors involves in a sectional warping calculation
8 Write the formula for calculating actual production of a power loom in yards per hour.
9 Calculate the efficiency of a winding machine, if its calculated rate of winding is 720 yards per minute and actual production is 600 yards per minutes.
10 What do you understand by the term 'Back-Beam'?

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

11 A) Compare side weft-fork motion and centre weft-fork motion (4)
B) With the help of line diagram explain the working of side weft-fork motion (8)

(OR)

C) Differentiate between loose-reed mechanism and fast-reed mechanism. (4)
D) Explain the working principle of climax dobby with neat sketches (8)

12 A) What are the mechanisms makes a plain powerloom into an automatic loom? (4)
B) Prepare a comprehensive lay out plan for a loom shed accommodating 50 powerlooms. Also mention the facilities which are necessary for the shed. (8)

(OR)

C) Write a short note on Weft Replenishment Mechanism (4)
D) With the help of a line sketch explain the working of Eccle's Drop Box Motion (8)

13 A) Calculate the length of warp that can be produced per day of 8 hours on Modern High Speed, if the warping speed is 610 yards per minute. The overall efficiency is 75%. (4)
B) A super speed Beam Warping Machine required to supply 53536 yards of warp with 3234 ends for a set of Back Beams. The count of the warp yarn is 44^S cotton yarn. If the capacity of the warping creel is 480 and the warping beam has a flange diameter of 40 inches, calculate the following: (8)
   i) No. of Back-Beams to be made.
   ii) No. of Ends on each Back-Beam.
   iii) Weight of warp on each Back-Beam.

(OR)

C) Weight of warp yarn on a Beam is 240 kgs. If the length of Warp is 20000 mtrs. and the number of Ends in the Warp is 500, calculate the Beam count. (4)
D) 500 cones are to be used for producing Back-Beams containing 500 Ends and 28000 mtrs. of warp on each. The weight of yarn on each cone is 2.2 kgs. and its count is 16 tex, calculate the number of Back-Beams that could be produced from the cone and also calculate the weight of warp yarn on each back beam. (8)

Contd.... 2

14 A) The total number of ends in a warp is 2700. Calculate the number of sections to be made and the number of ends in each section, if the creel capacity is 500 bobbins. (4)

B) The weight of sized warp on a beam was found to be 82.5 pounds. The beam contains 1050 yards of warp, whose count before sizing was 50^S cotton. If the number of ends in the warp is 3000, calculate the following: (8)

i) The weight of size put on the warp.
ii) The percentage of size put on the warp.
iii) The count of sized warp yarn.

(OR)

C) A stripe warp is to be prepared on a sectional warping machine with a creel capacity of 480 bobbins. There are 70 stripes in the warp, each stripe containing 36 ends. Besides, there are 20 selvedges on each side. Calculate the number of sections to be made and the number of ends in each section. (4)

D) A warp containing 2500 ends and is 32000 mtrs. long has to be sized with 25% size on it. If the count of the unsized warp yarn is 16 tex, calculate the following: (8)

i) The weight of size put on the warp.
ii) The weight of sized warp.
iii) The count of sized warp yarn.

15 A) The weight of yarn on 100 bobbins was found to be 99 pounds. The amount of waste made during winding was 1.0 pound. Find the length of yarn in yards required for each bobbin, assuming the count of yarn to be 30^S cotton. (4)

B) A loom is producing cloth with 10 picks per centimeter on a Jet-loom with P.P.M. of 300. If the efficiency of the loom is 80%. Calculate the time that would be required to weave 1000 mtrs. of warp on a Weavers' Beam. Take 6% as waste and up-take of warp in weaving. (8)

(OR)

C) Calculate the number of spindles required to wind 30 kgs. of 15 tex. yarn in 8 hours, if the actual production per spindle per minute is 600 mtrs. (4)

D) Calculate the production in meters of the day of 8 hours at 20 picks per centimeter of 40 looms weaving the following varieties of cloth. (8)

Variety	Picks per centimeter	Production in 8 hours
Sort No.1	16	280 mtrs.
Sort No.2	20	270 mtrs.
Sort No.3	24	820 mtrs
Sort No.4	32	120 mtrs.

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DIPLOMA IN HANDLOOM & TEXTILE TECHNOLOGY

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

Time : 3 Hours **Max.Marks : 80**

IV SEMESTER

4.2 FABRIC STRUCTURE-III

PART– A

2x10=20 Marks

1 Mention the purpose of producing Treble cloth.

2 Name the warp and weft series used to produce Treble cloth.

3 Name the two types of Backed cloth.

4 Mention the uses of introducing wadding threads in the backed cloth.

5 Name the two types of warp series used to produce Pile fabrics.

6 Mention the factors for the absorbency quality of pile fabrics.

7 Mention the two types of warp pile fabrics.

8 Name the pile fabric required two looms for its production.

9 What type of pile effect produce in the velvet fabric?

10 Why pile fabrics are having more weight per unit area than the normal woven fabrics with the same ends per inch?

PART-B

12x5= 60 Marks

11 A) Construct the design for Treble width cloth. (4)

B) Construct the design of Treble cloth in 12x12 using plain weave with self stitching. (8)

(Or)

C) Explain the methods of producing Wadded Backed cloth. (4)

D) When do you called a Backed fabric as reversible? Construct the weave, draft, peg plan of a Reversible Backed Weave and Non-Reversible Backed weave. (8)

12 A) Mention the differences between Warp Backed cloth and Weft Backed cloth. (4)

B) Draw the design of Weft Wadded Warp Backed weave using 6 thread twill. (8)

(Or)

C) Write short notes on Imitation Backed Cloth. (4)

D) Draw the design for producing Warp Wadded Weft Backed cloth by using suitable weave. (8)

P.T.O.

13 A) Construct four pick Terry to form stripe effect of the fabric. (4)

B) Explain the formation of 3 pick Terry pile on handloom with suitable attachment. (8)

(Or)

C) Draw 3 pick Terry for check formation. (4)

D) Name the different Terry weave structures. Draw a 4 pick Terry weave with pile on both side using 1 ground and 1 pile ratio and give the drafting order for this weave. (8)

14 A) What are the differences between 'True pile' and 'Terry pile'? (4)

B) What is Chenille Carpet? With suitable diagram explain the method of manufacturing this variety on handloom. (8)

(Or)

C) Differentiate between 'Loop piles' and 'Cut piles'. (4)

D) Explain the method of producing Velvet fabric with the weave. (8)

15 A) Write differences between Velvet and Velveteen. (4)

B) Describe Corduroy with help of neat sketch and design with thread interlacement diagram. (8)

(Or)

C) Write down the salient features of Weft Piles. (4)

D) Explain the method of producing Velveteen fabric with the weave. (8)

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DIPLOMA IN HANDLOOM & TEXTILE TECHNOLOGY

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

Time : 3 Hours **Max. Marks:80**

IV SEMESTER

4.3 CHEMICAL PROCESSING OF TEXTILES-II

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 mela 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 an 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)

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DIPLOMA IN HANDLOOM & TEXTILE TECHNOLOGY

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

Time : 3 Hours **Max. Marks : 80**

IV SEMESTER

4.4 ECOLOGY & POLLUTION CONTROL IN TEXTILE INDUSTRY

Part – A

Answer all the questions within two to three sentences. **2 x 10 =20 Marks**

1 What is biosphere?

2 Write any two radio-nuclides.

3 What are the effects of chlorine as air pollutant?

4 Tabulate the Air Quality Standard in India.

5 Define water pollution.

6 Expand DO,BOD,COD & TDS.

7 What is the importance of coagulant?

8 Define reverse osmosis.

9 State any two Eco-Standards in textiles.

10 Elaborate EMS & ISO.

PART-B **12 x 5= 60 Marks**

11 A) Explain the term "Global Warming". **(4)**

B) Write short notes on acid precipitation. **(8)**

(OR)

C) How are radio-active elements harmful to human beings? **(4)**

D) Explain any four processes and pollutants released from textile industries. **(8)**

12 A) Classify air pollutants. **(4)**

B) Name any four air pollutants and their severe effects on humans. **(8)**

(OR)

C) Write the sources of indoor air pollutants. **(4)**

D) Write the sources of Air Pollution in a Textile Mill. What are the various equipments to control particulates? **(8)**

PTO

13 A) How is COD determined in the water sample? (4)

B) Explain the sources of waste water in wet processing. (8)

(OR)

C) Write short notes on organic and inorganic water pollutants. (4)

D) How will you reduce water consumption in textile industries? (8)

14 A) Design Effluent Treatment Plant. (4)

B) Write briefly about the environmental effects of waste water. (8)

(OR)

C) Explain various methods of removal of colour from textile dye house waste. (4)

D) Define the followings: (8)

i) Mechanical flocculation

ii) Chemical coagulation

iii) Neutralization

iv) Sludge treatment

15 A) Define noise pollution and how will you control noise pollution in textile industry? (4)

B) Explain the new challenges of rigid standards in textile industry. (8)

(OR)

C) Write objectives of ISO 14000. (4)

D) State and explain the physical and psychic disorder of noise pollution. (8)

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DIPLOMA IN HANDLOOM AND TEXTILE TECHNOLOGY

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Time : 3 Hours **Max. Marks : 80**

IV SEMESTER 4.5 PROFESSIONAL ETHICS & PERSONALITY DEVELOPMENT

Part – A

(Answer all the questions within two to three sentences) **2x10 = 20 Marks**

1 Define "Ethics".

2 What is importance of Civic Virtue?

3 What is "Moral Dilemma"? Give one example.

4 Explain the meaning of the term "Work Place Spirituality".

5 What is "Conventional Level" in "Kohlberg's Theory of Moral Development"?

6 Differentiate between "Consensus" and "Controversy".

7 Define "Valence" and "Multiplexity" in relation to attitudes.

8 Explain the relationship between "Self Esteem" & "Self Confidence".

9 What is Pareto Principle?

10 What is Non Verbal Communication?

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

11 A) What is the importance of a positive relationship between an employer and an employee in an organization? (4)

B) What are different types of ethics? Explain each one in detail. (8)

(Or)

C) What are some tips to maintain integrity in the work place? (4)

D) Explain the 6 characteristics that a professional must possess in order to be successful. (8)

12 A) Name any 4 important character traits that will help an individual to develop their character. (4)

B) How does a positive workplace create a win-win situation for both the employer and the employees? (8)

(Or)

C) What are core qualities that person must possess in relation to, (i) Empathy (ii) Emotional Mastery (4)

D) What is "Moral Autonomy"? What are factors influencing Moral Autonomy? What are skills to improve Moral Autonomy? (8)

13 A) What is Normative Theory, Theory of Right Action? (4)

B) Explain relationship between "Law" and "Ethics with a suitable example. (8)

(Or)

C) What is importance of "Risk Assessment"? (4)

D) What are "Code of Ethics"? What are it's Positive Role? Explain the specific ways in which Engineering Societies can promote ethics? (8)

PTO

14 A) Explain sub process of "Perception". (4)

B) Can attitudes be changed? Explain. (8)

(Or)

C) What is importance of "Goals" in one's life? (4)

D) Explain the steps that one can take to achieve "Self Development". (8)

15 A) Write barriers to communication? (4)

B) Explain some important nonverbal clues that one can send across in the communication process. (8)

(Or)

C) How can complex problem solving be made easy and achievable? (4)

D) Explain "Time Management" with respect to "Pickle Jar Theory". (8)

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Time : 3 Hours **Max. Marks : 80**

V SEMESTER 5.1 WEAVING TECHNOLOGY & TECHNOLOGY CALCUALTIONS-IV

PART – A

(Answer all the questions within two to three sentences) **2 x 10=20 Marks**

1 State the limitation of Shuttle less loom.

2 What do you mean by "Multi-phase Weaving machine"?

3 Classify jacquard machine.

4 Write the name of the important parts of a jacquard machine.

5 What are the uses of inverted hook jacquard machine?

6 What is a leno jacquard machine?

7 Write the equation between the yarn diameter and count for woolen yarn as per Ashenhursts' formula.

8 Write the Pierce formula to calculate a yarn diameter in inch whose count is given in tex system.

9 Write the equation to calculate the maximum setting for a cloth.

10 Define the term "Cover Factor of a Fabric".

PART-B

(4+8) x 5= 60 Marks

11 A) Compare the different shuttle less weaving techniques. (4)

B) Explain the weft insertion technique of projectile loom with neat diagram. (8)

(OR)

C) State the advantages of shuttle less looms over shuttle looms. (4)

D) Explain the weft insertion technique of flexible double Rapier loom with neat diagram. (8)

12 A) Briefly state the difference between the single lift single cylinder and double lift double cylinder jacquard. (4)

B) Explain the working principle of double lift single cylinder jacquard machine with neat diagram. (8)

(OR)

C) Write the advantages and disadvantages of open shed jacquard mechanism. (4)

D) Explain the working principle of double-lift double cylinder jacquard machine with neat diagram. (8)

PTO

13 A) Write the working principle of leno jacquard briefly. (4)

B) Explain the mechanism and working principle of cross border jacquard. (8)

(OR)

C) Write the at least two advantages & disadvantages of Inverted hook jacquard mechanism (4)

D) Explain the mechanism and working principle of Self Twilling jacquard. (8)

14 A) Calculate the count of the yarn in Ne cotton System having 1/177 inch diameter. (4)

B) Calculate the diameter of the following yarns using Ashenhurts' formula. (8)

(i) 24^s Woollen Yarn (ii) 60^s Worsted Yarn (iii) $2/80^s$ Cotton Yarn

(Or)

C) If the diameter of 16 tex yarn is 1/170 inch find the diameter of 32 tex yarn. (4)

D) Find the diameter of the following yarns using Pierce formula. (8)

(i) 20^s Linen Yarn (ii) 40^s Worsted Yarn (iii) 36^s Cotton Yarn

15 A) Find out the maximum setting for a warp of 40^s cotton yarn that can be woven into a plain square cloth. (4)

B) Find out the total cover of the cloth from the following particulars (8)

Warp: 30 tex : 20 ends per cm

Weft: 20 tex : 30 ends per cm

Density of cotton is 1.52 gm/cc

(Or)

C) What do you mean by the terms (i) Fractional Cover (ii) Relative Cover? (4)

D) Compare the relative closeness of warp yarns in the following two plain clothes. (8)

i) Warp: 16^s Cotton: 50 ends per inch

ii) Warp: 36^s Cotton: 84 ends per inch

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Time : 3 Hours **Max. Marks : 80**

V SEMESTER **5.2 FABRIC STRUCRURE - IV**

PART – A

(Answer all the questions within two to three sentences) **2 x 10=20 Marks**

1 What are the different methods of controlling/disposing of floats in extra warp?

2 What is planting in extra warp weaving?

3 Name the series of ends and picks used in patent satin weaving

4 Give one example of traditional fabric in which traditional tapestry technique is used.

5 How will you decide the count of graph paper for enlargement of figures?

6 How many series of ends and picks are used in figured warp backed fabric?

7 What is the punching procedure for 4 colour figured double cloth?

8 Mark the ground & figure weaves of 2 colour Double cloth.

9 What are the types of shed formed in leno weaving?

10 What are the types of doup healds used in leno weaving?

PART-B

12 x 5= 60 Marks

11 A) Draw an extra warp motif on 16 x 16. (4)

B) Taking 1:1 ratio of ground & extra ends mark the full structure for the above motif. (8)

(OR)

C) Calculate the number of picks required for enlargement for extra weft design. PPI-80 G:E::1:1 Size of motif – 1" (4)

D) Taking a motif on 12 x 12, mark the full structure of extra weft design with 1:1 ratio of ground & extra picks. (8)

12 A) What are the types of interlacement of warp & weft threads in patent satin? (4)

B) Taking a motif on 6 x 6, mark the full structure of patent satin. (8)

(OR)

C) Draw the thread interlacing diagram(flat view) of traditional tapestry(2 picks) structure. (4)

D) Indicate the three weaves of 3 pick tapestry structure. (8)

13 A) Draw the straight drafting order for straight tie. (4)

B) Taking a small motif enlarge on 20 x 20 with suitable binding mark to produce figured single cloth. (8)

(OR)

C) What type of effect figured backed cloth produce in fabric? (4)

D) Taking small motif on 10 x 10, mark the full structure of weft backed cloth. (8)

PTO

14 A) What are different techniques used for producing figured double cloth? **(4)**

B) Mark the full structure of a 4 colour double cloth by taking a motif on 24 x 24. **(8)**

(OR)

C) Draw the drafting order for straight tie & sectional draft jacquard set-up for producing double cloth. **(4)**

D) Mark the full structure of a 2 colour double cloth by taking a motif on 48 x 48. **(8)**

15 A) Draw the passage of threads in simple leno weaving loom. **(4)**

B) With line diagram mark the lifting order followed for producing different types of sheds in leno weaving. **(8)**

(OR)

C) Draw the diagram showing the formation of crossed in leno weaving. **(4)**

D) Draw thread interlacing diagram & drafting order to produce leno with pointed draft. **(8)**

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Time : 3 Hours **Max.Marks : 80**

FIFTH SEMESTER **5.3 CHEMICAL PROCESSING OF TEXTILES - III**

Part – A

2 x 10=20 Marks

1 Define Tg.

2 What is the function of Carrier in Polyester dyeing?

3 What are defects in HTHP Beam dyeing machine?

4 Give Principle of Jet Dyeing machine.

5 Why 1:1 Metal Complex dyes are not generally used for dyeing for Nylon?

6 What is the nature of dye fiber bonds between Acrylic and Basic dyes?

7 What is the basic principle of Transfer printing method?

8 What do you mean by Styles of Printing?

9 What is the use of Safolin in Textile Printing?

10 What is the difference between Steaming and Curing?

PART-B **12 x 5= 60 Marks**

11 A) What is the need of heat setting polyester? **(4)**

B) Write the principle and method of Heat Setting of Synthetic Fibers. **(8)**

(Or)

C) What are the disadvantages of Carrier dyeing method for PET Dyeing? **(4)**

D) Explain the principle and method of dyeing of PET in Continuous manner. **(8)**

12 A) List out the defects and damages while dyeing of PET in HTHP Beam Dyeing machine **(4)**

B) Describe the working of Jet dyeing machine with a line diagram. **(8)**

(Or)

C) Write the advantages of Soft Flow dyeing machine? **(4)**

D) Write down sequence of operations for processing of 35:65 (P/C) blended suiting in Deep shades with process conditions for each operation? **(8)**

13 A) Why the use of Disperse dyes is not popular for Dyeing of Polyamides? **(4)**

B) Explain the method of dyeing of Polyamides with Reactive dyes mentioning the function of each chemicals. **(8)**

(Or)

C) How the structural aspects of Acrylics affecting their dyeing behavior? **(4)**

D) Elaborate the Method of Dyeing of Acrylics with Cationic dyes in Defitherm process along with the Functions of auxiliaries used during Dyeing. **(8)**

P.T.O.

14 A) What are the differences in between Rotary Screen Printing machine and Flat Bed Screen Printing machine. (8)

B) Explain the working of Rotary Screen Printing machine along with a neat line diagram. (8)

(Or)

C) Write the demerits of Block Printing methods. (4)

D) Describe the Transfer printing method along with its demerit. (8)

15 A) Describe the role of Ageing in printing of Cellulosic Fibers. (4)

B) Described in brief the steps involved for preparing printing screen by Photographic method. (8)

(Or)

C) Explain the need of fixation after printing of Textiles and outline any one method for fixation. (4)

D) Describe the functions of following ingredients in a printing paste. (8)

i. Wetting Agents **ii.** Mild Oxidizing Agents
iii. Discharging or Reducing Agents **iv.** Emulsion Thickener

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DIPLOMA IN HANDLOOM AND TEXTILE TECHNOLOGY

SEMESTER EXAMINATION APRIL/MAY-2017 (2014 REGULATION)

Time : 3 Hours **Max. Marks : 80**

V SEMESTER **5.4 PRINCIPLES OF TEXTILE TESTING – I**

PART – A

(Answer all the questions within two to three sentences) **2 x 10=20 Marks**

1 What is the role of textile testing in quality control of textile materials?

2 Write the formula for calculating mode of the observations?

3 Define moisture regain.

4 What is Hygrometer?

5 Define count of the yarn.

6 Convert 60 Ne into Tex count.

7 Explain twist of the yarn.

8 Mention formula for calculating twist per inch of the yarn.

9 What is short and medium term variation in respect fibre length?

10 State the principle of capacitance method of evenness testing.

PART - B

(4+8) x 5= 60 Marks

11 A) The test results for the English count of yarn are as follows. **(4)**

21, 18, 20, 19, 22

Calculate mean and median of the observations.

B) Calculate the standard deviation and the CV % of the following test results. **(8)**

12, 24, 36, 22, 65, 68, 39, 75, 80, 48

(OR)

C) Explain random sampling and biased sampling. **(4)**

D) Twelve mule cops were tested for count and the mean found to be 94.2s. The standard deviation of the twelve results is 2.2 counts. If the nominal count is 92s, is the mule spinning too fine? **(8)**

12 A) Write standard testing atmosphere of textile testing. **(4)**

B) Explain Wet and Dry Bulb Hygrometer. **(8)**

(OR)

C) Write moisture regain of the following fibres. **(4)**

Acrylic, Nylon, Wool, Cotton, Polyester, Silk, Glass fibre, Viscose rayon

D) Explain various factors which affect the moisture regain of textile materials. **(8)**

PTO

13	A)	Name the Direct Reading Yarn Count Balances.	(4)
	B)	Explain Indirect, Direct and Universal System of yarn numbering	(8)
		(OR)	
	C)	Write the steps involved in calculating the yarn count through Wrap reel and Weighing Balance Method.	(4)
	D)	Explain working of Quadrant Balance with neat sketch.	(8)
14	A)	What is the S & Z direction of twist in the yarn? Explain with diagram.	(4)
	B)	Express relationship between twist and strength of the yarn with indicative diagram in detail.	(8)
		(OR)	
	C)	Explain the function of twist in yarn structure.	(4)
	D)	Discuss Straightened Fibre Method of twist measurement.	(8)
15	A)	Explain different measures for measuring yarn irregularity.	(4)
	B)	State the working of Electronic Capacitance Tester.	(8)
		(OR)	
	C)	Explain Cutting and Weighing method for measurement of evenness of yarn.	(4)
	D)	Explain Uster – Classmate System with respect to yarn faults.	(8)

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DIPLOMA IN HANDLOOM & TEXTILE TECHNOLOGY

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

Time : 3 Hours **Max. Marks : 80**

V SEMESTER 5.5 PRINCIPLE OF MANAGEMENT AND ENTREPRENEURSHIP

Part – A

10 x 2=20 Marks

1 Explain in brief why handloom industry is a priority sector for government.

2 Write two function of primary handloom cooperative society?

3 Define handloom cluster.

4 What is value addition in a product?

5 What is marketing mix?

6 What is selling concept?

7 What is market sampling?

8 What do you mean by primary data sources?

9 What is rural marketing?

10 What is a Drone entrepreneur?

PART-B

12 x 5= 60 Marks

11 A) Explain the organization structure of handloom industry. **(4)**

B) Elaborates the history of Indian handloom industry. **(8)**

(OR)

C) Explain in brief the objectives of Apex Cooperative Society **(4)**

D) Explain socio economic importance of handloom industry. **(8)**

12 A) Explain significance of product diversification. **(4)**

B) Explain major services provided by the weavers service centre. **(8)**

(OR)

C) Explain National Handloom Development Programme (NHDP) **(4)**

D) What is product diversification? Explain various type of product diversification **(8)**

PTO

13 A) Distinguish between marketing and selling. **(4)**

B) Define marketing and Explain its importance. **(8)**

(OR)

C) Distinguish between micro marketing and macro marketing. **(4)**

D) What is marketing planning? Explain the contents of a marketing plan **(8)**

14 A) Distinguish between single pricing and variable pricing **(4)**

B) What is pricing? Explain factors affecting pricing decision. **(8)**

(OR)

C) Explain importance of pricing. **(4)**

D) What is marketing research? Explain various type of marketing research. **(8)**

15 A) Distinguish between innovative entrepreneur and adoptive entrepreneur. **(4)**

B) What is an entrepreneur? Explain qualities of a successful entrepreneur. **(8)**

(OR)

C) Explain role of District Industry Center (DIC) in promoting entrepreneurship. **(4)**

D) What is E-Business? Explain various type of E-Business. **(8)**

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DIPLOMA IN HANDLOOM AND TEXTILE TECHNOLOGY

SEMESTER EXAMINATION APRIL/MAY-2017 (2014 REGULATION)

Time : 3 Hours **Max. Marks : 80**

VI SEMESTER 6.1- WEAVING TECHNOLOGY AND TEXTILE CALCULATION-V

PART – A

(Answer all the questions within two to three sentences) **2 x 10=20 Marks**

1. What is the specialty of Kancheepuram saree?
2. What is the specialty of Banaras Saree?
3. Name two fabrics that are produced by using Sectional harness tie.
4. What do you mean by "Casting out"?
5. Write the formula to calculate count of warp yarn in the required cloth, when ends per inch in the fabric are required to be changed.
6. Write the formula to calculate ends per inch in the required cloth, when the count of the warp yarn in the fabric is required to be changed.
7. Name any two factors considered while calculating weight of warp or weft.
8. Name any two types of wastages considered while calculating the weight of warp or weft.
9. What do you mean by costing of fabric?
10. What is the difference between cost price and selling price of the fabric?

PART-B

12 x 5= 60 Marks

11 A) Describe steps involved in Traditional Banaras Saree weaving. (4)

B) Explain the warp tie and dye weaving technique. (8)

(OR)

C) Describe steps involved in Traditional Kancheepuram Saree weaving. (4)

D) Explain in details about the weft tie and dye weaving technique (8)

12 A) Briefly explain the London system of harness tie. (4)

B) With a suitable diagram explain **any one of** the following design harness ties. (8)

i. Straight harness tie ii. Pointed harness tie.

(OR)

C) Briefly explain the term casting out? (4)

D) In a 400 hook jacquard loom, It is proposed to build Straight harness tie with harness sett of 40. Width of the body harness to be built up is 50 inches. How many harness cords are to be tied on each hook? (8)

PTO

13 A) A cloth is woven with 72 ends per inch of 60^s cotton. Calculate ends per inch in the new fabric if the count is to be changed into 40^s cotton so as to maintain same level of the compactness. **(4)**

B) A $\frac{2}{2}$ twill cloth is woven with 72 ends per inch and 64 picks per inch. If the weave is changed into plain weave having the same compactness, calculate the number of ends per inch and picks per inch required in the plain cloth if the count of warp and weft are same. **(8)**

(OR)

C) A cloth is woven with 32 ends per inch using 10^s cotton yarn. What count of the yarn is to be used to have 48 threads per inch to get the same compactness? **(4)**

D) A cotton cloth is made with 60^sx40^s having 64 ends per inch x 52 picks per inch. It is required to produce a fabric with same compactness but 10% heavier. What count of yarn and threads per inch should be used in the new fabric? **(8)**

14 A) Calculate the weight of warp and weft present in 1000 yards of fabric with the following particulars. **(12)**

Count of warp and weft - 40^s x 40^s
Ends per inch and picks per inch – 60 x 52
Warp crimp and weft crimp – 5% & 6% respectively
Width of the fabric – 36 inches
Selvedge -½ inch on both sides 4 ends are drawn per dent.

(OR)

B) Calculate the weight of warp and weft required in kg to produce silk fabric measuring 100 metres with following particulars. **(12)**

Count of warp and weft - 20 Denier x 20 Denier
Ends per cm and picks per cm – 48 x 40
Warp crimp and weft crimp – 5% & 6% respectively
Width of the fabric – 90 cm
Selvedge - 0.5 cm on both sides 4 ends are drawn per dent.

15 Calculate selling price per metre of the fabric by considering the following particulars. **(12)**

Cloth length – 100 meters	
Weight of warp consumed including wastage	- 3.350 kg
Weight of weft consumed including wastage	- 3.515 kg
Cost of warp yarn	- Rs. 280 per kg
Cost of weft yarn	- Rs. 250 per kg.
Warp preparatory charges	- Rs. 50/- per kg
Weft preparatory charges	- Rs. 40/- per kg.
Dyeing charges for warp and weft	- Rs. 80.00 per kg.
Weaving charges	- Rs. 15 per metre.
Overhead charges	- @ 15% on the base cost
Margin profit	- 30%

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DIPLOMA IN HANDLOOM & TEXTILE TECHNOLOGY

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

Time : 3 Hours **Max.Marks : 80**

VI SEMESTER

6.2 – FABRIC STRUCTURE-V

PART– A

10 x 2=20 Marks

1 What are the advantages of using healds in Extra Warp weaving?

2 What are the advantages of using plain cards in Extra Weft weaving?

3 Mention the different tension to be followed for beams used in Patent Satin weaving.

4 Mention the different tension to be followed for beams in Pique weaving.

5 Name different jacquard techniques used in weaving Damask fabric.

6 Define 'Reversible Tapestry'.

7 What are the conditions to be followed for forming the Terry pile?

8 Draw the principle of needle and hook setting in Inverted hook jacquard.

9 How do you differentiate Banaras saree from Kancheepuram saree?

10 How do you differentiate Paithani saree from Jamdhani saree?

PART-B

12 x 5=60 Marks

11 A) Sketch a motif suitable for Extra warp border weaving of Saree keeping main border in 1" width X 2" length and supporting border in 0.5" X 2" length. **(4)**

B) Enlarge 0.5" X 0.5" of any part of the above motif in 24 X 24 and indicate its complete structure of Extra warp with 1 Ground and 1 Figuring order in 48 ends X 24. **(8)**

(Or)

C) What are the differences between the loom techniques used for weaving Figured Extra Warp and Extra Weft? (4 points) **(4)**

D) Explain the loom technique and drafting order used for weaving combined Figured Extra **(8)**

12 A) Sketch the jacquard loom used for weaving Figured Patent Satin. **(4)**

B) Taking a guide graph in 16 X 12, indicate the complete weave structure of Figured Patent Satin in 48 X 48. **(8)**

(Or)

C) Sketch the jacquard loom arrangement used for weaving Figured Pique. **(4)**

D) Taking a guide graph in 16 X 12, indicate the complete structure of Figured Pique in 48 X 48. **(8)**

P.T.O.

13 A) What are the different jacquards weaving techniques used for Damask Fabric? (4)

B) Taking a guide graph in 16 X 16, indicate the complete structure of Damask in 48 X 48 woven using 3 eyed decked mail and 3 picks per card. (8)

(Or)

C) Sketch the jacquard loom arrangement used for weaving Tapestry structure. (4)

D) Draw the design and interlacing diagram of 3 weaves of 3 picks Reversible Weft Tapestry. (8)

14 A) What are the advantages of using Inverted hook jacquard for weaving Figured Terry? (4)

B) Taking a guide graph in 12 X 16, indicate the complete structure of 3 picks Figured Terry in 48 X 48. (8)

(Or)

C) Sketch the jacquard loom arrangement used for weaving Figured Terry fabric. (4)

D) Taking a guide graph in 12 X 12, indicate the complete structure of 4 picks Figured Terry in 48 X 48. (8)

15 A) Mention Count, Threads per inch, Dimension and weaves of traditional Saree woven in your region. (4)

B) Write down salient features of Banaras Saree (or) Kancheepuram Saree. (8)

(Or)

C) Mention Count, Threads per inch, Dimension and weave of shirting or dhoties. (4)

D) Write down eight salient features of Paithani Saree (or) Jamdhani Saree. (8)

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DIPLOMA IN HANDLOOM & TEXTILE TECHNOLOGY

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

Time : 3 Hours **Max.Marks : 80**

VI SEMESTER **6.3 CHEMICAL PROCESSING OF TEXTILES-IV**

PART – A

2x10=20 Marks

1 Write any two developing methods for reactive printing.

2 Give the name of two discharging agents for printing.

3 State the advantages and disadvantages of Kalamkari Printing.

4 What is the function of bees wax in batik printing?

5 Write any two factors affecting textile finishing.

6 What are the objects of Calendaring?

7 What is DMDHEU? Give the chemical name.

8 Define Buckram Finishing.

9 How natural dyes are influencing eco friendly wet processing? Justify it.

10 Which enzyme is most suitable for bio polishing?

PART-B

(4+8) x 5= 60 Marks

11 A) Write the advantages and disadvantages of silicate padding process for reactive printing on cotton. **(4)**

B) Describe in details about printing of cotton with direct dyes along with recipe and process sequence. **(8)**

(Or)

C) Why emulsion based thickener is required for pigment printing? Elaborate the reason. **(4)**

D) Explain the printing of cotton with pigment dyes along with recipe and process sequence. **(8)**

12 A) Write short notes on Tie & Dye process? **(4)**

B) Describe in details about direct style printing of Silk with Acid Dyes? Explain the function of chemical and process methods. **(8)**

(Or)

C) How batik printing is produced on cotton fabric? Explain briefly. **(4)**

D) Explain in details about printing of polyester with disperse dyes? Elaborate the various developing methods **(8)**

P.T.O.

13 A) What are the objects of textile finishing? (4)

B) What is Calendering? Explain 7 Bowl Calendering process with neat sketch. (8)

(Or)

C) Give the classification of textile finishing. (4)

D) What is zero–zero finishing? Why it is called zero-zero finishing? Explain the process with neat line diagram. (8)

14 A) How luster and dye uptake improved after mercerization? Explain the mechanism involved. (4)

B) Write short notes on water proof and flame retardant finishing. (8)

(Or)

C) State the advantages and disadvantages of softening. (4)

D) Describe the working principle of any one fabric mercerizing machine with neat sketch. (8)

15 A) Elaborate the important role of enzyme in textile wet processing. (4)

B) Discuss the impact of banned dyes on environment. (8)

(Or)

C) List out any four harmful chemicals in textile processing. How it harmful to environment? (4)

D) Explain the identification procedure of water soluble dyes in powder form. (8)

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DIPLOMA IN HANDLOOM & TEXTILE TECHNOLOGY

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

Time : 3 Hours **Max. Marks : 80**

VI SEMESTER

6.4 PRINCIPLES OF TEXTILE TESTING-II

Part – A

2 x10 = 20 Marks

1 What is yield point in tensile properties of textiles?

2 How do define 'breaking length of a textile material?

3 What are specifications of a lea for strength test.

4 What are the instruments used to find out CSP value?

5 Give two specific examples where bursting strength test is done.

6 Differentiate between single thread and lea strength test results.

7 Give the most significant reason for fabric shrinkage.

8 How do you express fabric 'Handle'?

9 What is the significance of TQM?

10 What is the fabric defects removed in singeing?

PART-B **12 x 5= 60 Marks**

11 A) Describe the CRT principle of tensile strength testing instruments. (4)

B) Elaborate the three different approaches of strength testing – tensile, tearing & bursting. (8)

(OR)

C) What are elastic recovery and its importance in tensile properties of textiles? (4)

D) Explain how specimen length is an influencing factor in strength testing results? (8)

12 A) Give pros and cons of single thread and lea strength test of yarns. (4)

B) Explain the principle and working of pendulum lever type strength testing instrument. (8)

(OR)

C) Distinguish the results obtained from ballistic and tensile strength testing machines. (4)

D) Describe the working of inclined plane tester with sketch. (8)

PTO

13 A) Give the specification and method of preparing sample for strip strength test. (4)

B) Describe the working of bursting strength tester with neat sketch. (8)

(OR)

C) What are various types of abrasions? (4)

D) D) Describe the working of Martindale abrasion tester. (8)

14 A) Define the terms – bending length & flexural rigidity. (4)

B) Explain the process of determining creasing property of a fabric. (8)

(OR)

C) What do you understand with 'drape co-efficient'? (4)

D) Describe measurement of crimp percentage by using Shirley crimp tester. (8)

15 A) Enlist various kinds of fabric defects and system to identify them. (4)

B) What is Acceptance Quality Level (AQL) and its usefulness in textile industry? (8)

(OR)

C) What are 'quality policy' and its benefit in textile manufacture? (4)

D) What are various objectives of fabric inspection during quality assurance? (8)

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