Program Guide
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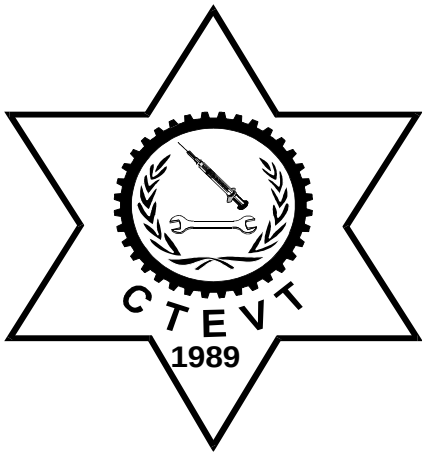
Textile and Sericulture JTA (TSLC)



Council for Technical Education and Vocational Training
Curriculum Development Division
2006

Introduction:

The competency based program guide for **Textile and Sericulture JTA (TSLC)** is designed to produce basic level skillful workforce in textile & sericulture field equipped with knowledge, skills and positive attitudes related to the technology in order to meet the demand of such workforce providing employable and entrepreneur able skill in the country so as to contribute in the national streamline of poverty reduction in the kingdom of Nepal. This curriculum focuses on the basic workmanship in weaving and sericulture production in the same time. This program aims at offering ample of opportunity for employment in the related sector.

Aims:

The main purpose of this program is to produce skilled /competent basic level workforce in the field of textile technology by providing training mainly to school dropouts, due to the low economic condition, unemployed, marginalized and unopportunitized youths and link them to employment opportunities. To meet this purpose the curriculum has the following aims:

- To produce competent basic level textile & sericulture workforce needed for the textile/sericulturs industries of the country.
- To produce such human resources through recognized institutional training program immediate followed by "On the Job Training (OJT)" in order to provide the trainees the maximum experience & exposure of "The World of Work" before entering in the actual occupation.
- To produce such technical workforce who will be able to be self-employed / an entrepreneur.
- To produce such technical workforce who intern will contribute in the economic upliftment of the country and also aid in the national slogan of poverty reduction.
- To provide the training opportunity to those people of the community who have not got the opportunity to develop skills necessary to be employed and in turn to improve their economic status / standard of living by equipping them with income generating activities in the field of textile technology.
- To explore, improve and develop the field of textile technology through organized institutional training program in the country.
- This program will aim at producing the persons, who will be able to be employed in sector of production of textile and sericulture.

Objectives:

After the completion of the training program the trainees will be able to

3.1 Communicate in Nepali and English language necessary for the effective communication in their occupation. Institute can teach one of the related languages if it is needed to provide batter training.

3.2 Apply basic mathematical knowledge and skills in the textile/sericulture technology to be competent in the related occupation.

3.3 Apply basic knowledge and skills in the textile/sericulture technology to be competent in the related occupation.

3.4 perform textile spinning,

3.5 perform textile warping,

3.6 separate good and bad cocoons,

3.7 practice for basic drafting and designing for weaving,
3.8 perform batik, Tie die works
3.9 handle textile and sericulture different charkhas, looms (general Jacquard, & dobby) for weaving,
3.10 perform cotton and silk cloth; woolen rug and woolen / jute carpet weaving,
3.11 perform dobby and jacquard weaving,
3.12 perform tapestry weaving,
3.13 perform textile and silk dyeing,
3.14 manage and market the textile production in the small scale
3.15 assist for managing and marketing the textile production
3.16 operate small scale textile industry and
3.17 Carry out weaver's occupation.
3.18 established mulberry farm
3.19 manage land for mulberry growing
3.20 propagate mulberry plant
3.21 perform cultural operations for growing mulberry
3.22 prepare compost
3.23 manage, handle and care necessary tools, materials and Equipment
3.24 protect mulberry against insects, pests, diseases and weeds
3.25 perform rearing of young age silk worms
3.26 perform rearing of adult silk worms
3.27 mount ripen silkworms
3.28 handle cocoons
3.29 apply mixed intercultural crops growing technology
3.30 utilize by-products
3.31 market quality Seri-products
3.32 manage sericulture through group approach

Course Description:

This curriculum guide provides trainees the skill and knowledge necessary for Junior Textile Assistant. There will be both demonstration by the trainers/ instructors and opportunity by trainees to carry out the skills/tasks necessary for this level of textile technical workforce. Trainees will practice and learn skills by using typical tools, materials, equipment and machines necessary for this training program.

This program includes two phases of training. First phase relates to the institutional training, which lasts for three years 4680. After the completion of the first phase of training, trainees are allowed to enter into the second phase of training called "On the Job training (OJT)". Only after the successful completion of the OJT the trainees will be certified as "Textile & Sericultyre JTA (TSLC)". The duration of OJT will be of one year (1600 hrs). The subject titles, Hours distribution and full marks will be as per the course structure developed and specified by this curriculum.

The objective of the on- the-job training

1. To make the trainees more practicable in the particular technical area.
2. To match the technical skill learn in the school with the needs of the employer.
3. To increase self-confidence in the student so that he/she can face the real world of work.

4. To make the employers feel the trainees to be their own employees and thus supervise the trainees activities in his duty so that employer is made to pay the trainees.
5. To ensure the standard of the training to keep pace with the requirement of the employer.

The total marks for on-the-job training is distributed as: 1000

1. 400 to be awarded by the supervisor of the trainee in the user agency.
2. 400 to be awarded by the relevant subject specialist from the school concerned.
3. 200 to be awarded by an expert appointed by the CTEVT.
4. Each school should Plan the on-the-job training through discussion with representatives from User agencies and agree to a detailed plan for evaluating each trainee on the basis of the following guidelines.
5. The 400 marks to be awarded by the Supervisor in the User agency are divided into 80 for whole Performance and 20 for attitude.
6. The 80 marks should be divided amongst five of more types of activity, the trainee would be performing during on-the-job training. E.g. If there were 5 types of activity, each activity would carry 16 marks.
7. For each type of activity identified in above, the assessment should be based on Efficiency, Accuracy, and Quality of performance.
8. The marks for attitude 20 should be awarded considering Attendance, Punctuality, Systematic ability to work, Relationship with people, Willingness to work, discipline and general behavior.
9. The subject specialist and the subject expert who would each award marks out of 100 will do so on the basis on the following. Depending on the school situation, the assessment cover be done by visiting the trainee at the work location or by discussion/interview at the school at the end of training.
    - Inspection of trainee's work, if possible
    - Discussion with trainee and his supervisor on trainee's attitude
    - Inspection of trainee's diary/log-book etc.
    - Oral questioning on the Understanding of activities Performed by the trainee.

    The new revised curriculum will help to equip the students' adequate practical skills and some theoretical knowledge to perform the duties of basic textile weaving.

    Upon graduation, The Council for Technical Education And Vocational Training will grant the student a certificate stating that the holder is qualified to perform duties of a Sericulture and Textile JTA (TSLC)

Course Structure

Textile 46 Month programme

(a) First year

S. No.	Course Title	Nature	Class hr /Week		Total Class hr /Yr			Marks Distribution									Exam Hours		Remar
								Internal			External/Final			All total					
			T	P	T	P	Total	Th	Pr	Tot	Th	Pr	Tot	Th	Pr	Tot	Th	Pr	
1	Nepali	T	2		78		78	25		25	25		25	50		50	2		
2	English	T	2		78		78	25		25	25		25	50		50	2		
3	Math	T	2		78		78	25		25	25		25	50		50	2		
4	Science	T	2		78		78	25		25	25		25	50		50	2	3	
5	Spinning I	P	2	6	78	234	312	20	80	100	20	80	100	40	160	200	2	3	
6	Design Development I	P	1	9	39	351	390	25	100	125	25	100	125	50	200	250	2	3	
7	Weaving I	P	2	8	78	312	390	25	100	125	25	100	125	50	200	250	2	3	
9	Sericulture I	P	1	3	39	117	156	10	40	50	10	40	50	20	80	100	2	3	
	Total		14	26	546	1014	1560	180	320	500	180	320	500	360	640	1000			

Second Year

S. No.	Course Title	Nature	Class hr /Week		Total Class hr /Yr			Marks Distribution									Exam Hours		Remar
								Internal			External/Final			All total					
			T	P	T	P	Total	Th	Pr	Tot	Th	Pr	Tot	Th	Pr	Tot	Th	Pr	
1	Applied Nepali	T	2		78		78	25		25	25		25	50		50	2		
2	Applied English	T	2		78		78	25		25	25		25	50		50	2		
3	Applied Math	T	2		78		78	25		25	25		25	50		50	2		
4	Applied Science	T	2		78		78	25		25	25		25	50		50	2	3	
5	Spinning II	P	1	5	39	195	234	15	60	75	15	60	75	30	120	150	2	3	
6	Design Development II	P	1	9	39	351	390	25	100	125	25	100	125	50	200	250	2	3	
7	Weaving II	P	2	7	78	273	351	20	90	110	25	90	115	45	180	225	2	3	
9	Sericulture II	P	1	3	39	117	156	10	40	50	10	40	50	20	80	100	2	3	
	Dyeing I	P	1	2	39	78	117	5	30	35	10	30	40	15	60	75	2	3	
	Total		14	26	546	1014	1560	175	320	495	185	320	505	360	640	1000			

Third Year

S. No.	Course Title	Nature	Class hr /Week		Total Class hr /Yr.			Marks Distribution									Exam Hours		Remar
								Internal			External/Final			All total					
			T	P	T	P	Total	Th	Pr	Tot	Th	Pr	Tot	Th	Pr	Tot	Th	Pr	
1	Spinning III	P	1	3	39	117	156	10	40	50	10	40	50	20	80	100	2		
2	Design Development III	P	1	9	39	351	390	25	100	125	25	100	125	50	200	250	2		
3	Weaving III	P	1	9	39	351	390	25	100	125	25	100	125	50	200	250	2		
5	Sericulture III	P	1	3	39	117	156	10	40	50	10	40	50	20	80	100	2	3	
6	Dyeing II	P	2	6	78	234	312	20	80	100	20	80	100	40	160	200	2	3	
7	Management and Marketing	P	3	1	117	39	156	10	40	50	10	40	50	20	80	100	2	3	
8	Total		9	31	351	1209	1560	100	400	500	100	400	500	200	800	1000			

Subject Title	Nature of instruction	Duration 1600 (Hrs)	Full marks
On the job training (OJT)	Practical	1 Year = 1600 hrs.	1000

Note: The academic year consists of 39 weeks with 40 hours per week 1560 hours (39×40= 1560 hrs) total per year.
Practical areas: OJT- Cottage Industries/ Cotton/ sericulture industries - 48 hrs (40 weeks)

Duration:-

4680 hrs. + 1600 hrs On The Job training

Length (Hrs): -

The course should be completed in 4 years (4680 class Hrs. + 1600 OJT hrs = 5680 hrs for grades eight pass candidates; in 2 year (3180 class Hrs) + 800 OJT hrs. = 3980 hrs for 10 passed (Sent up) candedates; in a formal setting. 1560 class hrs + 300 OJT hrs = 1860 for S.L.C passed candidates.

The 10 months OJT will be compulsory after final exam. The total hours for the course will be 3120+800 (OJT) = 4020 hrs.

Target Group: 8 class passed individuals

Group Size: 20 in each batch

Target Location: All over Nepal

Medium of Instruction: Nepali, Hindi, and English

Patterns of Attendance:-

40 Hrs. per week for 39 weeks and 90 % attendance is required, per year.

Entry Requirements: -

a. 8-class pass.
b. Selection: Candidates will be selected on the basis of entrance examination/options (decided by as per CTEVT).

Certificate Requirements: -

CTEVT will award the certificate Sericulture & Textile JTA (TSLC) to the students who gain a mark of 60% in practical test and 40% in knowledge test in all subjects..

Trainees Evaluation Details:

a Regular internal evaluation of the trainees is to be conducted by the related instructors to ensure the proficiency over each tasks/ skills in each subject.
b Related technical knowledge of the tasks learnt by the trainees is to be evaluated through written test. Internal assessment will be conducted 3 times by the institute within training period.
c 80% marks are allotted to the practical work and 20 % is allotted to the related technical knowledge in each subjects.
d The CTEVT Examination Division will conduct Final examination after completion of the course.
e For each subject 50 % of the weight age will be allotted to the internal assessment and the rest of the 50 % to the final examination.
f The overall mark comes from adding the weight age score from internal assessment and mark from the assessment. Only the students who have passed the internal assessment can appear in the final exam.
g Candidate who fails in the final exam can appear in the re-test scheduled by CTEVT.
h After completion of the final examination On the Job (OJT) will be administered.

Trainers' Qualification:

The course grading will be as follows: -

Grading	Overall Marks
Distinction	Passed with 80% or above
First Division	Passed with 75% or above
Second Division	Passed with 65% or above

Third Division Passed with

Subjects

First Year

Nepali
English
Mathematics
Science
Spinning I
Design Development I
Weaving I

Sericulture I

Second Year

Applied Nepali
Applied English
Applied Mathematics
Applied Science
Spinning II
Design Development II
Weaving II
Sericulture II
Dyeing I

Third Year

Spinning III
Design Development III
Weaving III
Sericulture III
Dyeing II
Management and Marketing

Forth Year

On the Job Training (OJT)

First Year

1. **Nepali**
2. **English**
3. **Mathematics**
4. **Science**
5. **Spinning I**
6. **Design Development I**
7. **Weaving I**
8. **Sericulture I**

नेपाली

वर्णनः यस विषयमा नेपाली भाषिक सीपसंग सम्बन्धित निबन्ध, कथा, जीवनी, चिठ्ठी, रूपक, दैनिकी, कविता र भाषातत्व (व्याकरण) जस्ता विधा क्षेत्र समावेश गरिएका छन्

उद्देश्यहरूः यो विषयको अध्ययन पूरा गरेपछि विद्यार्थीहरू निम्न लिखित कुराहरूमा सक्षम हुनेछन्:

- नेपाली भाषमा गरेका वार्तालाप बुझ्ने गरी ध्यानपूर्वक सुन्न
- समूहमा रही अरूले छलफल गरेका विषयवस्तु बुझ्ने गरी सुन्न
- प्रवचन, व्याख्या, प्रश्नोत्तरजस्ता कुराको आशय बुझी व्यक्त गर्न
- मौखिक अभिव्यक्तिका क्रममा उपयुक्त हाउभाउ, चेष्टा, अभिनय आदिको ख्याल गरी सुन्न र बुझ्न
- रेढियो, टेलिभिजन, टेलिफोन,जस्ता सञ्चारका माध्यमबाट व्यक्त भएका विषयहरू घटनालाई सुनेर बुझ्न
- आफूले पढेका र सुनेका शब्दहरूको शुद्धसंग उच्चारण गर्न
- देखेका सुनेका, पढेका र आफूले अनुभव गरेका विषयवस्तुका बारेमा गति, याति र मिलाई भन्न ।
- सरल कथा, कविता, निबन्ध जीता साहित्यिक विधा रूची लिई पढ्न र लेख्न
- आफूले पढेका। सुनेका शब्दलाई मिलाई शुद्धसंग हिज्जे -वर्णविन्यास) मिलाई लेख्न
- विषयवस्नु र प्रसङ्ग अनुसार ठीकठीक गाउँमा चिन्हहरू प्रयोग गरी लेख्न
- स्वतन्त्ररूपमा घरायसी र कार्यालयीय चिठी लेख्न
- अनुच्छेद, दैनिकी र निवेदन लेख्न
- कुराकानी, प्रश्नोत्तर, संवाद, वादविवाद छलफलजस्ता गतिविधिमा मौखिक अभिव्यक्ति दिन
- कुनै पनि विषयमा आफ्नो विचारलाई स्पष्टसंग अभिव्यक्त गर्न
- बोल्दा वा लेख्दा ठीक ठाउँमा ठीक शब्द र वाक्यांशको प्रयोग गर्न
- नेपाली भाषाका लिखित सामग्रीहरूलाई शुद्ध र स्पष्टसंग सस्वर र मौनवाचन गर्न
- मौखिक तथा लिखितरूपमा अभिव्यक्त भएका विषयवस्नुको सारांश लेख्न
- स-साना कथा, कविता निबन्ध लेख्न
- नेपाली भाषामा लेखिएका विषयवस्तुहरूको खासखास बुँदा टिप्न र व्याख्या गर्न
- देखेका, सुनेका र पढेका घटना र विषयवस्तुहरू बुझी तिनीहरूको आधारमा प्रश्नोत्तर गर्न
- बोल्दा, पढ्दा र लेख्दा उखानटुक्काको प्रयोग गर्न
- नेपाली भाषाका व्याकरणका आधारभूत नियमको पालना गरी अभिव्यक्त गर्न
- नेपाली शब्दकोषको प्रयोग गर्न
- नेपाली भाषाका शब्दभण्डार बढाउन ।

विधा र क्षेत्र

क्र.सं.	विधा	क्षेत्र
१	निबन्ध	निबन्ध • सामाजिक ➢ सांस्कृतिक तथा ऐतिहासिक • प्राकृतिक तथा वातावरणीय ➢ वैज्ञानिक तथा प्राविधिक • कलाकोशल तथा सौन्दर्य ➢ व्यावसायिक
२	कथा	कथा लोक कथा पौराणिक कथा ऐतिहासिक आधुनिक कथा
३	जीवनी	जीवनी राजनैतिक साहित्यिक र कलासंबन्धी सांस्कृतिक/ऐतिहासिक विचारक जीवनी राजनैतिक विचारक आविष्कारक कलाकार
४	चिठी	चिठी घरायसी विद्यालयीय कार्यालयीय/ व्यापारिक निवेदन
५	रूपक	रूपक संवाद वदविवाद मनोवाद वक्तृता एकाङ्की
६	दैनिकी	दैनिकी
७	कविता	कविता नीतिप्रधान प्रकृतिप्रधान इतिहासप्रधान संस्कृतिप्रधान समाजप्रधान
८	भाषातत्व	भाषातत्व (क) पदसङ्गति वचन पुरूष
		(ख) काल र पक्ष सामान्य वर्तमान पूर्ण वर्तमान अपूर्ण वर्तमान सामान्य भूत पूर्ण भूत अपूर्ण भूत अभ्यस्त भूत अज्ञात भूत सामान्य भविष्यत पूर्ण भविष्यत अपूर्ण भविष्यत

		(ग) भाव सामान्यार्थ (प्रश्नार्थसहित) इच्छार्थ संकेतार्थ	
		(घ) वाच्य कर्तवाच्य भाववाच्य	कर्मवाच्य वाच्यपरिवर्तन
		(ङ) धातु सामान्य धातु नामधातु	प्रेरणार्थक धातु धातुरूपावली
		(च) कारक र विभक्ति विभक्तिहरू सरल र तिर्यकरूपसमेत कारक (कर्ता, कर्म करण, सम्प्रदान, अपादान, र अधिकरण)	
		(छ) शब्दवर्ग नाम (भेदसहित) सर्वनाम (भेदसहित) विशेषण (भेदसहित) क्रियापद (सकर्मक, अकर्मक, सरल र संयुक्त) अव्यय (क्रियायोगी, नामयोगी, संयोजक, विस्पयादिबोधक र निपात)	
		(ज) वाक्यसंश्लेषण र विश्लेषण सरल वाक्य सयुक्त वाक्य मिश्र वाक्य	
		(झ) चिन्हहरू पूर्णविराम योजक अर्धविराम निर्देश	योजक उद्‌गार उद्धरण
		(ञ) शब्द निर्माण प्रक्रिया उपसर्ग व्युत्पन्न शब्दहरू तद्धितान्त व्युत्पन्न शब्दहरू	कृदन्त व्युत्पन्न शब्दहरू समस्त व्युत्पन्न शब्दहरू

		(ट) हिज्जे	
९	शब्दभण्डार	शब्दभण्डार	
		पर्यायवाची शब्द	विपरीतार्थी शब्द
		अनुकरणात्मक शब्द	श्रुतिसमभिन्नर्थक शब्द
		अनेकार्थक शब्द	लघुवाचक शब्द (सानोलाई बुझाउने
		सिङ्गो शब्द	शब्द)
		संक्षिप्त शब्द	पारिभाषिक शब्द
			टुक्का र उखान

पाठ्यपुस्तक

नेपाली कक्षा ९ प्रकाशक जनक शिक्षा सामग्री केन्द्र, सानोठिमी भक्तपुर
नेपाली कक्षा १० प्रकाशक जनक शिक्षा सामग्री केन्द्र, सानोठिमी भक्तपुर

English

Description

This subject consist of contents dealing with the knowledge and skill related to reading, writing, speaking, listening in English language as a means of communication.

Objective

After the completion of this course the trainees will be able:

- To develop a competence in spoken English.
- To communicate fluently and accurately with other speakers of English
- To develop competence in understanding a variety of reading texts
- To gain the skills necessary to write in English appropriately and effectively.
- To develop an ability to use simple reference materials.
- To read, appreciate and enjoy literary texts.
- To develop an awareness of cultural and ethical values relevant to Nepal.

S. No	Content	
1	Making plans and expressing intensions	
2	Suggesting and advising	
3	Making request	
4	Expressing condolence / sympathy	
5	Apologizing and responding apology	
6	Asking for Permission	
7	Making offer	
8	Accepting and rejecting offers	
9	Describing (using relative clauses)	
10	Describing (using clausetive)	
11	Locating places	
12	Describing Purpose and function	
13	Taking about past (narrating past events)	
14	Taking about past (comparing past & present)	
15	Taking about past (interrupted continuous action)	
16	Taking about past (Past actions with present significance)	
17	Giving advice / warnings	
18	Persuading some one to do something\	
19	Expressing an ability to do something	
20	Expressing degree of certainty	
21	Reporting Statement	
22	Reporting questions	
23	Reporting Commands	
24	Giving and withholding permission	
25	Reporting, giving and withholding permission	
26	Expressing conditions	
27	Asking for and giving reasons	
28	Criticizing	

29	Expressing preferences	
30	Taking about past (narrating past events)	
31	Taking about (interrupted continuous action)	
32	Conforming and denying	
33	Agreeing and disagreeing	
34	Expressing degrees of probability	
35	Interrupting tables, charts, diagrams etc.	
36	Revision and recycling of the above	

- Text books
- English (grade 9 and 10)
  - V.S. Rai
  - I. Shrestha
  - K.R. Hamal

Mathematics

Description

This subject contains seven units dealing with the knowledge & skill on the areas of sets & trigonometry, arithmetic, mensuration Algebra, Geometry Statistics and Probability.

:

After the completion of this course the trainees will be able:

- To demonstrate/ explain the basic knowledge and skills on the following:
  - Sets
  - Trigonometry,
  - Arithmetic,
  - Mensuration
  - Algebra,
  - Geometry
  - Statistics and
  - Probability.

  To solve the mathematical problems included in the textbooks

Content **Time hrs.**

Unit I Sets & Trigonometry

1. Sets
   - 1.1 Set operation
   - 1.2 Uses of Venn-diagram

2. Trigonometry,
   - 2.1 Trigonometric ratios
   - 2.2 Values of Trigonometric ratios in the interval of 10
   - 2.3 Trigonometric ratios of some standard angles
   - 2.4 Problems on height and distance
   - 2.5 Area of a triangle using two sides & included angles between them.

Unit II

3. Arithmetic,
   - 3.1 Unitary methods and variation
   - 3.2 Percentage
   - 3.3 Profit and loss
   - 3.4 Simple Interest
   - 3.5 Home Arithmetic
   - 3.6 Commission & taxation
   - 3.7 Compound interest
   - 3.8 Population growth & compound depreciation
   - 3.9 Ratio and Proportion
   - 3.10 Problems on mixture of ingredients

Unit III

4. Mensuration
   - 4.1 Problems on area involving cost & quantities
   - 4.2 Surface area & volume of solids
   - 4.3 Surface area & volume of Shapes
   - 4.4 Area of triangle
   - 4.5 Problems area and volume of cones, prisms, pyramids and related problems

Unit VI

5. Algebra,
   - 5.1 Algebraic Expression
   - 5.2 Linear equation & Simple inequalities
   - 5.3 Quadratic equations
   - 5.4 Simple inequalities with two variables

Unit V

6. Geometry
   - 1.1 Tangles
   - 1.2 Parallelograms
   - 1.3 Area of triangles and quadrilaterals
   - 1.4 Similarity
   - 1.5 Locus
   - 1.6 Circle
   - 1.7 Constructions: triangles and quadrilaterals, Regular polygons & constructions related to the locus

Unit VI

7. Statistics
   - 7.1 Cumulative frequency table and pie chart
   - 7.2 Arithmetic mean of grouped data
   - 7.3 Mean and Mode
   - 7.4 Histogram and ogive
   - 7.5 Mean, Median, and use of cumulative frequency to estimate quartiles

Unit VII

8. Probability.
   - 8.1 Experiment
   - 8.2 Introduction to probability scale
   - 8.3 Empirical probability
   - 8.4 Additive & multiplicative Laws
   - 8.5 Probability on simple dependent events

Mathematics

Tasks	Related Technical Knowledge
1. Perform weaving calculation	**Yarn** ➢ Definition ➢ Type (handmade, machine-made, single and twisted yarn.) ➢ Importance ➢ Different counting system (gram, Pound, Kilo, Indian, international, metric) ➢ Calculation ➢ System of numbering yarn No. ➢ Count of resultant yarns ➢ Condition o Humidity, o Moisture content o Regain ➢ Yarn and its count number **Folded yarn** ➢ Definition ➢ System ➢ Count **Measuring systems** **Count number** ➢ Definition ➢ Importance **Average count number** ➢ Definition ➢ Importance ➢ Formulation **Changing methods,** e.g. gram to pond, Kg to gram, etc. Table of conversion factors **Simplified formulation for count** ➢ Cotton, ➢ span silk, **Reed and reed calculation** **Reed** ➢ Definition ➢ Importance ➢ Formulation ➢ Type ➢ Size ➢ Calculation ➢ System of courting conversion from one system to another, such as Old system to Metric system. **Healds** ➢ Definition

	➢ Importance ➢ Formulation ➢ Type ➢ Size ➢ Calculation ➢ Country of heals, ➢ Calculation on rate of lenthing, ➢ Casting out of heals, ➢ Spaced draft. **Factors involved in cloth calculation** ➢ Contraction of warp and weft., ➢ take up, ➢ Regular cut length, ➢ Reed conter and reed space, ➢ Loom picks, ➢ Allowance for visible and inversible waste, ➢ allowance for count in bleached and dyed fabric **Warp and weft calculation** **Formula for warp calculation** **Formula for weft calculation**
2. Determine the count yarn	Yarn determination technic
3. Determine weight of the yarn	4. Type of the yarn (hank, lie, bundle) 5. Different measurement systems 6. Changing the system of measurement from one unit to another, for example: gram to kilogram, gram to pounds, etc. 7. Record 8. Definition 9. Importance 10. Types 11. Recording procedure
12. Perform warping calculation	**Warping calculation** ➢ Definition ➢ Importance ➢ Methods ➢ The vibration **Warping drum** ➢ Definition ➢ Importance **Koka** ➢ Definition ➢ Importance **Reed**

	➢ Definition ➢ Importance
13. Determine weight of *Bana, Tana* (warp and weft)	**Tana (Warp) yarn** ➢ Definition ➢ Type ➢ Units ➢ Importance **Bana (weft) yarn** ➢ Definition ➢ Type ➢ Units ➢ Importance **Different calculating systems of yarn** ➢ Definition ➢ Type ➢ Importance ➢ Changing procedure (one system to another) **Recording system** **Safety precaution**
14. Determine the count number of yarn	**Weaving calculations:** ➢ Weight system ➢ Length system ➢ Equivalent count ➢ Metric system
15. Determine weight of the yarn	**Weighing systems** ➢ Definition ➢ Types o Fixed weight system o British system o Bharatiya system o Metric system ➢ Importance ➢ System converting procedure
16. Perform warping calculations	➢ Introduction of weaving Warping calculation
17. Determine the weight of *Bana, Tana,* Warp and Weft	**Warp** ➢ Introduction: ➢ Calculation **Weft** ➢ Introduction: ➢ Calculation

Textbooks

Compulsory Mathematics Grade Nine English version
Compulsory Mathematics Grade Tem English version
Janak Educational Material Centre Ltd.
Sanothimi, Bhaktapur.

Science

Description

This subject contains four units dealing with the knowledge & skill Physics Chemistry, Biology, and Astrology & Geology respectively.

:

After the completion of this course the trainees will be able:

- To demonstrate/ explain the basic knowledge and skills on the following area:
  - Physics
  - Chemistry,
  - Biology, and
  - Astrology and
  - Geology

  To perform the activities included in the textbooks

Content	Time hrs.

Unit I Physics

1. Measurement
2. Force
3. Mechanics
4. Work, energy & power
5. Light
6. Sound
7. Pressure
8. Energy
9. Heat
10. Current, Electricity & magnetism

Unit II Chemistry

1. Valiancy and molecular formula
2. Lionization
3. Acid, base and salt
4. Some gases
5. Carbon and its compounds
6. Classification of elements
7. Chemical reactions
8. Solubility
9. Metals
10. Metals used in daily life

Unit III Biology

1. Plants Reproduction through spores
2. Invertebrates

3. Tissues and organs
4. Skeleton system
5. Circulatory systems
6. Stimulation & Reaction
7. Ecosystems
8. Classification of Plants and animals
9. Virus
10. Adaptation
11. Cell division
12. Reproduction
13. Heredity & Evolution

Unit IV Astronomy and Geology

1. Natural Disasters
2. The earth in the universe
3. History of earth
4. Atmosphere
5. Universe

Textbooks

1. Science Grade Nine English version, Janak Educational Material Centre Ltd. Sanothimi, Bhaktapur.

2. Compulsory Mathematics Grade Tem English version, Janak Educational Material Centre Ltd. Sanothimi, Bhaktapur.

Spinning I

Description

This subject deals with the knowledge & skill on spinning (cotton, wool and silk). The trainees perform cotton spinning, wool spinning and silk spinning using different types spinning tools and equipment, such as charkhas, machines etc. The course gives clear idea for that work.

Objectives:

After the completion of this course the trainees will be able to:

- Explain and demonstrate cotton spinning using different charkhas and machines in the basic knowledge and skills.
- Explain and demonstrate woolen spinning using different charkhas and machines in the basic knowledge and skills.
- Explain and demonstrate silk spinning using different charkhas and machines in the basic knowledge and skills.
- Spin cotton, woolen and silk according to the need.
- Explain different types of spinning techniques and demonstrate different types spinning. Such as cotton, silk and wool

Subject Details

Tasks	Related Technical Knowledge
1. Identify Textile Fibers	**Textile Fibers** ➢ Definition ➢ Properties ➢ Composition ➢ Type ➢ Importance ➢ Quality ➢ Separating technique ➢ Storing ➢ Recording system and importance ➢ Safety precaution
2. Perform blending opening	**Blending opening** ➢ Definition ➢ Importance ➢ Procedure
3. Perform carding	**Carding** ➢ Definition ➢ Importance ➢ Procedure
4. Perform rove making	**Rove Making** ➢ Definition ➢ Importance

	➢ Procedure
5. Spin cotton yarn	**Cotton Yarn** ➢ Definition ➢ Type ➢ Importance ➢ Methods of spinning ➢ Methods to storing ➢ Records keep
6. Perform gelling	**Gelling** ➢ Definition ➢ Importance ➢ Procedure
7. Perform combing	**Combing** ➢ Definition ➢ Importance ➢ Procedure
8. Spin woolen yarn	**Wool** ➢ Definition ➢ Type ➢ Importance ➢ Quality ➢ Separating technique ➢ Spinning Methods ➢ Storing ➢ Recording system and importance ➢ Safety precaution
9. Spin silk yarn	**Cocoon** ➢ Definition ➢ Properties ➢ Type ➢ Importance ➢ Quality (Good and bad) ➢ Separating technique ➢ Good and bad cocoon separating procedure ➢ Spinning methods ➢ Storing ➢ Recording system and importance ➢ Quality ➢ Methods to separating dirt, ➢ Boiling, washing and drying procedure ➢ Spreading procedure ➢ Hank making ➢ Storing procedure ➢ Record keeping ➢ Safety precaution

Degine Development I

Tasks	Related Technical Knowledge
Design textile	**Textile** ➢ Definition ➢ Types ➢ Importance **Design** ➢ Definition ➢ Types ➢ Importance ➢ Designing Techniques **Textile design** ➢ Definition ➢ Types ➢ Importance ➢ Designing Techniques ➢ Use of design paper ➢ Method of indicating drat/s
Make pegg plan	**Pegg planning** ➢ Definition ➢ Type ➢ Importance ➢ Function Systems of drafting Condition in drafting Prepare different types of pegg plans
Identify types of textile design	**Textile design** ➢ Definition ➢ Types of textile design 1. Plain 2. Twill 3. Honeycomb 4. Hakka bank 5. Macklino 6. Satain
Identify type of design for drafting	**Drafting** ➢ Definition ➢ Types

	➢ Importance ➢ Drafting Techniques ➢ Textile drafting techniques
Plan for design	**Planning** ➢ Definition ➢ Types of textile design ➢ Importance **Types of textile design** ➢ Drawing ability and painting ➢ Preparation **Plain pegg planning procedure**
Perform plain weave design	**Plain weave design** ➢ Definition ➢ Types ➢ Importance ➢ Design making ➢ Types of designing Clothes a. Warp rib weave b. Weft rib weave c. Hopsack weave d. Mat or basket weave e. Repitation of weave
Prepare design on graph paper	**Graph Paper** ➢ Definition ➢ Types ➢ Importance ➢ Design making ➢ Types of designing Clothes ➢ Using designs on the weaving cloth **Given design pegg planning procedure** **Healds** ➢ Definition ➢ Types ➢ Importance ➢ Use ➢ Size ➢ Calculation
Draft plain design	**Plain design drafting** ➢ Definition ➢ Type ➢ Formula counting ➢ Calculation and simple mathematics

	➢ Planned design drafting
Thread the warp	**Warping** ➢ Definition ➢ Types ➢ Importance ➢ Importance of warping ➢ Angle of inclination of twil weave

Required tools/equipment: Note book, graph paper, eraser, pencil
Safety: Be careful while designing

Weaving I

Description

This subject deals with the knowledge & skill for weaving (clothes, rugs, and carpets). The trainees perform winding, warping, different types of weaving according to the design and market need. The course gives clear idea for that work.

Objectives:

After the completion of this course the trainees will be able to:

- Explain and demonstrate winding, warping in the basic knowledge and skills for cloth for weaving.
- Explain and demonstrate warping in the basic knowledge and skills for rug for weaving.
- Explain and demonstrate warping in the basic knowledge and skills for carper for weaving.
- Weave clothes, rugs, and carpets according to the prepared design.
- Explain different types of design and demonstrate different types weaving, such as clothes, rugs, and carpets.

Subject Details

Weaving Mechanism

Tasks	Related Technical Knowledge

1. Familiarise with weaving motion	**Weaving motion**
	➢ Definition
	➢ Properties
	➢ Type
	  ➢ Primary
	  ➢ Secondary
	  ➢ Axiliary
	➢ Importance
	➢ Mechnism

2. Identify loom parts	**Looms**
	➢ Definition
	➢ History
	➢ Type
	  ➢ Counter balance
	  ➢ March
	  ➢ Dobby
	  ➢ Jacquard
	  ➢ Backset
	  ➢ Frame
	➢ Importance
	➢ Functions
	➢ Size

	Loom Parst ➢ Types ➢ Functions ➢ Importance ➢ Use
3. Fill healds	**Healds** ➢ Definition ➢ Type ➢ Importance ➢ Functions ➢ Size ➢ Use ➢ Filling calculation ➢ Filling technic ➢ Tieing technic
4. Fill reed	**Reed** ➢ Definition ➢ Type ➢ Importance ➢ Functions ➢ Size ➢ Use ➢ Filling calculation ➢ Filling technic
5. Perform shedding	**Shedding** ➢ Definition ➢ Type ➢ Importance ➢ Functions ➢ Size ➢ Use ➢ Technic
6. Familiarize with Yarn	**Yarn** ➢ Definition ➢ Properties ➢ Composition ➢ Type ➢ Importance ➢ Quality
7. Make weaver's Knot	**Knot** ➢ Definition

	➢ Type ➢ Importance ➢ Function ➢ Use
8. Familiarise Weaving	**Weaving** ➢ Definition ➢ Historical Background ➢ Materials ➢ Primary process ➢ Type ➢ Measurement ➢ Importance
9. Prepare graph for Design	**Graph** ➢ Definition ➢ Type ➢ Paper ➢ Measurement ➢ Preparation ➢ Importance **Drawing** ➢ Definition ➢ Type ➢ Paper ➢ Measurement ➢ Preparation ➢ Importance for design **Design** ➢ Definition ➢ Type ➢ Paper ➢ Measurement ➢ Preparation ➢ Importance **Coloring** ➢ Definition ➢ Type ➢ Importance ➢ Texture **Affective records Keeping**
10. Perform warping	**Warping** ➢ Definition ➢ Type (horizontal, Vertical) ➢ Importance

	➢ Procedure ➢ Calculations ➢ Drum **Spring and weight** ➢ Definition ➢ Type ➢ Importance ➢ Function ➢ Role **Beaming** ➢ Definition ➢ Type ➢ Importance ➢ Function ➢ Technique **Yarn** ➢ Definition ➢ Type ➢ Importance **Bobbins.** ➢ Definition ➢ Type ➢ Importance ➢ Function **Krill** ➢ Definition ➢ Type ➢ Importance ➢ Function **Cross making** ➢ Definition ➢ Type ➢ Importance ➢ Procedure
11. Peg warping	**Peg warping** ➢ Definition ➢ Type ➢ Importance ➢ Procedure
12. Perform vertical warping	**Vertical warping** ➢ Definition ➢ Type ➢ Importance ➢ Procedure
13. Perform horizontal warping	**Horizontal Warping** ➢ Definition

	➢ Type ➢ Importance ➢ Procedure
14. Perform board warping	**Board warping** ➢ Definition ➢ Type ➢ Importance ➢ Function ➢ Warping procedure of frame board
15. Set warp on beam	**Beam** ➢ Definition ➢ Type ➢ Importance ➢ Function ➢ Warp setting
16. Selecting thread	**Warp and weft** • Introduction • types ➢ colours, ▪ importance ▪ types ➢ yarn , ▪ importance ▪ types
17. Set heald/Reed on loom	Loom • Introduction • Types • Importance • Function Heald /Reed • Introduction • Types • Importance • Function
18. Set pulley, Jack, paddle on loom	Pulley • Introduction • Types • Importance • Function Jack, • Introduction • Types

	• Importance • Function Paddle • Introduction • Types • Importance • Function
19. Mount thread on weft bobbin by Charkha/machine	Bobbin • Introduction • Types • Importance • Function
20. Beat weft	Weft beating • Introduction • Types • Importance • Function Beating motion • Introduction • Types ➢ Positive ➢ Negative ➢ Picking ❖ Under ❖ Over ❖ Cone ➢ Secondary ❖ Take up ❖ Let up ➢ Warp protectors ❖ Lose read ❖ Fart read ❖ Weft fork • Importance • Function
21. Prepare heavy loom for carpet/rug weaving	**Heavy loom** • Introduction • Types • Importance • Function
22. Keep necessary weaving tools materials in easily available place	**Weaving tools** • Introduction

	• Types • Importance • Function **Weaving materials** • Introduction • Types • Importance
23. Picking steps for box	**Shuttle box** • Introduction • Types • Importance • Function
24. Perform let off and take up mechanism of beam	
25. Check up the performance	**Checking of** • Coca • Read • Paddle • Pully • Jack • Draft • Beam
26. Correct errors in operation	Operation errors correction procedure
27. Perform finishing activities	Finishing activities • Sizing • Cutting • Designing • Ironing • Blocking • Hanging • Bundling • Packing
28. Measure the cloth	Measuring • Unit • Type
29. Keep records	Record keeping • Formats • •

30. Handle loom products	Materials/ tools Collection Storing Procedure Safety handleing
31. Identify looms	**Looms** ➢ Definition ➢ Historical Background ➢ Type ➢ Importance
32. Counter balance looms 33.	**Loom** ➢ Definition ➢ Type ➢ Importance ➢ Functions ➢ Parts ➢ Procedure to weft setting ➢ Operating procedure ➢ Countering procedure
34. Describe different looms (Back strap) 35.	➢ Knowledge about the traditional style of doing warping ➢ Ways to put cross sticks ➢ Methods to uplift the cross set ➢ Weaving of the cloth
36. 37. Describe different looms frame (tapestry)	The frame loom for tapestry
38. Familiarise sizing	**Sizing** ➢ Definition ➢ Historical Background ➢ Type o Hank o Warp o Machinary ➢ Importance
39. Classify sizing materials	**Sizing materials** ➢ Definition ➢ Type o Sticky substance. o Definition o Importance

	○ Weight increasing substance. ○ Thread soft-making substance. ○ Light colours. ○ Fungus and the ways ○ Elasticity, plasticity, flexibility, etc. ➢ Importance
40. Prepare ratio of sizing material	➢ Sizing material ➢ Soft sizing material ➢ Medium sizing material ➢ Heavily sized material ➢ Deeply sized material
41. Prepare sizing solution	➢ Tools and equipment ➢ Ratios ➢ Sizing material ➢ Weight-taking ➢ Protection of the materials from fungus ➢ Indigo material ➢ Mixing of materials ➢ Heating/ driving ➢ Cooling the material ➢ Storing the material ➢ Keeping the records
42. Familiarize method of sizing	➢ Hank, bundle, cluster, bunch, etc. ➢ Thread ➢ Required tools and equipments ➢ Sizing solution ➢ Soaking of thread ➢ Importance of boiling and heating ➢ Filtering ➢ Mechanism of sizing system ➢ Why the sizing is dried ➢ Keeping records ➢ Type of sizing ➢ Definition of warping ➢ What liga is ➢ Squeezing and extorting
43. Select woolen thread	➢ Knowledge about the warp and weft ➢ Various types of colours, yarn , its importance and types
44. Set healed /Reed on loom	➢ Introduction, work, importance and types of heald and reed
45. Set pulley, Jack, paddle on loom	➢ Introduction, work, importance and types of pulley, jack and paddle

46. Beat weaved thread	➢ Introduction, work, importance and types of beating
47. Prepare heavy loom for carpet/rug weaving	➢ Introduction, work, importance and types of heavy looms
48. Place weaving tools, materials in easily available place	➢ Introduction, work, importance and types of materials and tools used in weaving
49. Practice for let off and take up mechanism of beam	➢ Introduction, work, importance and types of beam
50. Check up the performance	**Performance checking** ➢ Introduction, ➢ work, ➢ importance ➢ types ➢ tools and equipments
51. Correct errors in operation	**Errors in operation** ➢ Introduction, ➢ work, ➢ importance ➢ types
52. Perform finishing activities	**Finishing activities** ➢ Introduction, ➢ work, ➢ importance ➢ types
53. Measure weaved rug	**Product Measurement** ➢ Introduction, ➢ work, ➢ importance ➢ types
54. Perform tapestry weft weaving technique as per design sample frame loom	➢ Design: a. Geometrical b. Landscape c. Detailed drawing ➢ - Frame loom ➢ - Different weaving techniques ➢ - Calculation of designed yarn ➢ - Process of tapestry ➢ - Calculation: a. Design b. Yarn ➢ - Finishing

	➢ - Blocking
55. Weave border	➢ Identifying the yarn ➢ Different weaving techniques ➢ Knot weaving
56. Weave over the designs using fingers	**Weaving technique as pr design:** ➢ Color shading ➢ Matching the colors ➢ Planning the weaving technique ➢ Joining ➢ Finishing **Take care of the mistake:** ➢ Problem with the warp ➢ Problem with the weft ➢ Problem with design, color and yarn ➢
57. Blocking	**Blocking** ➢ Definition ➢ Type ➢ Importance ➢ Functions ➢ Use ➢ Size ➢ Process ➢ Measurement ➢ Heat & temperature ➢ Duration
58. Identify types of design for tapestry	➢ General idea about tapestry drawing
59. Plan for design for tapestry	➢ Drawing ability and tapestry painting

Sericulture I

Task	Related Technical Knowledge
1 Plan for sericulture farming	- Definition of sericulture - Different types of sericulture - Economic/ social / cultural importance of sericulture - Requirement for mulberry sericulture - Sources of information - Planning formats - Precautionary measure - Keeping records
2 Select land	- Specification of land required by seri-farming - Surveying from different point of views - Infrastructure of model sericulture farm - Resource base for the sericulture farm - Vicinity of an ideal sericulture farm - Precautionary measure - Keeping records
3 Prepare land for Seri farm	- Specification of a model sericulture farm - Preparation at plain land, gently slopped land and steep landscape - Preparation of bench terraces - Precautionary measure - Keeping records
4 Perform layouts	- Planning sericulture farm - Master plan for typical Seri farm - Layout plan of sericulture farm - Precautionary measure - Keeping records
5 Prepare irrigation system	- Precautionary measure - Keeping records
6 Prepare drainage system	- Drainage requirement of the mulberry farm - Drainage system /structure for a normal farm - Preparing specifications and estimates of a drainage system - Developing the entire system of

	drainage - Precautionary measure - Keeping records
7 Fence the land	- Fencing requirement - Various types of fencing - Merits of bio-fencing - Merits of trench fencing - Merits of barbed wire fencing - Precautionary measure - Keeping records
8 Prepare the networks of farmroads	- Requirements for farm road networks - Components of farmroad networks - Specifications of farm road - Precautionary measure - Keeping records

Mulberry propagation

Task	Related Technical Knowledge
1. Determine the need for mulberry propagation	- Significance of mulberry propagation - Characteristics of mulberry varieties - Different methods and practices of mulberry propagation
2. Select nursery sites	- Need for a good nursery site - Requirements of mulberry nursery
3. Identify/select variety of mulberry	Variated characteristics of mulberry Variety and it's precaution to geophysical environment - -varieties and their seasonal characteristics
4. Propagate mulberry by grafting	- Grafting and its type

Establish Mulberry farm

Task	Related Technical Knowledge
1. plan for mulberry farm	- Define specification of a good mulberry farm - Categorization of mulberry farm for different purposes - Sources of information - Planning forcasts and processes - Precautions to be followed in establishing mulberry farm - Record keeping
2. select site for mulberry farm	Specification of a good mulberry farm Selection criteria for a good site Sources of information

	Precautions to be followed in selecting sites Record keeping
3. Manage human resource	- Specification of human resource need of sericulture - Sources of information - Selection criteria for human resource - Precautionary measures - Record keeping
4. Prepare the land	- Land preparation criteria - Specification of land for good mulberry farm - Master plan of the mulberry farm/sericulture - Sources of information - Precautionary measures - Record keeping
5. Layout of the plantation farm	- Infrastructure of a good mulberry farm - Laying out of a mulberry farm - Different purpose mulberry farm - Precautionary measures - Record keeping
6. Manage/procure/ plantation material	- Inventory of plantation materials - Sources of the plantation materials - Methods of procuring plantation materials - Precautionary measures - Record keeping
7. Perform fencing	- Different fencing methods and means - Fencing estimates - Importance of fencing - Significance of bio fencing - Precautionary measures - Record keeping
8. Layout for plantation	- purpose of plantation layout - methods of layout - importance of layout - layout pattern for different purpose mulberry plantation - Precautionary measures - Record keeping

9. Dig plantation pits/trenches	- Plantation methods - Dimention of plantation pits/trenches - Merits demerits of plantation pits/trenches - Precautionary measures - Record keeping
10. Fill the pit/trenches with plantation material	- Plantation materials - Soil treatment - Sources of plantation materials - Sequence of filling pits/trenches - Precautionary measures - Record keeping
11. Select obtain saplings	- Different cultivas of mulberry - Performance of different varieties of mulberry - Seasonal and geophysical adaptability of various mulberry varieties - Precautionary measures - Record keeping
12. Plant saplings	- Plantation of perennial plantation crops - Mechanism of plantation works - Precautionary measures - Record keeping
13. carry out initial care of the planted saplings	- Importance of initial care of plantation crop - Steps of initial care of plantation crops - Growth patterns of plantation crops - Precautionary measures - Record keeping
14. Keep records	

Perform cultural operations

Task	**Related Technical Knowledge**
1. Perform weeding	- Weeds encroaching mulberry fields - Weed crop relationship - Means of weed control - Precautionary measures - Record keeping
2. Manure the plantation garden	- Mulberry as a plantation crop - Manuring needs of mulberry

	- Ratio of different organic/inorganic manures - Seasonal distribution of manuring in mulberry - Application of manures - Precautionary measures - Record keeping
3. Perform irrigation in mulberry field	- Relation between soil moisture and plant growth - Irrigation needs of mulberry fields - Methods of irrigating mulberry fields - Times of irrigating mulberry fields - Precautionary measures - Record keeping
4. Carry out drainage	- Water logging and mulberry plantation - Drainage system in mulberry field - Precautionary measures - Record keeping
5. Carry out mulching	**Mulching** Definition Type Function Importance Use Procedure

Perform treatment of insect /pest /weeds /diseases of mulberry

Task	Related Technical Knowledge
1. Make calendar for pest management	- Pests attacking mulberry - Seasonal periodicity of the pest occurrence - Appropriate stage of the pests to encounter - Making calendar of the pest management - Precautionary measures - Record keeping
2. Identify common pests of mulberry	- Definition of pests - Pests attacking mulberry - Classification of pests - Identification of the common pests

	- Precautionary measures - Record keeping
3. Identify the nature of damage caused by pests	- Common pests of mulberry - Nature of damage caused by common pests - Processing of damaged materials - Identification of the damages caused by common pests - Precautionary measures - Record keeping
4. Perform soil treatment	- Soil enhabling insects - Insects damaging underground parts of the plant - Pesticides used in the soil treatments - Principle of the soil treatment - Methods of soil treatments - Precautionary measures - Record keeping
5. Select pesticides	- Different types of pesticides - Actions of different pesticides - Classification of pesticides based on toxicity - Applicability of pesticides to particular pest control - Precautionary measures - Record keeping
6. Spray the pesticides	- principle and practices of pesticides uses - mechanism of sprayer uses - methods of spraying - Precautionary measures - Record keeping
7. Follow safety precaution	- Precautionary measures against - Tools and equipment - Pesticides - Weedicides - Fungicides - First aid treatments against - Injuries, poisoning accidents - Record keeping
8. Identify major weeds	- Common weeds infesting field

	- Weeds crop inter relationship - Identification of common weeds - Processing of collected specimens for identification - Precautionary measures - Record keeping
9. Control major weeds by mechanical means	- Principle of weed control - Mechanical means of weed control - Using weedicides - Precautionary measures - Record keeping
10. Keep records	-

Second Year

1. **Applied Nepali**
2. **Applied English**
3. **Applied Mathematics**
4. **Applied Science**
5. **Spinning II**
6. **Design Development II**
7. **Weaving II**
8. **Sericulture II**
9. **Dyeing I**

व्यावहारिक नेपाली

वर्णन: यस विषयले जुनियर टेक्स्टायल असिष्टेण्टहरूलाई आफ्नो कामको सिलसिलामा आवश्यक पर्ने नेपाली भाषिक सीपको विकास गर्दछ । यसमा दिइएका भाषिक सीपहरूले जुनियर टेक्स्टायल असिष्टेण्टहरूलाई टेक्स्टायल विषयमा आवश्यक पर्ने सीपहरू प्रदान गरी सक्षम संचारकर्ता बनाउँछ । यसले ती जुनियर टेक्स्टायल असिष्टेण्टहरूलाई प्रतिवेदन तयार गर्न, विभिन्न किसिमका कागजात तयार गर्न र आफ्ना ग्राहकहरू समक्ष आफ्ना कुराहरू बताउन, आफ्नो व्यवसायका लागि प्रस्ताव बनाउन र आफूलाई चाहिएको प्राविधिक सामग्रीको नामहरूसंग परिचय गराउन समेत सहयोग गर्दछ ।

उद्देश्यहरू: यो विषयको अध्ययन पूरा गरेपछि प्रशिक्षार्थीहरू निम्न लिखित कुराहरूमा सक्षम हुनेछन्:

- यो विषयको अध्ययन पूरा गरेपछि विद्यार्थीहरू शुद्ध हिज्जे र उपयुक्त पदसङ्गतिको प्रयोग गर्दै वाक्य बनोट गरी अनुच्छेद तथा निबन्ध लेख्न
- कुनै वस्तुको वर्णन गर्न
- नेपालीमा क्रियाकलापका प्रतिवेदन लेख्न
- निरीक्षणपछि नेपालीमा प्रतिवेदन लेख्न
- नेपालीमा चिठ्ठी पत्र लेख्न
- नेपालीमा संस्मरणपत्र लेख्न
- नेपालीमा निर्देशन कुभ्न् र लेख्न
- नेपालीमा विदा, ऋण, रोजगारी आदिका लागि निवेदन लेख्न
- नेपालीमा प्रकाशन भएका प्राविधिक कुरा पढ्न् र बुझ्न
- नेपालीमा प्रवचन तयार पार्न
- नेपालीमा प्रवचन दिन
- नेपालीमा टेक्स्टायल र सेरिकल्चर विषयको वर्णन गर्ने खालका नाटिका तयार पार्न
- नेपालीमा लेखिएका विभिन्न लेवलहरू पढ्न
- नेपालीमा प्रश्नहरू तयार पार्न
- आफूले तयार पारेका उत्पादनहरूलाई नेपालीमा प्रदर्शनी तयार गर्न र प्रदर्शन गर्न
- नेपालीमा ससाना पत्रिकाहरू तयार पार्न

Applied English

Description

This subject consists of two units related top the knowledge and skill for simple communication in English language for the related occupation.

Objective

The of this subject are to enable trainees:

- To read\, write, speak and listen/understand English language using related technical words, terms and sentences.
- To Apply knowledge and skill of English language for communication in the related job performance situation.

S. No	Content	
	Unit I Application of Language skill in job situation	
1. 1	Making plans and expressing intensions	
2.	Read/ Write memos	
3.	Read, understand, and use the technical terms in their sentences (with emphasis on trade related terminology).	
4.	Read, understand, national English News papers publish by standard publication (e.g. The Kathmandu post, The Himalayan Etc.)	
5.	Read, understand, Related Technical publication in English	
6.	Read and follow English language instruction	
7.	Read, write and follow the directions in English language.	
8.	Write diary, notes, applications, Curriculum vitae, letters, short reports, talks, and short stories, paragraphs and essays related to the occupation.	
9.	Improve listening skills through participating in conversational programs between two persons or among the groups	
10.	Explain related objects, drawing and projects, graphs, visuals by both written and speaking methods	
11.	Participate on debate programs which are related to the training and advocate for the motion and also against the motion	
12.	Develop the spoken competencies required to apply for employment during the stage of Visa application to work station in abroad	
	Unit II English conversation Practice	
1.	Situational conversation	
2.	Structural conversation	

Reference: Grant Taylor (1975), "English Conversation Practice" Tata MC Graw-Hill Publishing Company Ltd.

Applied Math

Description

This subject contains two units of items dealing with the knowledge & skill on the areas applicable in the related job performance

:

After the completion of this course the trainees will be able:

- To demonstrate/ explain Mathematical skills applicable in textile and sericulture occupation:
- To solve the mathematical problems to be encountered in textile and sericulture occupation
- To apply the acquired skill and knowledge for better job performance in textile and sericulture occupation

Content **Time hrs.**

Unit I Application of mathematical skills in textile

1. Determine count no of thread
2. Determine weight of the thread
3. Perform warping calculations
4. Determine weight of warp and wept
5. Calculate percentage of wastage
6. Perform dyeing calculation
7. Calculate wages
8. Calculate variable cost
9. Calculate material cost
10. Calculate fixed cost
11. Calculate unit cost of product
12. Calculate transportation cost
13. Calculate price
14. Calculate profit and loss
15. Prepare balance sheet
16. Calculate Moisture regain
17. Calculate modulation percentage of wool fiber
18. Calculate coefficient of variation of fiber diameter of wool
19. Calculate crimp frequency of wool fiber
20. Calculate scouring yield of wool
21. Calculate the percentage of vegetable content in wool
22. Calculate average turns per inch during twist testing
23. Calculate no of inches/ meters of folded yarn product
24. Calculate weight of pound/ germs of folded yarn product
25. Calculate time to wind a single pirn
26. Calculate productivity of package winding
27. Calculate productivity of warping
28. Carry out comparison of tax with other count systems

Unit II Application of mathematical skills in sericulture

1. Convert between metric and imperial measure
2. Measure and record lengths or distance
3. Determine the area of various shape of land
4. Estimate distance by pacing (stepping off)
5. Estimate area of irregular shaped land by dividing them into right-angled triangles and of trapezoids.
6. Weigh agricultural items by the metric system
7. Convert local weights to metric weights
8. Convert metric weights to local weights
9. Measure liquids using the metric system
10. Convert metric liquid volume measures to local measures and vice versa
11. Calculate volume to containers, pieces of wool etc.
12. Calculate gross income, expenditure, net income and percentage of profit
13. Calculate the difference in real profit amount and % of profit amount when costs, harvest price, storage costs and off season price are given
14. Convert land area in sq. meter to hectare, ropani and bigha and vice versa
15. Read and use conversation tables
16. Calculate the weight or volume of pesticide or fertilizer containing a given quality of active ingredient or nutrient when the % of active ingredient or nutrient is given
17. Calculate
18. The amount of concentrated chemical to use for making a spray solution when the dilution is given, the rate of application per hectare or other unit is given and the total area is known or can be determined by measuring
19. Calculate the plant population for a hectare or other unit of measure when the number of plants in a given area is provided
20. Calculate the amount for a given area of land when the seed rate, rate of application of a chemical of fertilizer is given
21. Calculate the amount for any other volume, yet keep the same concentration when a given dilution rate per liter or 10 liters is provided
22. Interpret and present simple graphs, histograms, charts, and maps, choosing an appropriate form for the information being illustrated.
23. Calculate the yield per hectare when the yield of a plot of known size is given
24. Make Calculation and estimations of perimeter, area and volume of right-angled figures, triangles, trapezoids, circles and cylinders.
25. Calculate cost per unit.
26. Calculate the amount of seed/seedlings needed for a given area land when the spacing is given
27. Calculate the amount of topsoil needed to fill a given number of plastic bags of a given size.

Mathematics

Tasks	Related Technical Knowledge
1. Determine /count no of thread	➢ Definition ➢ Importance ➢ Various methods ➢ Vibration and the warping drum
2. Determine weight of *Bana, Tana*	Weft/ Warp Bana thread ➢ Definition ➢ Calculation ➢ Different systems of calculating thread ➢ Changing the units of weight
3. Calculate the percentage of wastage	➢ Wastage ➢ Calculation method ➢ Controlling mechanism of wastage
4. Calculate profit and loss	Profit and loss ➢ Calculation ➢ Importance ➢ Method ➢ Posting the calculation in the tables
5. Calculate the wages	➢ Wages ➢ Methods of payment of wages ➢ Labor turn over ➢ Cost and cost sheet
6. Calculate the cost of products	➢ Definition ➢ Importance ➢ Separation ➢ Marginal ➢ BEP analysis ➢ Total cost of products ➢ Preparation of cost sheet
7. Calculate price	➢ Price of the materials ➢ Labour cost ➢ Service cost ➢ Rent ➢ Office cost ➢ Price calculation method
8. Calculate material cost	➢ Cost of materials ➢ The type of the cost of materials ➢ The total cost
9. Dyeing calculation	➢ Definition ➢ Type ➢ Importance ➢ Function ➢ Measuring units

	➢ Changing of units (From one system to another ➢ Concept of unitary method
10. Calculate the transportation cost	➢ Salary and wage Definition ➢ Concept of Taxation and Insurance ➢ Calculating per unit cost of the transportation.
11. Calculate variable cost	➢ Definition ➢ Type ➢ Function ➢ Importance of calculating variable cost. ➢ Method of calculating variable cost
12. Calculate the cost	➢ Different types of cost ➢ Concept of the cost of different materials as per need ➢ Labor cost ➢ Fixed and variable cost ➢ Maintenance and repair cost ➢ Concept of selling and distribution
13. Perform warping calculations	➢ Introduction of weaving ➢ Warping calculation
14. Determine the weight of *Bana, Tana,* Warp and Weft	Introduction: ➢ Warp ➢ Weft Calculation ➢ Warp ➢ Weft
15. Calculate the percentage of wastage	Introduction of different Kinds of wastage: ➢ Prepare time ➢ Working time ➢ Finishing time ➢ Depending upon materials Calculations: ➢ Wastage of warp ➢ Wastage of weft ➢ Shrinkage

Science

Description

This subject contains ten units of items dealing with the production: plant fiber processing; wool; sericulture and silk production; non-mulberry silk production; spinning; yarn preparation; weaving knifing and fiber manufacture; dyeing and printing; and medical and hygiene textile production.

After the completion of this course the trainees will be able:

- To explain scientific principles and procedures of sheep/ rabbit /goat/fiber crops production for wool/fibers.
- To explain plant fiber processing
- To explain wool; wool classification; processing; and grading, testing and utilization
- To explain

Content **Time hrs.**

Unit I Physics

Measurement

Force

Mechanics

Work, energy & power

Light

Sound

Pressure

Energy

Heat

. Current, Electricity & magnetism

.

Unit II Chemistry

1. Valiancy and molecular formula
2. Lionization
3. Acid, base and salt
4. Some gases
5. Carbon and its compounds
6. Classification of elements
7. Chemical reactions
8. Solubility
9. Metals
10. Metals used in daily life

Unit III Biology

1. Plants Reproduction through spores
2. Invertebrates
3. Tissues and organs
4. Skeleton system

5. Circulatory systems
6. Stimulation & Reaction
7. Ecosystems
8. Classification of Plants and animals
9. Virus
10. Adaptation
11. Cell division
12. Reproduction
13. Heredity & Evolution

Unit IV Astronomy and Geology

1. Natural Disasters
2. The earth in the universe
3. History of earth
4. Atmosphere
5. Universe

Textbooks

3. Science Grade Nine English version, Janak Educational Material Centre Ltd. Sanothimi, Bhaktapur.

4. Compulsory Mathematics Grade Tem English version, Janak Educational Material Centre Ltd.
   Sanothimi, Bhaktapur.

Spinning II

Description

This subject deals with the knowledge & skill on spinning (cotton, wool and silk). The trainees perform cotton spinning, wool spinning and silk spinning using different types spinning tools and equipment, such as charkhas, machines etc. The course gives clear idea for that work.

Objectives:

After the completion of this course the trainees will be able to:

- Explain and demonstrate cotton spinning using different charkhas and machines in the basic knowledge and skills.
- Explain and demonstrate woolen spinning using different charkhas and machines in the basic knowledge and skills.
- Explain and demonstrate silk spinning using different charkhas and machines in the basic knowledge and skills.
- Spin cotton, woolen and silk according to the need.
- Explain different types of spinning techniques and demonstrate different types spinning. Such as cotton, silk and wool

Subject Details

Tasks	Related Technical Knowledge
1. Grade cocoons (good & bad)	**Good / bad cocoon** ➤ Definition ➤ Properties ➤ Importance
2. Decide volume of cocoon	**Reeling** ➤ Definition ➤ Type ➤ Procedure ➤ Importance ➤ Calculation
3. Handle Zaguri Charkha	**Zaguri Charkha** ➤ Definition ➤ Importance ➤ Mechanism ➤ Using process
4. Perform manual silk cocoon reeling using Zaguri Charkha	➤ Boiling duration ➤ Boiling process ➤ Silk reeling starting process ➤ Face fiber cleaning process ➤ Cocoon brushing

	Denier ➢ Definition ➢ Importance ➢ Measurement **Safety precaution**
5. Perform silk yarn gassing	**Gassing** ➢ Definition ➢ Importance ➢ Function ➢ Process ➢ Duration
6. Handle Reeling machine	**Reeling machine** ➢ Definition ➢ Functions ➢ Parts ➢ Importance ➢ Mechanism ➢ Using process **Electrical Power** ➢ Volt ➢ Ampere ➢ Watt ➢ Measurement **Safety**
7. Boil cocoons	➢ Heat ➢ Tempatrature ➢ Duration ➢ Materials ➢ Process ➢ Quantity ➢ Safety ➢ Checking process of boiled cocoons
8. Perform filature reeling	➢ Silk reeling starting process ➢ Face fiber cleaning process ➢ Cocoon brushing **Reeling Machine** ➢ Definition ➢ Importance ➢ Mechanism ➢ Using process ➢ Parts

	Safety precaution **Process of the silk soaking**
9. Perform silk re-reeling	**Re-reeling** ➢ Methods ➢ Knotting ➢ Process ➢ Packing ➢ Storing
10. Spin bast fibreyarn	**Bast fiber** ➢ Definition ➢ Type ➢ Procedure ➢ Importance ➢ Calculation ➢ Fiber separating techniques ➢ Preparation ➢ Scotching ➢ Relating ➢ Hacking ➢ Spinning process ➢ Numbering ➢ Bundling ➢ Storing
11. Perform packing	**Packing** ➢ Definition ➢ Type ➢ Procedure ➢ Importance ➢ Materials
12. Perform silk yarn storing	➢ Storing process ➢ Recording process ➢ Safety

Design Development II

Tasks	Related Technical Knowledge
1. Prepare design on graph paper	➢ Graph paper ➢ Designs ➢ Sample designs ➢ Using designs on the weaving cloth
2. Draft twill design	Twill design ➢ Definition ➢ Importance ➢ Types Draft formulating count number ➢ Use of twill design in cloth
3. Draft Honey comb design	Honey comb ➢ Definition ➢ Importance ➢ Use Drafting Calculation
4. Draft Hakka draft design	Hakka bank design ➢ Definition of the ➢ How is it made Formulating count number for drafting Drafting calculation
5. Thread the warp	Warping of thread ➢ Definition ➢ Importance

Weaving II

Tasks	Related Technical Knowledge
1. Perform vertical warping	Vertical warp. ➢ Definition ➢ Function
2. Perform horizontal warping	Horizontal warping ➢ Definition ➢ Function ➢ Definition of type of work for warping. ➢ Warping calculations ➢ Role of spring and the weight. ➢ Technique of beaming.
3. Perform sectional warping	➢ Design ➢ Calculation of warping ➢ Warping calculations ➢ Usage of tools and equipments ➢ Cross section and beaming warps
4. Set Warp on beam	➢ Beam ➢ Warping ➢ Warping setting
5. Set pulley, Jack, paddle on loom	Pulley, jack and paddle ➢ Introduction, ➢ Work, ➢ Importance and ➢ Types
6. Perform beating	Beating ➢ Introduction, ➢ Work, ➢ Importance and ➢ Types
7. Prepare heavy loom for carpet/rug weaving	Heavy looms ➢ Introduction, ➢ Work, ➢ Importance and ➢ Types
8. Keep necessary weaving tools materials in proper place	Weaving materials and tools ➢ Introduction, ➢ Work, ➢ Importance and ➢ Types

9. Perform Picking steps for box	➢ Introduction, work, importance and types of shuttle
10. Familiarize for let off and take up mechanism of beam	Beam ➢ Introduction, ➢ Work, ➢ Importance and ➢ Types
11. Check up the performance	Loom tools and equipments ➢ Introduction, ➢ Work, ➢ Importance and ➢ Types
12. Correct errors in operation	Loom tools and equipments ➢ Introduction, ➢ Work, ➢ Importance and ➢ Types
13. Perform finishing activities	Loom tools and equipments ➢ Introduction, ➢ Work, ➢ Importance and ➢ Types
14. Handle loom products	Weaving material, record keeping Loom Product handling
15. Familiarize with method of sizing	➢ Hank, bundle, cluster, bunch, etc. ➢ Thread ➢ Sizing solution ➢ Soaking of thread ➢ Importance of boiling and heating ➢ Filtering ➢ Mechanism of sizing system ➢ Cause dried sizing ➢ Type of sizing ➢ Definition of warping ➢ Liga is ➢ Squeezing and extorting
16. Dry sizing material	➢ Drying place ➢ Tools ➢ Liga ➢ Spreading of thread

	➢ Cleaning of thread Definition ➢ Salara, ➢ Mogda, ➢ Mila Polishing Topsy-turvy Piling
17. Perform weft on the frame as per design	➢ Design: Geometrical Landscape Detailed drawing ➢ Frame loom ➢ Different weaving techniques ➢ Calculation of designed yarn ➢ Process of tapestry ➢ Calculation: c. Design d. Yarn ➢ Finishing ➢ Blocking
18. Prepare design and picture	Design: ➢ Introduction ➢ Types ➢ Functions Importance of ➢ Size lines ➢ Shapes ➢ Colors: Types Mixing Matching ➢ Calculation
19. Prepare frame and make warp	Frame loom: ➢ Introduction ➢ Types ➢ Importance ➢ Size Making a Frame ➢ Width of the tapestry ➢ Overall length ➢ Length of the tapestry ➢ Thickness of wood ➢ Technique

	➢ Position and angle of the nails Preparing warp: ➢ Warping on ➢ Setting up the frame ➢ Correcting the tension ➢ Cross the sticks
20. Select appropriate colored thread for weft	**Warp yarn** ➢ Definition ➢ Types **Color** ➢ Type ➢ Color mixing ➢ Color matching ➢ Mixing of colored yarn
21. Weave weft on the frame as per design	Weaving Technique: ➢ Plan ➢ Machinery ➢ Crossing ➢ Joining ➢ Overlap ➢ Warp lock ➢ Interlocking weft **Design** ➢ Introduction ➢ Types ➢ Functions ➢ Importance ➢ Size ➢ Lines ➢ Shapes **Color** ➢ Type ➢ Color mixing ➢ Color matching ➢ Mixing of colored yarn
22. Weave border	➢ Identifying the yarn ➢ Different weaving techniques ➢ Knot weaving
23. Place the design on the back side of the warp	➢ Placing the design in correct way so that weaving san be done efficiently
24. Weave over the designs by fingers	Weaving technique as pr design: ➢ Color shading ➢ Matching the colors ➢ Planning the weaving technique ➢ Joining

	➢ Finishing ➢ Take care of the mistake: Problem with the warp Problem with the weft Problem with design, color and yarn
25. Perform Blocking	➢ Measurement ➢ T-pin and iron using Technique ➢ Concept of heating
26. Count March loom	➢ Concept of count March loom ➢ Technique of count March loom
27. Describe different looms	➢ Dobby loom and its number ➢ Concept of design for dobby loom ➢ Methods of drafting and weaving
28. Describe different looms frame (tapestry)	➢ The frame loom for tapestry ➢ Types of different looms frame (tapestry)
29. Describe different looms	➢ Jacquard loom and its number ➢ Use of punch cards ➢ Drafting and weaving methods
30. Selection of thread	➢ Different types of thread and its respective purposes ➢ Importance of quality of thread in weaving ➢ Concept of weaving thread
31. Perform beating	➢ Knowledge about the loom and its parts ➢ Concept of cross and beating ➢ Importance of beating in weaving ➢ Beating methods
32. Prepare heavy loom for carpet weaving	➢ Knowledge about the different types of loom ➢ Materials and equipments used in the loom ➢ Concept of design and size
33. Practice for let off and take up mechanism of beam	➢ Concept of: Let off / take up mechanism Importance of let off/ take up mechanism Reason for putting weight on warp beam Picking of thread in weaving cloth Relation between warp and cloth beam
34. Check up the performances	➢ Concept of: Loom and its various parts Concept of warp and cloth beam Let off / take up mechanism Importance of let off/ take up mechanism Concept of drafting and picking Checking of weft thread
35. Correct errors in operation	➢ Concept of the whole operation system of the

	loom
36. Perform finishing activities	Finishing tools and equipment ➢ Introduction ➢ Types, names and their functions ➢ Importance ➢ Methods to conduct the finishing activities
37. Measure the cloth	➢ Concept of the different measuring system or unit ➢ Changing of the unit from one system to another ➢ Importance of measuring
38. Handle loom products	Loom products ➢ Handling ➢ Importance Quality products and safety measures

Design II

Tasks	Related Technical Knowledge
1. Designing for fabrics	➢ Drawing of painting
2. Perform tapestry designing	➢ Drawing and painting
3. Identify various tools, materials, equipments and machinery	➢ Definition of various models of tools, equipments and machineries ➢ Knowledge regarding the features of various tools materials and equipments ➢ Methods of repairing and replacement
4. Select various tools/ materials/ equipments/ machine	➢ - Methods of selecting the right kind of tools/ materials/ equipments/ machine
5. Set up equipments and machinery	➢ Concept of auxiliary tools and materials ➢ Methods of separating parts ➢ Methods of joining parts ➢ Smooth operation of equipments and machinery ➢ Checking of the equipments and machinery
6. Care of various tools, materials, equipments and machinery	➢ Define safety ➢ Storing methods ➢ Concept of handling and maintenance ➢ Methods of checking and repairing ➢ Chemicals and oils used in cleaning ➢ Keeping records -
7. Keep records	

Sericulture II

Tasks	Related Technical Knowledge
1. Propagate by hardwood cuttings	➢ Principle of hardwood cutting ➢ Use of root inducing hormones ➢ Nursery wave fl—practices ➢ Merits and demerits of propagation of hardwood cutting ➢ Manuring hardwood cutting beds ➢ Weeding nursery beds ➢ Precautionary measures ➢ Keeping records
2. Propagate by softwood cuttings	➢ Principle of cutting by softwood cuttings ➢ Mechanism of propagation by softwood cuttings ➢ Environment required by softwood cuttings ➢ Mist propagation ➢ Use of RIA in softwood cuttings ➢ Managing nursery beds ➢ Precautionary measures ➢ Keeping records
3. Propagate by grafting	➢ Principle of grafting process ➢ Mechanism of grafting process ➢ Different grafting processes ➢ Management of grafting works ➢ Plant protection in grafting process
4. Propagate by grafting	➢ Grafting and Its types ➢
5. Perform weeding in nursery beds	➢ Identification of weeds ➢ Estimation of control points for weeds in mulberry nursery ➢ Chemistry of weedicides ➢ Selectivity of weedicides ➢ Different methods of weed control ➢ Application of weedicides
6. Perform irrigation in nursery beds	➢ Water requirement of the growing saplings ➢ Principle of irrigation ➢ Methods of irrigation ➢ Importance of irrigation
7. Protect plants from natural hazards	➢ Response of mulberry saplings towards natural hazards ➢ Response towards ---- ingredients ➢ Moisture stress in mulberry nursery
8. Protect plants from pests and diseases	➢ Principle of plant protection from pests and disease ➢ Different methods of plant protection from pests

	and diseases ➢ Classification of pests/ pathogens infesting mulberry samplings ➢ Identification of pests attacking saplings ➢ Diagnosis of mulberry diseases
9. Thining unwanted shoot lets from growing saplings	➢ Selection of healthy shoot lets ➢ Differentiation of diseased shoot lets ➢ Pest damaged shoot lets ➢ Under grown shoot lets ➢ Healthy shoot lets
10. Uproot well grown saplings	➢ Differentiation of healthy and unhealthy saplings ➢ Identification root system of saplings produced through different methods ➢ Preparatory measures for uprooting of saplings ➢ Methods of uprooting saplings
11. Distribute/transplant the saplings	➢ Condition required by saplings in transportation
12. Keep records	➢

Estimate mulberry form

Tasks	Related Technical Knowledge
1. Manage human resource	➢ Specification of human resource need of sericulture ➢ Sources of information ➢ Selection criteria for human resource ➢ Precautionary measures ➢ Record keeping
2. Manage/procure/ plantation material	➢ Inventory of plantation materials ➢ Sources of the plantation materials ➢ Methods of procuring plantation materials ➢ Precautionary measures ➢ Record keeping
3. Keep records	➢

Prepare compost

Tasks	Related Technical Knowledge
1. Plan for composting	➢ Definition of compost ➢ Principle of composting ➢ Importance of compost making ➢ Requirement for making compost ➢ Planning process ➢ Precautionary measure ➢ Keeping records
2. Collect composting materials	➢ Materials suitable for compost making ➢ Procedures of composting ➢ Mechanism of decomposing composting materials

	➢ Precautionary measure ➢ Keeping records
3. Determine size of compost pit	➢ Ratio of raw materials and ripened compost ➢ Size of compost required as per compost volume ➢ Layout of the compost pit ➢ Tools and equipments required ➢ Precautionary measure ➢ Keeping records
4. Select site for composting pit	➢ Appropriate site for a compost pit ➢ Space of compost pit required for the bulk of compost needed ➢ Tools and equipments required ➢ Precautionary measure ➢ Keeping records
5. Dig compost pit	➢ Compost making procedures ➢ Ratio of the pit and the ripe compost volume ➢ Layout methods ➢ Tools equipments required ➢ Precautionary measure ➢ Keeping records ➢
6. Fill the pit with composting materials	➢ Composting process ➢ Decomposing agents ➢ Decomposing microorganism ➢ Task related tools and equipments ➢ Precautionary measure ➢ Keeping records ➢
7. Seal the compost pit	➢ Decomposing process ➢ Decomposing time ➢ Effect of drenching/ evaporation/ leaching ➢ Tools and equipments ➢ Precautionary measure ➢ Keeping records ➢
8. Perform turning of compost layers	➢ Importance ➢ Turning process ➢ Turning time ➢
9. Examine the quality of compost	➢ Examining process ➢ Tools ➢ Quality
10. Store/ distribute/ utilize compost	➢ Utilization of the compost ➢ Demand collection

	➢ Task related tools equipments ➢ Precautionary measure ➢ Keeping records

Perform cultural operations

Tasks	Related Technical Knowledge
1. Make calendar for cultural operations	➢ Various steps of cultural operations in mulberry garden ➢ Timing of various cultural operations ➢ Calendar of operations ➢ Precautionary measures ➢ Record keeping
2. Perform weeding	➢ Weeds encroaching mulberry fields ➢ Weed crop relationship ➢ Means of weed control ➢ Precautionary measures ➢ Record keeping
3. Manure the plantation garden	➢ Mulberry as a plantation crop ➢ Manu ring needs of mulberry ➢ Ratio of different organic/inorganic manures ➢ Seasonal distribution of manuring in mulberry ➢ Application of manures ➢ Precautionary measures ➢ Record keeping
4. Perform irrigation in mulberry field	➢ Relation between soil moisture and plant growth ➢ Irrigation needs of mulberry fields ➢ Methods of irrigating mulberry fields ➢ Times of irrigating mulberry fields ➢ Precautionary measures ➢ Record keeping
5. Carry out drainage	➢ Water logging and mulberry plantation ➢ Drainage system in mulberry field ➢ Precautionary measures ➢ Record keeping
6. Carry out mulching	
7. Carry out pruning/ training of mulberry	➢
8. Prevent pest /diseases	➢
9. Keep records	➢

Perform treatment of insects/ pests/ weeds/ diseases of mulberry.

Task	RTK

1. Make calendar for pest management	➢ Pests attacking mulberry ➢ Seasonal periodicity of the pest occurrence ➢ Appropriate stage of the pests to encounter ➢ Making calendar of the pest management ➢ Precautionary measures ➢ Record keeping
2. Identify common pests of mulberry	➢ Definition of pests ➢ Pests attacking mulberry ➢ Classification of pests ➢ Identification of the common pests ➢ Precautionary measures ➢ Record keeping
3. Identify the nature of damage caused by pests	➢ Common pests of mulberry ➢ Nature of damage caused by common pests ➢ Processing of damaged materials ➢ Identification of the damages caused by common pests ➢ Precautionary measures ➢ Record keeping
4. Perform soil treatment	➢ Soil enabling insects ➢ Insects damaging underground parts of the plant ➢ Pesticides used in the soil treatments ➢ Principle of the soil treatment ➢ Methods of soil treatments ➢ Precautionary measures ➢ Record keeping
5. Select pesticides	➢ Different types of pesticides ➢ Actions of different pesticides ➢ Classification of pesticides based on toxicity ➢ Applicability of pesticides to particular pest control ➢ Precautionary measures ➢ Record keeping
6. Prepare spray volume of pesticide	➢ Pesticides used for particular pests ➢ Doses of the pesticides used against particular pests ➢ Spray volume to be used for certain area to be sprayed ➢ Precautionary measures ➢ Record keeping
7. Spray the pesticides	➢ Principle and practices of pesticides uses

	➢ Mechanism of sprayer uses ➢ Methods of spraying ➢ Precautionary measures ➢ Record keeping
8. Follow safety precaution	➢ Precautionary measures against ➢ Tools and equipment ➢ Pesticides ➢ Weedicides ➢ Fungicides ➢ First aid treatments against ➢ Injuries, poisoning accidents ➢ Record keeping
9. Make calendar for disease management	➢ Disease infesting mulberry ➢ Seasonal occurrence of common diseases ➢ Appropriate stages to counter the diseases ➢ Making calendar for the disease management ➢ Precautionary measures ➢ Record keeping
10. Diagnose common disease	➢ Common diseases of mulberry ➢ Nature of symptoms of disease infections ➢ Diagnosis of the common diseases ➢ Precautionary measures ➢ Record keeping
11. Identify nature of damage caused by disease	➢ Common diseases of mulberry ➢ Nature of damage caused by disease ➢ Processing of the damaged specimen for diagnosis ➢ Identification of the damages caused by disease ➢ Precautionary measures ➢ Record keeping
12. Treat common diseases	➢ Principle of disease control ➢ Fungicides commonly used against major diseases ➢ Methods of treating common disease ➢ Precautionary measures ➢ Record keeping
13. Identify major weeds	➢ Common weeds infesting field ➢ Weeds crop inter relationship ➢ Identification of common weeds ➢ Processing of collected specimens for

	identification ➢ Precautionary measures ➢ Record keeping
14. Control major weeds by mechanical means	➢ Principle of weed control ➢ Mechanical means of weed control ➢ Using weedicides ➢ Precautionary measures ➢ Record keeping
15. Keep records	

Manage young age silkworm rearing (CRC)

Tasks	Related Technical Knowledge
1. Plan for chauki rearing centre	➢ Specification of ideal CRC ➢ Selection of CRC house designs ➢ Planning forecasts ➢ Use of planning forecasts ➢ Precautionary measures ➢ Record keeping
2. Establish mulberry garden for the CRC	➢ Specification of CRC mulberry garden ➢ Mulberry matching to CRC garden needs ➢ Law preparation ➢ Laying out CRC garden ➢ Plantation for CRC garden ➢ Precautionary measures ➢ Record keeping
3. Identify young age silkworms	➢ Morphological characteristics of CRC worms ➢ Biology of CRC worms ➢ Range of CRC worms ➢ Precautionary measures ➢ Record keeping
4. Develop CRC rearing house	➢ Specification of CRC rearing house ➢ Construction plan for the CRC rearing house ➢ Precautionary measures ➢ Record keeping
5. Disinfect rearing house	➢ Pathogen likely to be present in rearing house ➢ Preventive measure against pathogen ➢ Various disinfecting chemicals ➢ Methods and sequences of disinfections ➢ Precautionary measures ➢ Record keeping

6. Procure silkworm eggs	➢ Types of silkworm eggs ➢ Sources of silkworm eggs ➢ Methods of procuring silkworm eggs ➢ Demand sheets ➢ Precautionary measures ➢ Record keeping
7. Incubate the silkworm eggs	➢ Development of silkworm embryo ➢ Temperature humidity and light adjustment for the incubation ➢ Incubation pattern of silkworm eggs ➢ Effect of light on hatching eggs ➢ Incubation of refrigerated eggs ➢ Incubation of non –hibernated eggs ➢ Precautionary measures ➢ Record keeping
8. Perform brushing of ants	➢ Hatching behavior of silkworm ➢ Response of ants to mulberry leaves ➢ Feeding habit of freshly hatched ants ➢ Brushing techniques ➢ Set the ants into required bed size ➢ Precautionary measures ➢ Record keeping
9. Prepare mulberry leaves for feeding	➢ Feeding habit of young age worms ➢ Leaf size required to feed young age worms ➢ Quality of leaves to feed young age worms ➢ Feeding shoot lets to young age worms ➢ Precautionary measures ➢ Record keeping
10. Feed young worms	➢ Feeding young silkworms ➢ Feed quality for young worms ➢ Feeding chopped leaves ➢ Feeding shoot lets ➢ Preserving freshness of the feed supplied ➢ Precautionary measures ➢ Record keeping
11. Perform bed cleaning	➢ Introduction of silkworm bed ➢ Microorganism likely to develop in silkworm bed ➢ Importance of bed cleaning ➢ Procedures of bed cleaning ➢ Precautionary measures

	➢ Record keeping
12. Spread the bed	➢ Growth pattern of silkworms ➢ Space required by growing worms ➢ Expansion of silkworm beds ➢ Precautionary measures ➢ Record keeping
13. Care for the moulting worms	➢ Growth mechanism of silkworms ➢ Moulting mechanism of silkworms ➢ Behavior of the moulting worms ➢ Care to be taken of the moulting worms ➢ Methods of caring moulting worms ➢ Temperature, humidity and light adjustment in rearing worm ➢ Precautionary measures ➢ Record keeping
14. Adjust temperature, humidity, ventilation and lighting	➢ Temperature adjustment ➢ Humidity adjustment ➢ Lighting adjustment ➢ Ventilation management ➢ Precautionary measures ➢ Record keeping
15. Adopt body disinfections of silkworm	➢ Micro organism likely to occur in silkworm bed ➢ Microorganism likely to attack silkworm ➢ Disinfections of silkworms body against pathogen attack ➢ Disinfectants used in body ➢ Disinfections of silkworms ➢ Techniques of body disinfections ➢ Precautionary measures ➢ Record keeping
16. Distribute the worms	➢ Collection of silkworm demand ➢ Intimating demand of silkworm distribution time ➢ Packing preparation of silkworms for distribution ➢ Dispatching the silkworms ➢ Precautionary measures ➢ Record keeping

Tasks	**Related Technical Knowledge**
1. Plan for seasonal rearing of adult age	➢ Principle of silkworm

worms	➢ Importance of silkworm rearing ➢ Seasonality of silkworm rearing ➢ Mechanism of silkworm rearing ➢ Planning process ➢ Uses of planning formats
2. Prepare rearing house	➢ Rearing house designs ➢ Specification of silkworm rearing house ➢ Estimation of rearing capacity ➢ Preparatory needs of rearing house
3. Identify adult age silkworms	➢ Nature of adult age silkworms ➢ Characteristics of adult age silk worms ➢ Different types/varieties of silkworms ➢ Seasonal specificity of the silkworms ➢ Development phases of the silkworms ➢ Growth pattern of the silkworms
4. Disinfect the rearing house/appliances	➢ Various pathogens to encounter ➢ Principle of disinfections ➢ Mechanism of disinfections ➢ Importance of disinfections ➢ Various disinfectants and their efficacies ➢ Tools and equipments used in disinfections
5. Procure young silkworms	➢ Nature of CRC worms ➢ Characteristics of CRC worms ➢ Importance of CRC worms ➢ Estimation of rearing capacity ➢ Usefulness of various silkworm varieties ➢ Tools and appliances required in silkworm rearing
6. Prepare mulberry shoots for feeding	➢ Principle of feeding silkworms ➢ Mechanism of silkworm feeding ➢ Significance of shoot feeding to adult age silkworms
7. Feed adult silkworms	➢ Food habit of silkworm ➢ Feeding behavior of the silkworm ➢ Feeding requirements of the silkworms
8. Perform bed cleaning	➢ Hygienic requirements of growing silkworms ➢ Principle of silkworm bed cleaning ➢ Mechanism of silkworm bed cleaning

	➢ Importance of bed cleaning in silkworm rearing
9. Spread the beds	➢ Space requirements of the growing worms ➢ Habit of the silkworms towards light and air ➢ Growth patterns of the silkworms ➢ Precautionary measures ➢ Record keeping
10. Care for the moulting worms	➢ Growth pattern of the insect ➢ Moulting of insects ➢ Physiology of moulting ➢ Moulting in silkworms ➢ Categorization of silks worms based on moulting ➢ Precautionary measures ➢ Record keeping
11. Adjust temperature, humidity, ventilation	➢ Rearing environment (temperature, humidity, ventilation, light) required by silkworms ➢ Means of adjusting environment within economical needs ➢ Precautionary measures ➢ Record keeping
12. Apply body disinfectants	➢ Silkworms are delicate creatures ➢ Silkworms are susceptible to various pathogen attacks ➢ Preventive means of protecting silk worms against pathogens ➢ Chemicals used in disinfecting silkworms ➢ Methods of body disinfections ➢ Precautionary measures ➢ Record keeping
13. Identify mature ripen worms	➢ Morphological difference of mature worms ➢ Behavioral changes of mature worms ➢ Methods of detecting mature worms ➢ Precautionary measures ➢ Record keeping

Mount ripen silk worms

Tasks	Related Technical Knowledge
1. Prepare mountage materials	➢ Veracious mountage ➢ Making of Veracious mount age ➢ Mountage making ➢ Material ➢ Making mountage weaving frame ➢ Use of mount age ➢ Precautionary measure ➢ Keeping records

2. Pick up reppned worms	➢ Morphological changes in ripened worms ➢ Behavioral changes in ripened worm ➢ Various methods of separating ripened worms ➢ ➢ Precautionary measure ➢ Keeping records
3. Mount the ripened worms	➢ Cocooning habit of the silk worms ➢ Space chosen by the silk worms for mountage ➢ Mounting habit of the silk worms ➢ Various types of mountages ➢ Mounting ripened worms ➢ ➢ Precautionary measure ➢ Keeping records
4. Maintain density of mounted worms	➢ Spacing of the worms ➢ Maintaining density of the worms in mountage ➢ Precautionary measure ➢ Keeping records
5. Remove the unspinning/dead worm	➢ Spinning time ➢ Unsuccessful spinner ➢ Removing unspinning/dead worms ➢ Precautionary measure ➢ Keeping records
6. Care for worms in mountages	➢ Environment for mounted silkworms ➢ Maintaining components of environments for mounted worms ➢ Maintaining disturbance free conditions ➢ Precautionary measure ➢ Keeping records
7. Identify ripened cocoon	➢ Metamorphosis of silkworm within cocoon ➢ Spinning time of the silkworm ➢ Consistency of ripened cocoon ➢ Precautionary measure ➢ Keeping records
8. Harvest ripened cocoon	➢ Types of cocoons ➢ Bad cocoons ➢ Good cocoons ➢ Harvesting time of cocoons ➢ Harvesting methods ➢ Harvesters ➢ Precautionary measure ➢ Keeping records
9. Keep records	➢ Keeping records

Handle cocoon

Tasks	Related Technical Knowledge
1. Identify cocoons	➢ Definition of cocoon ➢ Shape/color/ texture of cocoon ➢ Composition of cocoon ➢ Types of cocoon ➢ Identifying cocoons ➢ Precautionary measure ➢ Keeping records ➢
2. Clean cocoons	➢ Foreign materials likely to be present on cocoon ➢ Spoiling chances of cocoon ➢ Tools and equipments ➢ Precautionary measure ➢ Keeping records ➢
3. Weigh cocoons	➢ Weighing principles ➢ Weighing machines ➢ Precautionary measure ➢ Keeping records ➢
4. Select good/saleable quality cocoon	➢ Types of cocoon ➢ Various bad cocoon ➢ Testing and selecting cocoon ➢ Precautionary measure ➢ Keeping records ➢
5. Dry the cocoon	➢ Purpose of cocoon drying ➢ Drying condition ➢ Quality of cocoon ➢ Moisture content of fresh and dry cocoon ➢ Kinds of drying machine ➢ Methods of drying ➢ Precautionary measure ➢ Keeping records ➢
6. Perform temporary storage	➢ Purpose of cocoon storage ➢ Storage needs ➢ Storage conditions ➢ Structure of design of cocoon warehouse ➢ Structure and design of cocoon storage chambers ➢ Methods of storage ➢ Storage containers ➢ Precautionary measure ➢ Keeping records

7. Transport cocoons	➢ Purpose of cocoon transportation ➢ Condition of cocoon to transport ➢ Means/methods of cocoon transportation ➢ Packing loading cocoon for transportation ➢ Transporting containers ➢ Precautionary measure ➢ Keeping records

Perform mixed-intercropping

Tasks	Related Technical Knowledge
1. Plan for mixed/ intercropping operations	➢ Define mixed intercropping with mulberry ➢ Types of mixed intercrops palatable with mulberry ➢ Importance of mixed intercropping ➢ Requirements of mixed intercropping ➢ Seasonal patterns of mixed intercropping ➢ Agronomy of mixed intercropping with mulberry ➢ Precautionary measure ➢ Keeping records
2. Identify select crops for mixed/ intercropping	➢ Crops palatable for mixed intercropping with mulberry ➢ Importance of various mixed inter crops ➢ Crop wise arrangement for mixed intercropping ➢ Agronomic practices for different crops ➢ Precautionary measure ➢ Keeping records
3. Prepare field for mixed/ intercropping	➢ Crop wise agronomic needs for mixed intercropping with mulberry ➢ Precautionary measure ➢ Keeping records
4. Sow/ plant the mixed intercrop	➢ Sowing of the seeds ➢ Planting of seedlings ➢ Sowing/ planting seeds/ seedlings with mulberry ➢ Initial care of just planted seeds/ seedlings ➢ Precautionary measure ➢ Keeping records
5. Perform intercultural operations	➢ Need of intercultural operations ➢ Importance of intercultural operations ➢ Methods and practices of intercultural operations ➢ Precautionary measure

	➢ Keeping records
6. Apply plant protection measures	➢ Plant protection in intercropping ➢ Care not to pollute the mulberry plant ➢ Pests of the crops ➢ Diseases of the crops ➢ Application of the plant protection measures ➢ Precautionary measure ➢ Keeping records
7. Apply integrated pest management (IPM) techniques	➢ Definition of IPM technique ➢ Importance of IPM ➢ Application of IPM ➢ Various safer and effective control measures ➢ Precautionary measure ➢ Keeping records
8. Apply manures	➢ manuring needs of the crop at use ➢ Importance of manuring the crop ➢ Application of manures ➢ Precautionary measure ➢ Keeping records
9. Harvest the product	➢ Maturity of the crops under application ➢ Harvesting methods of the crop ➢ Harvesting the crop ➢ Precautionary measure ➢ Keeping records

Dyeing I

Perform dyeing/ printing and finishing

Tasks	Related Technical Knowledge
1. Dyeing of the cotton cloth	➤ Knowledge about ☛ Chemicals ☛ Cloth ☛ Thread
2. Washing drying and weighing of material	➤ Knowledge regarding – ☛ Chemical/ ☛ Temperature/ ☛ Timing ☛ Weight ☛ Calculation
3. Soak the material (cotton/silk) in the (cold/warm) water	➤ Knowledge about the identification of the proper medium of soaking
4. Preparation of dye solution	➤ the : ☛ Chemicals ☛ Dyes ☛ Ability to mix it with appropriate amount of water
5. Carry out the process of dye in silk and wool	➤ Knowledge of ☛ colour ☛ time ☛ temperature ☛ sample
6. Washing and drying of dyed silk/wool	➤ Knowledge regarding the right temperature, chemical, timings weight and calculation.

Third Year

1. **Spinning III**
2. **Drafting III**
3. **Weaving III**
4. **Design Development III**
5. **Handling tools and materials III**
6. **Sericulture III**
7. **Dyeing II**
8. **Management and Marketing**

Spinning III

Description

This subject deals with the knowledge & skill on spinning (cotton, wool and silk). The trainees perform cotton spinning, wool spinning and silk spinning using different types spinning tools and equipment, such as charkhas, machines etc. The course gives clear idea for that work.

Objectives:

After the completion of this course the trainees will be able to:

- Explain and demonstrate cotton spinning using different charkhas and machines in the basic knowledge and skills.
- Explain and demonstrate woolen spinning using different charkhas and machines in the basic knowledge and skills.
- Explain and demonstrate silk spinning using different charkhas and machines in the basic knowledge and skills.
- Spin cotton, woolen and silk according to the need.
- Explain different types of spinning techniques and demonstrate different types spinning. Such as cotton, silk and wool

Subject Details

Tasks	Related Technical Knowledge
1. Handle bobbin winding machine	**Bobbin winding machine** ➤ Definition ➤ Functions ➤ Parts ➤ Importance ➤ Mechanism ➤ Using process **Electrical Power** ➤ Volt ➤ Ampere ➤ Watt
2. Perform bobbin winding	**Bobbin** ➤ Definition ➤ Functions ➤ Importance ➤ Using process

3. Handle twisting machine	**Twisting machine** ➢ Definition ➢ Functions ➢ Parts ➢ Importance ➢ Mechanism ➢ Using process ➢ Twisting type ➢ Safety ➢ Twisting direction
4. Perform single twisting work	➢ Single twisting process
5. Handle Doubling machine	**Doubling machine** ➢ Definition ➢ Functions ➢ Parts ➢ Importance ➢ Mechanism ➢ Using process ➢ Safety
6. Perform yarn doubling work	➢ Yarn doubling process
7. Perform double twisting work	➢ Double twisting process
8. Perform Gassing	**Gassing** ➢ Definition ➢ Importance ➢ Function ➢ Process ➢ Duration ➢ Water volume for gassing ➢ Safety
9. Handle hank making machine	**Doubling machine** ➢ Definition ➢ Functions ➢ Parts ➢ Importance ➢ Mechanism ➢ Using process ➢ Safety
10. Perform hank making	➢ Hank making process

11. Handle yarn numbering machine	**Yarn numbering machine Definition** ➢ Functions ➢ Parts ➢ Importance ➢ Mechanism ➢ Using process ➢ Safety
12. Perform yarn numbering	**Yarn numbering** ➢ Process ➢ Importance
13. Handle packing machine	**Yarn numbering machine Definition** ➢ Functions ➢ Parts ➢ Importance ➢ Mechanism ➢ Using process ➢ Safety
14. Perform packing	➢ Packing process
15. Perform silk yarn storing	➢ Storing process ➢ Recording process ➢ Safety

Drafting III

Tasks	Related Technical Knowledge
1. Draft Mocklino design	**Mocklino design** • Definition • Importance • Formulation count number for drafting • Calculation • Use
2. Draft satin design	Definition of satin design and its importance Formulating count number for drafting Calculation while drafting Using the satin design
3. Thread the warp	Related Technical Knowledge of: the definition of warping importance of warping of thread

Weaving III Cloth Weaving

Tasks	Related Technical Knowledge
1. Perform beating in dobby and jacard weaving	**Bobby and jacard Beating** a. Definition b. Methods c. Important
2. Familiarize with dobby loom	**Dobby Loom** a. Definition b. Parts c. Function d. Important e. Handling process
3. Identify Dobby shaft number	**Dobby shaft** a. Definition b. Parts c. Function d. Important e. Handling process f. Number g. Concept of shaft h. Design in dobby shaft loom
4. Make design/drawing on paper based on the dobby number	**Dobby Number** a. Definition b. Function c. Important **Dobby design in ghaph paper**
5. Perform sizing of punching cards	**Punching machine** a. Definition b. Function c. Important d. Type **Measuring machine and cylinder** **Punching** **Cards sizing** **Record keeping**
6. Prepare cards for dobby shaft weaving	**Punching cards** **Leashing cards** **Join cards on cylinder**

7. Fill koka as per design	**Koka for dobby** a. Definition b. Function c. Important d. Type **Tools and equipments** **Tools for dobby weaving** e. Concept of preparing koka f. Method of filling koka or drafting
8. Tie up shaft	a. design and its effect on shaft b. Pulley and roller, zack c. Process of shaft tying
9. Join pedal and driving lever	a. Pedal and driving lever b. Methods of fixing pedal and driving lever c. Fixing string d. Concept of connecting string
10. Re-adjust the whole operating system	a. Tools and equipments b. Parts of the loom c. Cause of the spoiled parts d. Readjusting and repairing of the spoiled parts
11. Familiarize with Jackrd loom	**Jacktrd Loom** a. Definition b. Parts (Neck card, needle, knife, or hooks) c. Function d. Important e. Handling process
12. Identify jacquard number for the design	**Design** a. Definition b. Function c. Important d. Jacquard number e. Comparison of graph with neck card
13. Develop design	**Design developing Technic** **Importance** **Function**

14. Make design or drawing on the graph based on the graph number	**Definition** a. drawing b. Designing c. graph d. sample design **Drawing as per provided sample**
15. Size the punching cards	**Punching machine** a. Definition b. Function c. Important d. Type **Measuring machine and cylinder** **Punching** **Cards sizing** e. Punching machine f. Jacquard cylinder g. Jacquard cards h. Cutting cards **Record keeping**
16. Prepare cards for jacquard Weaving	a. Leashing cards b. Joining cards on cylinder
17. Select weft thread for jacquard	**Thread** a. Definition b. Function c. Important d. Type e. Quality f. Records keeping
18. Check the whole operating system	**Operating system** a. Definition b. Function c. Important d. Handling **Jacquard loom** e. Heald/reed/ pickar/ handle etc f. Needle/hooks/spring g. Kambar and nekard boards h. Driving and traidal lever i. Harnessing j. Leashing cards k. Join cards l. Define take up and let off motion

19. Set harness	**Harness** a. Definition b. Function c. Important d. Type e. Quality f. Number Calculation g. Width of cloth h. Kambar board i. Neck card board j. Calculation k. Filling **Hanging lingo** l. Definition m. Function n. Important
20. Re-adjust the whole operating system	a. Parts of Jacquard loom b. Checking, repairing and c. readjustment of the operating system of the jacquard loom
21. Prepare thread/heald/ for jacquard loom	a. Tools and equipments used in jacquard b. Calculation of heald number/length/ width etc c. Preparing heald d. Filling heald e. Fixing heald in the loom
22. Join paddle and driving lever	a. All the tools and equipments b. String c. Paddle and driving lever d. Giving height of traidal
23. Classify sizing materials	a. The sticky substance. b. The weight increasing substance. c. Constituents of the thread soft-making substance. d. Constituents needed for making light colours. e. Fungus and the ways with which we can get rid of it. f. Elasticity, plasticity, flexibility, etc.

24. Size the tread/cloth	a. Hank, bundle, cluster, bunch, etc. b. Thread c. Required tools and equipments d. Sizing solution e. Soaking of thread f. Importance of boiling and heating g. Filtering h. Mechanism of sizing system i. Why the sizing is dried j. Keeping records k. Type of sizing l. Definition of warping m. What liga is n. Squeezing and extorting o. Keeping records
25. Dry sizing material	: a. Suitable place b. Tools c. Lingo d. Spreading of thread e. Cleaning of thread f. Definition of Salara, mogha, mila g. Polishing h. Topsy-turvy i. Pilling j. Keeping record
26. Perform finishing activities (Rug)	a. Importance of qualitative finishing
27. Store loom products	a. Knowledge about weaving material, record keeping
28. Keep records of finished rug	a. Knowledge about record keeping
29. Prepare design and picture Tapestry	**Design** a. Introduction b. Types and functions of the designs c. Importance of size lines and the shapes d. Colors: e. types of color f. mixing of colors g. matching of colors h. Calculation i. size j. design

30. Select appropriate colored thread for weft	a. Introduction/ types: b. Warp yarn c. Weft yarn d. Color: e. type of color f. color mixing g. color matching h. mixing of colored yarn
31. Weave weft on the frame as per design	<u>Weaving Technique:</u> a. Plan b. Machinery c. Crossing d. Joining e. Overlap f. Warp lock g. Interlocking weft <u>Design:</u> h. Introduction i. Types j. Functions k. Importance l. Size m. Lines n. Shapes <u>Colors:</u> o. Types of color p. Color mixing q. Color matching
32. Weave over the designs using fingers	a. Weaving technique as pr design: b. color shading c. Matching the colors d. Planning the Weaving III technique e. Joining f. Finishing g. Take care of the mistake: h. Problem with the warp i. Problem with the weft j. Problem with design, color and yarn
33. Perform blocking in tapestry	a. Measurement technique using T-pin and iron b. Concept of heating c. The corner should be at right angles.

34. Cundect Cloth analysis	**Cloth analysis** a. Definition b. Function c. Important d. Procedure

4 Design Development III

Perform design for batik, tie-dye and printing

Tasks	Related Technical Knowledge
1. Prepare sketches for batik, tie-dye and printing	Batik drawing and painting Tie-dye drawing and painting Batik and Tie-dye pattern and painting Block printing Screen printing

Handle tools materials

Tasks	Related Technical Knowledge
2. Identify various tools, materials, equipments and machinery	- Definition of various models of tools, equipments and machineries - Knowledge regarding the features of various tools materials and equipments - Methods of repairing and replacement
3. Select various tools/ materials/ equipments/ machine	- Methods of selecting the right kind of tools/ materials/ equipments/ machine
4. Set up equipments and machinery	- concept of auxiliary tools and materials - methods of separating parts - methods of joining parts - smooth operation of equipments and machinery - checking of the equipments and machinery
5. Care of various tools, materials, equipments and machinery	
6. keep records	

5 Sericulture

Mulberry propagation

Tasks	Related Technical Knowledge
1. Determine the need for mulberry propagation	- Significance of mulberry propagation - Characteristics of mulberry varieties - Different methods and practices of mulberry propagation
2. Select nursery sites	- Need for a good nursery site - Requirements of mulberry nursery
3. Identify/select variety of mulberry	- Varieties characteristics of mulberry - Variety and it's precaution to geophysical environment - varieties and their seasonal characteristics
4. Prepare nursery beds	- Precipices of nursery beds - Requirements of nursery beds - Plan of nursery beds - Propagation methods and nursery beds
5. Propagate mulberry by seeds	- Principle of plant propagation. - Importance of propagation by seeds - Uses and applications of seed age saplings - Merits and demerits of propagation by seeds
6. Propagate by hardwood cuttings	- Principle of hardwood cutting - Use of root inducing hormones - Nursery wave fl—practices - Merits and demerits of propagation of hardwood cutting - Managing hardwood cutting beds - Weeding nursery beds - Precautionary measures - Keeping records
7. Propagate by softwood cuttings	- Principle of cutting by softwood cuttings - Mechanism of propagation by softwood cuttings - Environment required by softwood cuttings - Mist propagation - Use of RIA in softwood cuttings - Manu ring nursery beds - Precautionary measures - Keeping records

8. Apply PGR in mulberry propagation	- Principle of root development vegetative - Role of PGR in root inducing cuttings - Various PGR& RIAs and their efficacy of performance - Application of practices of PGR and RIA in mulberry propagation
9. Propagate by layering	- Principle of vegetative propagation - Importance layering - Pests and diseases attached growing saplings
10. Propagate by grafting	- Principle of grafting process - Mechanism of grafting process - Different grafting processes - Management of grafting works - Plant protection in grafting process
11. Propagate by grafting	**Grafting and its types**
12. Perform weeding in nursery beds	- identification of weeds - Estimation of control points for weeds in mulberry nursery - Chemistry of weedicides - Selectivity of weedicides - Different methods of weed control - Application of weedicides
13. Perform irrigation in nursery beds	- Water requirement of the growing saplings - Principle of irrigation - Methods of irrigation - Importance of irrigation
14. Protect plants from natural hazards	- Response of mulberry saplings towards natural hazards - Response towards ---- ingredients - Moisture stress in mulberry nursery
15. Protect plants from pests and diseases	- Principle of plant protection from pests and disease - Different methods of plant protection from pests and diseases - Classification of pests/ pathogens infesting mulberry samplings - Identification of pests attacking saplings - Diagnosis of mulberry diseases
16. Lull unwanted shoot lets from growing saplings	- Selection of healthy shoot lets - Differentiation of diseased shoot lets - Pest damaged shoot lets - Under grown shoot lets - Healthy shoot lets

17. Uproot well grown saplings	- Differentiation of healthy and unhealthy saplings - Identification root system of saplings produced through different methods - Preparatory measures for uprooting of saplings - Methods of uprooting saplings
18. Distribute/transplant the saplings	- Condition required by saplings in transportation
19. Keep records	

Establish Mulberry farm

Tasks	Related Technical Knowledge
1. Plan for mulberry farm	- Define specification of a good mulberry farm - Categorization of mulberry farm for different purposes - Sources of information - Planning forecasts and processes - Precautions to be followed in establishing mulberry farm - Record keeping
2. Select site for mulberry farm	- Specification of a good mulberry farm - Selection criteria for a good site - Sources of information - Precautions to be followed in selecting sites - Record keeping
3. Manage human resource	- Specification of human resource need of sericulture - Sources of information - Selection criteria for human resource - Precautionary measures - Record keeping
4. Prepare the land	- Land preparation criteria - Specification of land for good mulberry farm - Master plan of the mulberry farm/sericulture - Sources of information - Precautionary measures - Record keeping

5. Layout of the plantation farm	- Infrastructure of a good mulberry farm - Laying out of a mulberry farm - Different purpose mulberry farm - Precautionary measures - Record keeping
6. Manage/procure/ plantation material	- Inventory of plantation materials - Sources of the plantation materials - Methods of procuring plantation materials - Precautionary measures - Record keeping
7. Perform fencing	- Different fencing methods and means - Fencing estimates - Importance of fencing - Significance of bio fencing - Precautionary measures - Record keeping
8. Layout for plantation	- purpose of plantation layout - methods of layout - importance of layout - layout pattern for different purpose mulberry plantation - Precautionary measures - Record keeping
9. Dig plantation pits/trenches	- Plantation methods - Dimension of plantation pits/trenches - Merits demerits of plantation pits/trenches - Precautionary measures - Record keeping
10. Fill the pit/trenches with plantation material	- Plantation materials - Sources of plantation materials - Sequence of filling pits/trenches - Precautionary measures - Record keeping
11. Select obtain saplings	- Different cultivars of mulberry - Performance of different varieties of mulberry - Seasonal and geophysical adaptability of various mulberry varieties - Precautionary measures - Record keeping
12. Plant saplings	- Plantation of perennial plantation crops - Mechanism of plantation works - Precautionary measures - Record keeping

13. Carry out initial care of the planted saplings	- Importance of initial care of plantation crop - Steps of initial care of plantation crops - Growth patterns of plantation crops - Precautionary measures - Record keeping
14. Keep records	

Prepare compost

Tasks	Related Technical Knowledge
1. Plan for composting	- Definition of compost - Principle of composting - Importance of compost making - Requirement for making compost - Planning process - Precautionary measure - Keeping records
2. Collect composting materials	- Materials suitable for compost making - Procedures of composting - Mechanism of decomposing composting materials - Precautionary measure - Keeping records
3. Determine size of compost pit	- Ratio of raw materials and ripened compost - Size of compost required as per compost volume - Layout of the compost pit - Tools and equipments required - Precautionary measure - Keeping records
4. Select site for composting pit	- Appropriate site for a compost pit - Space of compost pit required for the bulk of compost needed - Tools and equipments required - Precautionary measure - Keeping records
5. Dig compost pit	- Compost making procedures - Ratio of the pit and the ripe compost volume - Layout methods - Tools equipments required - Precautionary measure - Keeping records

6. Fill the pit with composting materials	- Composting process - Decomposing agents - Decomposing microorganism - Task related tools and equipments - Precautionary measure - Keeping records
7. Seal the compost pit	- Decomposing process - Decomposing time - Effect of drenching/ evaporation/ leaching - Tools and equipments - Precautionary measure - Keeping records
8. Perform turning of compost layers	Condition of the composting materials composting layers Pit Seal
9. Examine the quality of compost	- Feelling procedure of the texture of the compost - compost quality testing - laboratory testing precautions to be followed - Records keeping
10. Store/ distribute/ utilize compost	- Utilization of the compost - Demand collection - Task related tools equipments - Precautionary measure - Keeping records

Perform cultural operations

Tasks	Related Technical Knowledge
1. Make calendar for cultural operations	- Various steps of cultural operations in mulberry garden - Timing of various cultural operations - Calendar of operations - Precautionary measures - Record keeping
2. Perform weeding	- Weeds encroaching mulberry fields - Weed crop relationship - Means of weed control - Precautionary measures - Record keeping

3. Manure the plantation garden	- Mulberry as a plantation crop - Manuring needs of mulberry - Ratio of different organic/inorganic manures - Seasonal distribution of manuring in mulberry - Application of manures - Precautionary measures - Record keeping
4. Perform irrigation in mulberry field	Irrigation - Definition - Type - Function - Importance
5. Carry out drainage	- Water logging and mulberry plantation - Drainage system in mulberry field - Precautionary measures - Record keeping
6. Carry out mulching	
7. Carry out pruning/ training of mulberry	
8. Prevent pest /diseases-	Receive instructions Collect samples of pest/diseases infecting mulberry Identify the specimens collected Diagnose the damage caused by pest diseases Consult experts for control measures Collect pests disease control materials provided by the experts Apply the recommend control material Follow precautions Keep records
9. Keep records	

Perform treatment of insects/ pests/ weeds/ diseases of mulberry

Tasks	Related Technical Knowledge
1. Make calendar for pest management	- Pests attacking mulberry - Seasonal periodicity of the pest occurrence - Appropriate stage of the pests to encounter - Making calendar of the pest management - Precautionary measures - Record keeping

2. Identify common pests of mulberry	- Definition of pests - Pests attacking mulberry - Classification of pests - Identification of the common pests - Precautionary measures - Record keeping
3. Identify the nature of damage caused by pests	- Common pests of mulberry - Nature of damage caused by common pests - Processing of damaged materials - Identification of the damages caused by common pests - Precautionary measures - Record keeping
4. Perform soil treatment	- Soil enabling insects - Insects damaging underground parts of the plant - Pesticides used in the soil treatments - Principle of the soil treatment - Methods of soil treatments - Precautionary measures - Record keeping
5. Select pesticides	- Different types of pesticides - Actions of different pesticides - Classification of pesticides based on toxicity - Applicability of pesticides to particular pest control - Precautionary measures - Record keeping
6. Prepare spray volume of pesticide	- pesticides used for particular pests - doses of the pesticides used against particular pests - spray volume to be used for certain area to be sprayed - Precautionary measures - Record keeping
7. Spray the pesticides	- principle and practices of pesticides uses - mechanism of sprayer uses - methods of spraying - Precautionary measures - Record keeping

8. Follow safety precaution	- Precautionary measures against - Tools and equipment - Pesticides - Weedicides - Fungicides - First aid treatments against - Injuries, poisoning accidents - Record keeping
9. Make calendar for disease management	- Disease infesting mulberry - Seasonal occurrence of common diseases - Appropriate stages to counter the diseases - Making calendar for the disease management - Precautionary measures - Record keeping
10. Diagnose common disease	- Common diseases of mulberry - Nature of symptoms of disease infections - Diagnosis of the common diseases - Precautionary measures - Record keeping
11. Identify nature of damage caused by disease	- Common diseases of mulberry - Nature of damage caused by disease - Processing of the damaged specimen for diagnosis - Identification of the damages caused by disease - Precautionary measures - Record keeping
12. Treat common diseases	- Principle of disease control - Fungicides commonly used against major diseases - Methods of treating common disease - Precautionary measures - Record keeping
13. Apply IPM technique	- Definition of IPM - Principle of IPM techniques - Application of IPM techniques - Threshold level of pesticide uses - Bio chemicals for pest/disease control - Precautionary measures - Record keeping

14. Identify major weeds	- Common weeds infesting field - Weeds crop inter relationship - Identification of common weeds - Processing of collected specimens for identification - Precautionary measures - Record keeping
15. Control major weeds by mechanical means	- Principle of weed control - Mechanical means of weed control - Using weedicides - Precautionary measures - Record keeping
16. Keep records	

Manage young silkworm rearing (CRC)

Tasks	Related Technical Knowledge
1. Plan for chauki rearing centre	- Specification of ideal CRC - Selection of CRC house designs - Planning forecasts - Use of planning forecasts - Precautionary measures - Record keeping
2. Establish mulberry garden for the CRC	- Specification of CRC mulberry garden - Mulberry matching to CRC garden needs - Law preparation - Laying out CRC garden - Plantation for CRC garden - Precautionary measures - Record keeping
3. Identify young age silkworms	- Morphological characteristics of CRC worms - Biology of CRC worms - Range of CRC worms - Precautionary measures - Record keeping
4. Develop CRC rearing house	- Specification of CRC rearing house - Construction plan for the CRC rearing house - Precautionary measures - Record keeping

5. Disinfect rearing house	- Pathogen likely to be present in rearing house - Preventive measure against pathogen - Various disinfecting chemicals - Methods and sequences of disinfections - Precautionary measures - Record keeping
6. Procure silkworm eggs	- Types of silkworm eggs - Sources of silkworm eggs - Methods of procuring silkworm eggs - Demand sheets - Precautionary measures - Record keeping
7. Incubate the silkworm eggs	- Development of silkworm embryo - Temperature humidity and light adjustment for the incubation - Incubation pattern of silkworm eggs - Effect of light on hatching eggs - Incubation of refrigerated eggs - Incubation of non –hibernated eggs - Precautionary measures - Record keeping
8. Perform brushing of ants	- Hatching behavior of silkworm - Response of ants to mulberry leaves - Feeding habit of fleshly hatched ants - Brushing techniques - Set the ants into required bed size - Precautionary measures - Record keeping
9. Prepare mulberry leaves for feeding	- Feeding habit of young age worms - Leaf size required to feed young age worms - Quality of leaves to feed young age worms - Feeding shoot lets to young age worms - Precautionary measures - Record keeping

10. Feed leaves for young worms	- Feeding young silkworms - Feed quality for young worms - Feeding chopped leaves - Feeding shoot lets - Preserving freshness of the feed supplied - Precautionary measures - Record keeping
11. Perform bed cleaning	- Introduction of silkworm bed - Microorganism likely to develop in silkworm bed - Importance of bed cleaning - Procedures of bed cleaning - Precautionary measures - Record keeping
12. Spread the bed	- Growth pattern of silkworms - Space required by growing worms - Expansion of silkworm beds - Precautionary measures - Record keeping
13. Care for the moulting worms	- Growth mechanism of silkworms - Moulting mechanism of silkworms - Behavior of the moulting worms - Care to be taken of the moulting worms - Methods of caring moulting worms - Temperature, humidity and light adjustment in rearing worm - Precautionary measures - Record keeping
14. Adjust temperature, humidity, ventilation and lighting	- Temperature adjustment - Humidity adjustment - Lighting adjustment - Ventilation management - Precautionary measures - Record keeping

15. Adopt body disinfections of silkworm	- Micro organism likely to occur in silkworm bed - Microorganism likely to attack silkworm - Disinfections of silkworms body against pathogen attack - Disinfectants used in body - Disinfections of silkworms - Techniques of body disinfections - Precautionary measures - Record keeping
16. Distribute the worms	- Collection of silkworm demand - Intimating demand of silkworm distribution time - Packing preparation of silkworms for distribution - Dispatching the silkworms - Precautionary measures - Record keeping

Manage adult age silkworm rearing.

Tasks	Related Technical Knowledge
1. Plan for seasonal rearing of adult age worms	- Principle of silkworm - Importance of silkworm rearing - Seasonality of silkworm rearing - Mechanism of silkworm rearing - Planning process - Uses of planning formats
2. Prepare rearing house	- Rearing house designs - Specification of silkworm rearing house - Estimation of rearing capacity - Preparatory needs of rearing house
3. Identify adult age silkworms	- Nature of adult age silkworms - Characteristics of adult age silk worms - Different types/varieties of silkworms - Seasonal specificity of the silkworms - Development phases of the silkworms - Growth pattern of the silkworms

4. Disinfect the rearing house/appliances	- Various pathogens to encounter - Principle of disinfections - Mechanism of disinfections - Importance of disinfections - Various disinfectants and their efficacies - Tools and equipments used in disinfections
5. Procure incubated silkworms	- Nature of CRC worms - Characteristics of CRC worms - Importance of CRC worms - Estimation of rearing capacity - Usefulness of various silkworm varieties - Tools and appliances required in silkworm rearing
6. Prepare mulberry shoots for feeding	- Principle of feeding silkworms - Mechanism of silkworm feeding - Significance of shoot feeding to adult age silkworms
7. Feed adult silkworms	- Food habit of silkworm - Feeding behavior of the silkworm - Feeding requirements of the silkworms
8. Perform bed cleaning	- Hygienic requirements of growing silkworms - Principle of silkworm bed cleaning - Mechanism of silkworm bed cleaning - Importance of bed cleaning in silkworm rearing
9. Spread the beds	- Space requirements of the growing worms - Habit of the silkworms towards light and air - Growth patterns of the silkworms - Precautionary measures - Record keeping
10. Care for the moulting worms	- Growth pattern of the insect - Moulting of insects - Physiology of moulting - Moulting in silkworms - Categorization of silks worms based on moulting - Precautionary measures - Record keeping
11. Adjust temperature, humidity, ventilation	- Rearing environment (temperature, humidity, ventilation, light) required by silkworms - Means of adjusting environment within economical needs - Precautionary measures - Record keeping

12. Apply body disinfectants	- Silkworms are delicate creatures - Silkworms are susceptible to various pathogen attacks - Preventive means of protecting silk worms against pathogens - Chemicals used in disinfecting silkworms - Methods of body disinfections - Precautionary measures - Record keeping
13. Identify mature ripen worms	- Morphological difference of mature worms - Behavioral changes of mature worms - Methods of detecting mature worms - Precautionary measures - Record keeping

Utilize by-products

Tasks	Related Technical Knowledge
1. Identify various by-products	- Definition of by-products - Specifications of various by-products - Identification of by-products - Precautionary measure - Keeping records
2. Make plans for the utilizations of by-products	- Receive instructions - Determine your mind towards the utilization of various by-products - Consult experts to know uses of various by-products - Decide what by-products to use - Note down the uses of the choosen by-products - Make plans for the uses of the by-products - Manage the related accessories - Follow precaution - Keep records
3. Utilize mulberry fruits	- Importance of mulberry fruits - Economic value of mulberry fruits - Various uses of mulberry fruits - Methods of utilizing mulberry fruits - Precautionary measure - Keeping records
4. Utilize pruned stock of mulberry	- Importance of mulberry stock - Economic value of mulberry shoots - Various uses of mulberry stock - Methods of utilizing mulberry stock - Precautionary measure - Keeping records

5. Utilize bark of mulberry	
6. Utilize mulberry roots	- Importance of roots - Economic value of mulberry roots - Medicinal value of mulberry roots - Processing of mulberry roots - Precautionary measure - Keeping records
7. Utilize bad/cut/ pierced cocoons	- Importance of bad cocoon - Definition of bad cocoon - Economic significance of bad cocoon - Uses of bad cocoon - Methods of using bad cocoons - Precautionary measure - Keeping records
8. Utilize bed droppings of silkworms	- Definition of bed droppings - Importance of bed dropping - Uses of bed droppings - Feed value of bed droppings - Methods of utilizing bed droppings - Precautionary measure - Keeping records
9. Utilize bed refuse of silkworms	- Definition of bed refuse - Uses of bed refuse - Food value of bed refuse - Methods of utilizing bed refuse - Precautionary measure - Keeping records
10. Utilizing the silkworm pupa	- Definition of pupa - Characteristics of pupa - Biological/ economic food value of pupa - Utilization of the silkworm pupa - Precautionary measure - Keeping records
11. Utilize reeling/spinning	- Definition of silk waste - Different points where silk waste is obtained - Processing of silk waste - Utilization of silk waste - Economic value of silk waste - Precautionary measure - Keeping records
12. Utilize secondary use of mulberry leaves (TEA, Vegetable)	-
13. Utilize secondary use of cocoons	-

6 Dyeing II

Perform design for batik, tie-dye and printing

Tasks	Related Technical Knowledge
1. Select cloth for batik	- Basic knowledge of the cloth structure
2. Draw design on cloth	- Artistic skill relating to design line and colour
3. Prepare colour solutions	- Knowledge OF the chemicals
4. Prepare wax	- Knowledge OF measuring and heating wax
5. Wax clothes using a brush over a design	- Knowledge regarding chemicals and the heating of the wax
6. Finish batik, tie-dye and printed clothes	- Knowledge regarding transferring of the wax from cloth to the paper

6 Management and Marketing

Market quality products

Tasks	Related Technical Knowledge
1. Prepare marketing plan.	Marketing ➢ Definition ➢ Type ➢ Function ➢ Importance ➢ Process Planning ➢ Definition ➢ Type ➢ Function ➢ Importance
2. Identify quality product.	Product ➢ Definition ➢ Type ➢ Function ➢ Importance Quality ➢ Definition ➢ Importance
3. Harvest the product.	Harvesting ➢ Definition ➢ Function ➢ Importance
4. Process the Product for marketing.	
5. Store the product.	Storing ➢ Definition ➢ Type ➢ Function ➢ Importance
6. Grade the product	Grading ➢ Definition ➢ Type ➢ Function ➢ Importance

7. Control products quality.	Quality control ➢ Definition ➢ Type ➢ Function ➢ Importance
8. Fix price	Price fixing ➢ Definition ➢ Type ➢ Function ➢ Importance
9. Select marketing channel.	Market channel ➢ Definition ➢ Type ➢ Function ➢ Importance
10. Transport the product.	Transportation ➢ Definition ➢ Type ➢ Function ➢ Importance
11. Advertise to sell the product.	Advertise ➢ Definition ➢ Type ➢ Function ➢ Importance
12. Sell the product	Selling procedure Target group identification Selling technique Material quality Counseling technique and procedure
13. Calculate cost	Cost calculation ➢ Definition ➢ Type ➢ Function ➢ Importance ➢ Method of calculation

14. Calculate returns	Returns calculation ➢ Definition ➢ Type ➢ Function ➢ Importance ➢ Method of calculation
15. Calculate profit/loss	Profit/loss calculation ➢ Definition ➢ Type ➢ Function ➢ Importance ➢ Method of calculation
16. Prepare balance sheet	Balance sheet ➢ Definition ➢ Type ➢ Function ➢ Importance ➢ Method of calculation
17. Prepare re-investment plan	Re-investment plan ➢ Definition ➢ Type ➢ Function ➢ Importance ➢ Method re-investment plan preparation
18. Perform the financial evaluation of the enterprise	Financial evaluation of the enterprise ➢ Definition ➢ Type ➢ Function ➢ Importance ➢ Method of financial evaluation of the enterprise
19. Improve standard of living	Standard of living ➢ Definition ➢ Importance ➢ Method of improvement of living standard
20. Keep records/books	

Manage sericulture through group approach

Tasks	Related Technical Knowledge
1. Call meeting of sericulture farmers.	Meeting ➢ Definition ➢ Type ➢ Function ➢ Importance
2. Form Seri-farmers group	Group formation ➢ Definition ➢ Type ➢ Function ➢ Importance
3. Form committee	Committee formation ➢ Definition ➢ Type ➢ Function ➢ Importance
4. Prepare Agenda	Agenda ➢ Definition ➢ Type ➢ Function ➢ Importance
5. Call meetings	Meeting calling ➢ Elements of meeting ➢ Objective ➢ Member ➢ Agenda
6. Conduct meetings	Conducting a meetings
7. Lead discussion	
8. Minute decisions	Minute ➢ Definition ➢ Type ➢ Function ➢ Importance
9. Circulate decisions	

10. Manage saving & credit	Saving & credit ➢ Definition ➢ Type ➢ Function ➢ Importance ➢ Rule and regulation
11. Prepare working calendar	Working calendar ➢ Definition ➢ Type ➢ Function ➢ Importance ➢ Preparing Procedure
12. Prepare proposals (for grant/loan)	Proposals ➢ Definition ➢ Type ➢ Function ➢ Importance ➢ Aims and objective ➢ Elements ➢ Program schedule
13. Identify donor/investor	Donor/investor ➢ Definition ➢ Type ➢ Function ➢ Importance
14. Approach for donation/loan	Donation/loan ➢ Definition ➢ Type ➢ Function ➢ Importance
15. Direct activities	Activities direction ➢ Definition ➢ Type ➢ Function ➢ Importance

16. Organize activities	Activities organization ➢ Definition ➢ Type ➢ Function ➢ Importance
17. Mobilize resources	Resource mobilization ➢ Definition ➢ Type ➢ Function ➢ Importance
18. Evaluate/control activities	Activity Evaluate/control system ➢ Definition ➢ Type ➢ Function ➢ Importance
19. Pay loan	➢ Loan paying procedure ➢ Rules of loan payment ➢ Loan duration ➢ Installment ➢ Interest
20. Keep records	

Basic Requirement for JTA Course

a Tools

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b Materials

☛

c Equipments

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Personnel involved for the development of the curriculum

1. Nathuni shah, Silk work Development Programm Khopashi, Kabhre
2. Pitamber shrestha, Gottage and Small industry, Central Jail Office
3. Gopal Kafle, New Baneshwor, Kathmandu.
4. Bhawani Bidari, Kathmandu -2, Rabibhawan.
5. Devaki K.C., Imadol-7
6. Durga Bhattarai, Sirjanatmak Kala Guthi.
7. Indra Kumar Chakradhar, Vidhya Ganesh Textile Factory, Garcha-8
8. Gyanta Adhikari, Lalitpur -3 Pulchok.
9. Kamala Pyakurel, Lalitpur, Bagdol.
10. Keshri Bhattarai, Sirjanatmak Kala Guthi.
11. Maina Bhatta, Gandaki Hendicraft and Workshop Bhaktapur.
12. Majuri Dahal, Imadol-5, Lalitpur.
13. Munu Aryal, Lajimpat, Kathmandu.-2
14. Pratap Singh Karki, Panauti-5, Kapalkot.
15. Sannani Shrestha, Lalitpur-5, Takhel.
16. Sarmila Lama, Sirjanatmak Kala Guthi.
17. Sita Khanal, Ramkot, Taupikal-5
18. Sunita Thapa, Gandaki Hendicraft and workshop

19. Surendra Bhandari, Gulmi jaisithok-6
20. Bishnu Bahadur K.C., Sirjanatmak Kala Guthi. Lalitpur
21. Nasir Ahamadm Sirjanatmak Kala Guthi. Lalitpur
22. Miss.Nani Hira Kansakar, Sirjanatmak Kala Guthi. Lalitpur
23. Mrs. Shanta Sharma, Sirjanatmak Kala Guthi. Lalitpur
24. Rajendra Prajapati, Sirjanatmak Kala Guthi. Lalitpur
25. Raju Tuladhar, Sirjanatmak Kala Guthi. Lalitpur
26. Jeeban Chandra Dahal, Sr. Curriculum Officer, CTEVT
27. Sagar Mani Lamsal, Curriculum Officer, CTEVT

Facilities

१ **आवश्यक भौतिक पूर्वाधारहरु:** यस निर्देशिकामा उल्लेख भएको पूर्वाधारहरुको सूची एक समूह (४० जना प्रशिक्षार्थी) को लागि तयार गरिएको छ ।

(क) **घर/जग्गा:** संस्था खोल्नको लागि,

- कमसेकम ५००० वर्गफिट क्षेत्रफल जमिन भएको स्थानमा करिव १० कोठा भएको भवनको व्यवस्था हुनु पर्ने । संस्थाको आफनै घर जग्गा नभएमा कम्तिमा एक ब्याच निकाल्न लाग्ने अवधिको लागि भाडामा वा लिजमा लिएको सम्झौता पत्र पेश गर्नु पर्नेछ ।
- खेलकूदका निम्ति अतिरिक्त ८००० वर्गफिट जमिनको व्यवस्था हुनु पर्ने ।
- यस अतिरिक्त ५००० वर्गफिट भएको जमीन भएमा छात्रावासको व्यवस्था हुन सक्छ ।
- शिक्षालयको स्थान एकान्त, स्वच्छ वातावरण र सकभर मूलसडक नजीक हुनु हुदैन ।

(ख) **कक्षा कोठाहरु**: तालीमको लागि सैद्धान्तिक कक्षा कोठा, प्रयोगात्मक कक्षा कोठा र कार्यशालाको व्यवस्था हुनु पर्नेछ ।

सैद्धान्तिक कक्षा कोठा ४० जना प्रशिक्षार्थीको लागि पर्याप्त हुनु पर्नेछ ।

प्रयोगात्मक कार्यशाला २० जना प्रशिक्षार्थीको लागि पर्याप्त हुनु पर्नेछ । पाठ्यक्रममा उल्लेख भए अनुसार यस तालीम कार्यक्रमको लागि निम्नानुसारको कक्षा कोठाको व्यवस्था हुनु पर्नेछ ।

क्र.स.	विवरण	कोठाको न्यूनतम क्षेत्रफल (वर्गफिट)	कोठा संख्या
१.	सैद्धान्तिक कक्षा कोठा	480 (12'X40')	२
२.	बैठक कोठा/कार्यशाला	600 (15'X40')	१
३.	छलफलका लागि कोठा	600 (150'X40')	१
४.	पुस्तकालय	360(12'X30')	१

(ग) **कार्यालय प्रयोजनको लागि कोठाहरु:**

➤ प्रमुखको लागि कोठा १

- प्रशिक्षक कोठा र १
- लेखा/प्रशासनिक कर्मचारीहरुको कार्यालय कोठा २
- स्टोर कोठा १
- First Aid कोठा १
- र सम्भव भए सम्म इन्डोर खेलकुद कोठा, र क्यान्टिन समेत उपलब्ध गराउनु पर्नेछ ।

(घ) सम्बन्धित संस्था भित्रै सामान्य साधनयुक्त ४ (कर्मचारिको लागि १ र महिला प्रशिक्षार्थीहरूका लागि कम्तीमा १ र पुरूष प्रशिक्षार्थीहरूका लागि कम्तीमा २) वटा शौचालयको व्यवस्था हुनु पर्नेछ ।

(ङ) **छात्रावासको व्यवस्था:** सम्बन्धित संस्थाले छात्रावासको पनि व्यवस्था गर्ने भएमा निम्नानुसार व्यवस्था हुनु पर्ने ।

- कोठामा प्रशिक्षार्थीको संख्याको आधारमा बेड र टेबुल हुनु पर्ने ।
- प्रशिक्षार्थीको संख्याको आधारमा शौचालय, स्नान कोठा, भान्छाघरको व्यवस्था हुनु पर्ने ।
- होस्टेल वार्डेन बस्ने कोठाको व्यवस्था हुनु पर्ने ।
- होस्टेलमा कमन र Recreation कक्ष हुनु पर्ने ।
- Visitor Room र Reading Room को व्यवस्था हुनु पर्ने ।

(च) **खेलकूद मैदान र सामग्रीहरु:** शारिरीक तथा मानसिक विकासको लागि खेलकूद आवश्यक पर्ने हुनाले आवश्यक खेलकूद मैदान र खेलकूद सामग्रीहरुको यथेष्ट रुपमा व्यवस्था हुनु पर्नेछ ।

(छ) **पुस्तकालयको व्यवस्था:** संस्थामा अध्ययन गराइने विषयहरुसंग सम्बन्धित पाठ्यपुस्तकहरु र श्रोत सन्दर्भ पुस्तकहरुको पर्याप्त व्यवस्था हुनु पर्नेछ । पाठ्यपुस्तकका साथै विषयसंग सम्बन्धित ज्ञान, विज्ञानका पत्रपत्रिकाहरु, बुलेटिनहरु, प्रशिक्षकका लागि Reference Books, Teachers Mannual र विद्यार्थीहरुका लागि निर्देशिकाहरुको पर्याप्त व्यवस्था हुनु पर्नेछ ।

लाइब्रेरीमा चाहिने टेबुल, दराज, पढने ठाउँको व्यवस्था भएको हुनु पर्नेछ । सन्दर्भ सामग्रीहरु अनुसूची -१ मा दिइएको छ ।

२ **फर्निचर र कार्यालय सामानको व्यवस्था:** शिक्षण तथा अन्य कार्यालय प्रयोजनको लागि तालीम संस्थामा निम्नानुसारको फर्निचर र कार्यालय सामानको उपयुक्त व्यवस्था हुनु पर्नेछ ।

(क) विद्यार्थीहरुको अुनपातमा सबैलाई वस्न पुग्ने गरी कुर्सी/बेन्च, डेक्सको व्यवस्था हुनु पर्नेछ ।

(ख) बैठक कोठा/कार्यशाला लागि आवश्यक पर्ने कुसन, टेबुल, कुर्सी, च्याक र दराजहरुको व्यवस्था हुनु पर्नेछ ।

(ग) शिक्षक कर्मचारीहरुको लागि आवश्यक टेबुल, कुर्सी, दराज, च्याकको व्यवस्था हुनु पर्नेछ ।

(घ) कार्यालय प्रयोजनको लागि टाइपराइटर वा कम्प्युटर, लिथोमेसिन/फोटोकपी मेसिन, ओभरहेड प्रोजेक्टर, टि.भि./भि.सि.आर./स्लाइड प्रोजेक्टर आदिको उपयुक्त व्यवस्था गरेमा उपयुक्त हुनेछ।

(ङ) कार्यालय प्रयोजनको लागि यथेष्ट मात्रामा स्टेशनरी आदि व्यवस्था हुनु पर्नेछ।

३. **प्रशिक्षक/कर्मचारीको व्यवस्थाः** तालीम कार्यक्रमलाई स्तरीय र गुणस्तर कायम गर्न संस्थालाई आवश्यक पर्ने प्राचार्य/प्रशिक्षक/कर्मचारीको व्यवस्था देहाय अनुरुप हुनु पर्नेछ।

(क) एक दिनमा ७ पिरीयडको कक्षा सञ्चालन गर्नु पर्ने र प्रत्येक पिरीयड ५० मिनेटको हुनु पर्नेछ।

(ख) विद्यार्थी शिक्षक अनुपात देहाय अनुसार हुनु पर्नेछ।

सैद्धान्तिक कक्षा ४०: १

प्रयोगात्मक ५–१०:१

(ग) संस्थाको लागि प्रशिक्षक – ५, सहायक प्रशिक्षक –३ हुनु पर्नेछ । उल्लेखित प्रशिक्षण तर्फका कर्मचारीहरुमा कम्तीमा ५०% पूर्णकालीन हुनु पर्नेछ।

(घ) संस्थाको लागि आवश्यक प्राचार्य (प्रमुख) पूर्णकालीन सेवाको हुनु पर्ने र त्यस्तो व्यक्तिहरु अन्य संस्थामा कार्यरत नभएको हुनु पर्नेछ।

(ङ) प्रशासनिक कर्मचारी तर्फ लेखा/प्रशासन सहायक, टाइपिष्ट, लाइब्रेरीयन, स्टोरकिपर, पियन र चौकिदारहरुको व्यवस्था हुन पर्नेछ। संस्थामा कार्यारत प्रशिक्षक/कर्मचारीहरुको योग्यता, तलब, भत्ता आदि न्यूनतम प्रा.शि.तथा व्या.ता.परिषद्को कर्मचारी सेवा, शर्त, नियमावलीमा उल्लेखित सरह हुनु पर्नेछ। योग्यता अनुसूची -२ मा उल्लेख भए अनुसार हुनु पर्नेछ।

४ **शैक्षिक सामग्री तथा उपकरणहरुको व्यवस्थाः** पाठ्यक्रममा समावेश भएका विषयहरुको प्रयोगात्मक कक्षाको लागि सामग्री, औजार र उपकरणहरुको आवश्यक व्यवस्था हुनु पर्नेछ । तपसिलमा उल्लेखित उपकरण, औजारहरु ४० जना प्रशिक्षार्थीहरुको लागि अनुमान गरिएको छ । औजार तथा उपकरणहरुको लिष्ट विषय अनुसार बनाइएको छ, तसर्थ खरिद गर्दा अधिकतम चाहिने हिसावले प्रथम वर्ष र द्वितीय वर्षको २ (दुई) समूहको लागि पुग्ने गरी व्यवस्था हुनु पर्नेछ।

शैक्षिक सामग्रीहरुको सूची वनाइएको छैन, ती सामाग्रीहरु तालीम सञ्चालनको लागि यथेष्ट हुने गरी तालीम अवधिमा क्रमिक रुपमा व्यवस्था गर्नु पर्नेछ।

1. Equipment

List of Equipment, machine and Materials:

S. No	Name	Quantity	Remarks
1	Computers	4	For 40 trainees
2	Fax	1	
3	Photocopy	1	
4	Over Hear Projector	1	
5	Cassette Player	1	
6	TV set	1	
7	Printer	1	
8	Soft /pin board	2	
9	White board /Black board	1	
10	Clip/flip board	1	

11	Chair	50	
12	Office table	5	
13	Cupboard	5	
14	Books	500	
15	Filing cabinet	2+3	
16	General table	10	
17	Camera	1	
18	Telephone set	10	
19	Internet/email facilities	1/1	
20	Kitchen set	2	
21	Hostel facilities		If needed

५ फिल्ड अभ्यासको लागि स्थान र प्रशिक्षकको व्यवस्थाः

तालीम कार्यक्रमसंग सम्बन्धित प्रयोगात्मक तालीमको लागि स्थान तथा सम्बन्धित निकायहरुको सेवा मूलक संस्थाहरुको छनोट गर्दा प्रशिक्षार्थीलाई पर्याप्त ज्ञान र सीप आर्जन गर्न सक्ने अवसर प्राप्त हुने संस्थाहरुलाई प्राथमिकता दिनु पर्ने र कार्यगत तालीमको हकमा त्यस्ता निकायहरुको छनोट गरी अग्रिम परिषद्लाई जानकारी दिनु पर्नेछ । ती स्थानहरुमा प्रशिक्षार्थीहरुलाई प्रयोगात्मक/कार्यगत तालीमको लागि पठाउँदा साथमा सम्बन्धित विषयका प्रशिक्षकहरु अनिवार्य रुपमा व्यवस्था गर्नु पर्नेछ ।

अनूसुची -१

प्रशिक्षकहरुको न्यनतम शैक्षिक योग्यता

१. ***प्रमूखः-*** सम्वन्धित विषयसंग सम्बन्धित, व्यवस्थापन अथवा नेतृत्व प्रदान गर्न सक्ने व्यक्तिलाई शिक्षण संस्था प्रमुख वनाइनु पर्ने ।

२. **पदः-** प्रशिक्षक (विषय अनुसार) (अधिकृत स्तर तृतीय श्रेणी प्रा.)

न्यूनतम शैक्षिक योग्यता: मान्यता प्राप्त शिक्षण संस्थाबाट सम्बन्धित विषयमा स्नातक वा सो सरह उत्तिर्ण ।

अथवा

मान्यता प्राप्त शिक्षण संस्थावाट सम्बन्धित विषयमा प्रमाण-पत्रतह वा सो सरह उत्तिर्ण भई सम्बन्धित विषयमा सहायक प्रशिक्षक पदमा ४ बर्षको अनुभव ।

३. **पदः-** सहायक-प्रशिक्षक (विषय अनुसार) (सहाय स्तर प्रथम श्रेणी प्रा.)

न्यूनतम शैक्षिक योग्यता: मान्यता प्राप्त शिक्षण संस्थाबाट सम्बन्धित विषयमा प्रमाण-पत्र तह वा सो सरह उत्तिर्ण ।

४. **पदः-** प्रशिक्षण-सहायक (विषय अनुसार) (सहाय स्तर द्वितीय श्रेणी प्रा.)

न्यूनतम शैक्षिक योग्यता: प्राविधिक एस.एल.सी. वा सम्बन्धित विषयमा मान्यता प्राप्त संस्थाबाट जुनीयर टेक्निसीयन तहको तालीम प्राप्त ।

Reading Materials
Personnel involved
Appendix

- **a Job description**
  - ☛ **Junior Textile Assistant**
  - ☛ **Junior Sericulture Assistant**
- **b Validated Task inventory for Junior Textile Assistant**
- **c Task inventory from DACUM Job Analysis of:**
  - ☛ **Junior Textile Assistant**
  - ☛ **Junior Sericulture Assistant**
- **d Task Analysis Sheet (Format Used)**
- **e Task Structure (Format Used)**
- **f Glossary of Technical Terms**
- **g Glossary of Curriculum Terms**
- **h Organization of duties and Tasks under subjects**

Grouped the duties in subjects

S. No	Subjects	Duties of DACUM
1	Applied Nepali, Hindi	
2	Applied English	
3	Applied Math	Calculation
4	Applied Science	
5	Spinning	Spinning
6	Drafting	Design
7	Weaving	Sizing, Loom, Warping, Weaving, Jacquard, Dobby
8	Designing	Design
9	Sericulture	Sericulture DACUM all
10	Dyeing	Dye /Print, Batik, Tie Die
11	Management	Management, Marketing
		Tools, equipment and materials
		Safety precautions

Distribution of Tasks for three-year course

S. No	Subjects	DACUM Chart Duties	DACUM Chart Task No		
			1st Year	2nd Year	3rd Year
1	Applied Nepali, Hindi				
2	Applied English				
3	Applied Math	Calculation	1-4	5,10,11	6-9,12-14
4	Applied Science				
5	Spinning	Spinning	1,2,4	3,5	6
6	Drafting	Drafting/designing	1,2,3,9	4-6	7,8
7	Weaving	Sizing	1-4	5	
		Loom	1,5	2,6	3,4
		Warping	1,2,4	3,5	
		Weaving			
		Cloth	22-24		3,18-24
		Rug	1-6,9-15,17	3,7-10,17-24	3,18-24
		Jacquard			All
		Dobby			All
8	Designing				
9	Sericulture				
10	Dyeing	Dye	1-7	7- all	
		Print			All
		Batik, Tie Die			All
11	Management				All

Appendix

i Job description
- **Junior Textile Assistant**
- **Junior Sericulture Assistant**

j Validated Task inventory for Junior Textile Assistant

k Task inventory from DACUM Job Analysis of:
- **Junior Textile Assistant**
- **Junior Sericulture Assistant**

l Task Analysis Sheet (Format Used)

m Task Structure (Format Used)

n Glossary of Technical Terms

o Glossary of Curriculum Terms

p Organization of duties and Tasks under subjects

Grouped the duties in subjects

S. No	Subjects	Duties of DACUM
1	Applied Nepali, Hindi	
2	Applied English	
3	Applied Math	Calculation
4	Applied Science	
5	Spinning	Spinning
6	Drafting	Design
7	Weaving	Sizing, Loom, Warping, Weaving, Jacquard, Dobby
8	Designing	Design
9	Sericulture	Sericulture DACUM all
10	Dyeing	Dye /Print, Batik, Tie Die
11	Management	Management, Marketing
		Tools, equipment and materials
		Safety precautions

Distribution of Tasks for three-year course

S. No	Subjects	DACUM Chart Duties	DACUM Chart Task No		
			1st Year	2nd Year	3rd Year
1	Applied Nepali, Hindi				
2	Applied English				
3	Applied Math	Calculation	1-4	5,10,11	6-9,12-14
4	Applied Science				
5	Spinning	Spinning	1,2,4	3,5	6
6	Drafting	Drafting/designing	1,2,3,9	4-6	7,8
7	Weaving	Sizing	1-4	5	
		Loom	1,5	2,6	3,4
		Warping	1,2,4	3,5	
		Weaving			
		Cloth	22-24		3,18-24
		Rug	1-6,9-15,17	3,7-10,17-24	3,18-24
		Jacquard			All
		Dobby			All
8	Designing				
9	Sericulture				
10	Dyeing	Dye	1-7	7- all	
		Print			All
		Batik, Tie Die			All
11	Management				All

हिन्दी

वर्णनः ईस विषय में हिन्दी भाषिक सीप से सम्बन्धित निबन्ध; कथा और कहानी; जीवनी; पत्र - लेखन; रूपक; एकाङ्की और नाटक; देनन्दिनी; कविता तथा भाषातत्व (व्याकरण) जैसी विधा समावेश किया गया है ।

उद्देश्य :

१ प्रशिक्षार्थीयों में हिन्दी भाषा पढने, सुनने और बुझने की सीपों का अभिवृद्धि करना

२ प्रशिक्षार्थीयों को निबन्ध; कथा और कहानी; जीवनी; पत्र - लेखन; रूपक; एकाङ्की और नाटक; देनन्दिनी; कविता तथा भाषातत्व (व्याकरण) के माध्यम से हिन्दी भाषा का प्रारम्भिक ज्ञान देना ।

३ प्रशिक्षार्थीयों को आधारभूत रूप से आवश्यक हिन्दी व्याकरण के पक्षों में सम्बन्धित सीप प्रयोग करने की क्षमता विकास करना ।

४ प्रशिक्षार्थीयों में हिन्दी भाषा में पढने, लिखने सुनने और वात करने सीपों का विकास करना ।

विधा र क्षेत्र

क्र.सं.	विधा	क्षेत्र
१	निबन्ध	निबन्ध • सामाजिक ➢ सांस्कृतिक और ऐतिहासिक • प्राकृतिक तथा वातावरणीय ➢ वैज्ञानिक और प्राविधिक • कलाकौशल और सौन्दर्य ➢ व्यावसायिक
२	कथा और कहानी	कथा और कहानी लोक कहानीयाँ आधुनिक कहानीयाँ ऐतिहासिक कहानीयाँ सामाजिक कहानीयाँ
३	जीवनी	जीवनी (राष्ट्रिय) राजनैतिक साहित्यिक और कला सांस्कृतिक/ऐतिहासिक विचारक जीवनी (अन्तरराष्ट्रिय) राजनैतिक विचारक आविष्कारक कला
४	पत्र	**पत्र** घरेलु पत्र विद्यालयीय पत्र कार्यालयीय/ व्यापारिक पत्र निवेदन
५	रू रूपक, एकाङ्की, और नाटक	**रूपक, एकाङ्की, और नाटक** एकाङ्की नाटक रेडियो रूपक ऐतिहासिक नाटक वैज्ञानिक एकाङ्की
६	दैनन्दिनी	दैनन्दिनी
७	कविता	कविता नीतिप्रधान प्रकृतिप्रधान इतिहासप्रधान संस्कृतिप्रधान समाजप्रधान
८	भाषातत्व	भाषातत्व **(क) वर्णपरिचय** वर्णमाला अनुस्वार और विसर्ग स्वर वर्णोंका उच्चारण स्थान व्यन्जन

		(ख) काल र पक्ष **वर्तमान काल** सामान्य वर्तमान तात्कालिक वर्तमान संदिग्ध वर्तमान **भविष्यत काल** सामान्य भविष्यत संभाव्य भविष्यत हेतुहेतुमद भविष्यत	**भूत काल** सामान्य भूत आसन्न भूत पूर्ण भूत अपूर्ण भूत संदिग्ध भूत हेतु हेतुमद भूत
		(ग) पद संज्ञा सर्वनाम विशेषण क्रिया	संबन्धबोधक विस्पयादिबोधक समुच्चय बोधक कृया विशेषण
		(घ) वाच्य कर्तृवाच्य भाववाच्य	कर्मवाच्य
		(ङ) शब्दविचार शब्द शब्दों का वर्गीकरण	विशेष्य विपरीतार्थक शब्द
		(च) क्रिया धातु	सकर्मक क्रिया अकर्मक क्रिया
		(छ) विराम चिन्ह • अल्प विराम • अर्ध विराम • पूर्ण विराम • प्रश्न चिन्ह • आश्चर्य चिन्ह • निर्देशक चिन्ह (डचास) • अवतरण चिन्ह	• कोष्ठक • वर्णाकार कोष्ठक • सर्पाकार कोष्ठक • रेखा • अपूर्ण सूचक • हसपद • टीकासूचक •
			• संकेत • पुनरूक्तिसूचक • तुल्यतासूचक • स्थानसूचक • समाप्तिसूचक

		(ज) शब्दोंका निर्माण उपसर्ग और प्रत्यय — समास सन्धी — द्विरूक्ति
		(झ) प्रत्यय प्रत्यय के भेद (कृत् ओर तद्धित)
		(ञ) शब्दभण्डार
		(ट) पदबंध संज्ञा पदबंध — क्रिया विशेषण पदबंध सर्वनाम पदबंध — संबन्धवोधक पदबंध विशेषण पदबंध — समुच्चय बोधक पदबंध क्रिया पदबंध — विस्मयादिबोधक पदबंध
		(ठ) वाक्य संश्लेषण और विश्लेषण वाक्य संश्लेषण की प्रक्रिया
		(ड) कारक और विभक्तियाँ कारक और विभक्ति — संप्रदान कारक कारक के भेद — अपादान कारक कर्ता कारक — संबन्ध कारक कर्म कारक — अधिकरण कारक करण कारक — संबोधन कारक
		(ढ) लोकोक्तियाँ/कहावतों और मुहावरे

हिन्दी कक्षा ९ प्रकाशक जनक शिक्षा सामग्री केन्द्र, सानोठिमी भक्तपुर
हिन्दी कक्षा १० प्रकाशक जनक शिक्षा सामग्री केन्द्र, सानोठिमी भक्तपुर

व्यावहारिक हिन्दी

वर्णनः ईस विषय ने जुनियर टेक्स्टायल असिष्टेण्ट को अपने कामको सिलसिलें में आवश्यक हिन्दी भाषिक सीपो को विकास कतृ है । इस में दिए हुए भाषिक सीपों ने जुनियर टेक्स्टायल असिष्टेण्टाँ को टेक्स्टायल विषय में आवश्यक सीपें प्रदान करके सक्षम संचारकर्ता बनाता है । इस नें वो जुनियर टेक्स्टायल असिष्टेण्टों को प्रतिवेदन तयार करने में, विविध दस्तावेज तयार करने और आपने ग्राहकों के समिप आपना वातों को प्रस्तुत करने, अपने व्यवसाय के लिए प्रस्ताव निर्माण करने ओर अपने लिए प्राविधिक सामग्री ओं के नाम के साथ परिचय कराने में सहयोग हरता है ।

उद्देश्यहरूः यो विषयको अध्ययन पूरा गरेपछि प्रशिक्षार्थीहरू निम्न लिखित विषय में सक्षम होते हैं:

- यो विषयको अध्ययन पूरा करने के वाद प्रशिक्षर्थीऔं शुद्ध हिज्जे ओर उपयुक्त पदसङ्गति को प्रयोग के साथ वाक्य बनोट करके अनुच्छेद तथा निबन्ध लिखने
- किसि वस्तुको वर्णन करने
- हिन्दी में क्रियाकलापों का प्रतिवेदन लिखने
- हिन्दी में निरीक्षण के वाद प्रतिवेदन लिखने
- हिन्दी में चिठ्ठी पत्र लिखने
- हिन्दी में संस्मरणपत्र लिखने
- हिन्दी में निर्देशन कुझने र लिखने
- हिन्दी में विदा, ऋण, रोजगारी आदिका लिए निवेदन लिखने
- हिन्दी में प्रकाशित प्राविधिक प्रकाशन पढने और बुझने
- हिन्दी में प्रवचन तयार करने
- हिन्दी में प्रवचन देने
- हिन्दी में टेक्स्टायल र सेरिकल्चर विषयको वर्णन करने वाले नाटिका तयार करने
- हिन्दी में लिखृ र्हु विभिन्न लेवलहरू पढने
- हिन्दी में प्रश्नहरू तयार करने
- अपने उत्पादर्नो को हिन्दी में प्रदर्शनी तयार और प्रदर्शन करने
- हिन्दी में छोटे छोटे पत्रिका तयार करने ।