

LEARNING OUTCOME BASED VOCATIONAL CURRICULUM

JOB ROLE: SMALL POULTRY FARMER

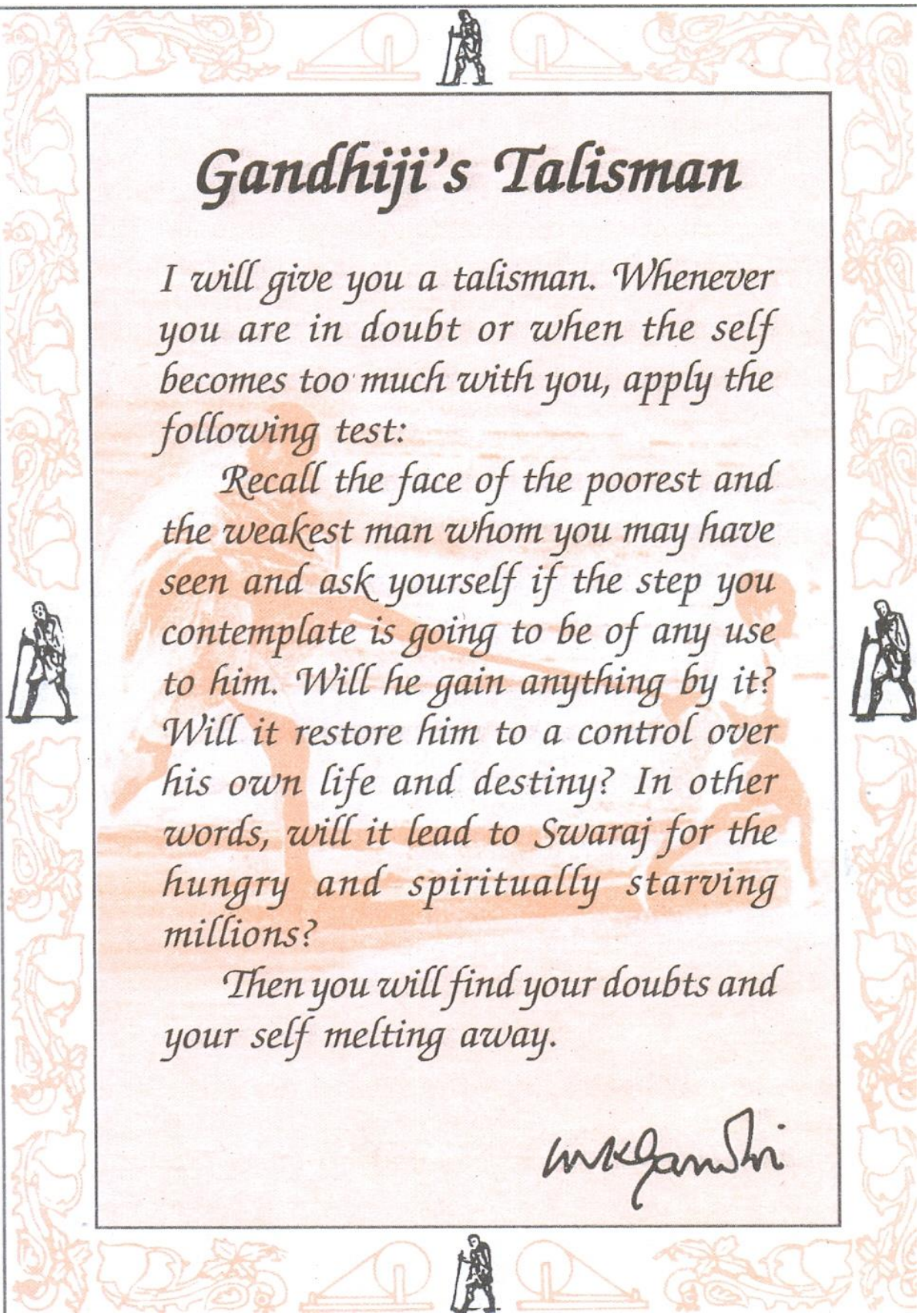
(QUALIFICATION PACK: REF. ID. AGR/Q4306)

SECTOR: AGRICULTURE

Classes 11 and 12



PSS CENTRAL INSTITUTE OF VOCATIONAL EDUCATION
(a constituent unit of NCERT, under MHRD, Government of India)
Shyamla Hills, Bhopal- 462 013, M.P., India
<http://www.psscive.ac.in>



Gandhiji's Talisman

I will give you a talisman. Whenever you are in doubt or when the self becomes too much with you, apply the following test:

Recall the face of the poorest and the weakest man whom you may have seen and ask yourself if the step you contemplate is going to be of any use to him. Will he gain anything by it? Will it restore him to a control over his own life and destiny? In other words, will it lead to Swaraj for the hungry and spiritually starving millions?

Then you will find your doubts and your self melting away.

M.K. Gandhi

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Agriculture – Small Poultry Farmer

April, 2020

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Joint Director
PSS Central Institute of Vocational
Education, NCERT, Shyamla Hills,
Bhopal



PATRONS

Prof. Hrushikesh Senapaty, Ph.D.,
Director,
National Council of Educational
Research and Training (NCERT),
New Delhi

Prof. Rajesh Khambayat, Ph.D.,
Joint Director
PSS Central Institute of Vocational
Education, Bhopal

COURSE COORDINATOR

Dr. Kuldeep Singh
Associate Professor
PSS Central Institute of Vocational
Education, Bhopal

FOREWORD

The Pandit Sunderlal Sharma Central Institute of Vocational Education (PSSCIVE), a constituent unit of National Council of Educational Research and Training (NCERT) is spearheading the efforts of developing learning outcome based vocational curriculum and courseware aimed at integrating both vocational and general qualifications to open pathways of career progression for students. It is a part of Vocationalisation of Education under *Samagra Shiksha*. The PSS Central Institute of Vocational Education (PSSCIVE) is developing curricula under the project approved by the Project Approval Board (PAB) of *Samagra Shiksha* of Ministry of Human Resource Development (MHRD), Government of India. The main purpose of the learning outcome based vocational curriculum is to bring about improvement in teaching-learning process and working competencies through learning outcomes embedded in the vocational subject.

It is a matter of great pleasure to introduce this learning outcome based vocational curriculum as part of the vocational training package for the job role of Small Poultry Farmer (AGR/Q4306). The curriculum has been developed for the higher secondary students of vocational education and is aligned to the National Occupation Standards (NOSs) of a job role identified and approved under the National Skill Qualification Framework (NSQF).

The curriculum aims to provide children with employability and vocational skills to support occupational mobility and lifelong learning. It will help them to acquire specific occupational skills that meet employers' immediate needs. The teaching process is to be performed through the interactive sessions in classrooms, practical activities in laboratories and workshops, projects, field visits, and professional experiences.

The curriculum has been developed and reviewed by a group of experts and their contributions are greatly acknowledged. The utility of the curriculum will be adjudged by the qualitative improvement that it brings about in teaching-learning. The feedback and suggestions on the content by the teachers and other stakeholders will be of immense value to us in bringing about further improvement in this document.

HRUSHIKESH SENAPATY
Director
National Council of Education
Research and Training

PREFACE

India today stands poised at a very exciting juncture in its saga. The potential for achieving inclusive growth are immense and the possibilities are equally exciting. The world is looking at us to deliver sustainable growth and progress. To meet the growing expectations, India will largely depend upon its young workforce. The much-discussed demographic dividend will bring sustaining benefits only if this young workforce is skilled and its potential is channelized in the right direction.

In order to fulfil the growing aspirations of our youth and the demand of skilled human resource, the Ministry of Human Resource Development (MHRD), Government of India introduced the revised Centrally Sponsored Scheme of Vocationalisation of Secondary and Higher Secondary Education in 2012 with the aim to provide for the diversification of educational opportunities so as to enhance individual employability, reduce the mismatch between demand and supply of skilled manpower and provide an alternative for those pursuing higher education. The scheme was subsumed in *Samagra Shiksha* in 2018 along with other schemes of school education. For spearheading the Vocationalisation Education, the PSS Central Institute of Vocational Education (PSSCIVE) was entrusted the responsibility to develop learning outcome based vocational curriculum, student workbooks, teacher handbooks and e-learning materials for the job roles in various sectors, with growth potential for employment.

The PSSCIVE firmly believes that the vocationalisation of education in the nation needs to be established on a strong footing of philosophical, cultural and sociological traditions and it should aptly address the needs and aspirations of the students besides meeting the skill demands of the industry. The curriculum, therefore, aims at developing the desired professional, managerial and communication skills to fulfil the needs of the society and the world of work. In order to honour its commitment to the nation, the PSSCIVE has initiated the work on developing learning outcome based vocational curriculum with the involvement of faculty members and leading experts in respective fields. It is being done through the concerted efforts of leading academicians, professionals, policy makers, partner institutions, Vocational Education and Training experts, industry representatives, and teachers. The expert group through a series of consultations, working group meetings and use of reference materials develops a National Curriculum. Currently, the Institute is working on developing curricula and courseware for over 50 job roles in various sectors, besides the curricula developed for 100 job roles.

We extend our gratitude to all the contributors for selflessly sharing their precious knowledge, acclaimed expertise, valuable time and positively responding to our request for development of curriculum. We are grateful to MHRD and NCERT for the financial support and cooperation in realising the objective of providing learning outcome based vocational curriculum and courseware to the States and other stakeholders under the PAB (Project Approval Board) approved project of *Samagra Shiksha* of Ministry of Human Resource Development (MHRD), Government of India.

Finally, for transforming the proposed curriculum design into a vibrant reality of implementation, all the institutions involved in the delivery system shall have to come together with a firm commitment and they should secure optimal community support. The success of this curriculum depends upon its effective implementation and it is expected that the managers of vocational education and training system, including subject teachers will make efforts to create better facilities, develop linkages with the world of work and foster a conducive environment as per the content of the curriculum document.

The PSSCIVE, Bhopal remains committed in bringing about reforms in the vocational education and training system through the learner-centric curricula and courseware. We hope that this document will prove useful in turning out more competent Indian workforce for the 21st Century.

RAJESH P. KHAMBAYAT
Joint Director
PSS Central Institute of Vocational Education

ACKNOWLEDGEMENTS

On behalf of the team at the PSS Central Institute of Vocational Education (PSSCIVE) we are grateful to the members of the Project Approval Board (PAB) of *Samagra Shiksha* and the officials of the Ministry of Human Resource Development (MHRD), Government of India for the financial support to the project for development of curricula.

We are grateful to the Director, National Council of Educational Research & Training (NCERT) for his support and guidance. We also acknowledge the contributions of our colleagues at the Technical Support Group of *Samagra Shiksha*, MHRD, National Skill Development Agency (NSDA) and National Skill Development Corporation (NSDC) and Agriculture Skill Council of India (ASCI) for their academic support and cooperation.

We are grateful to the experts for their earnest efforts and contributions in the development of this learning outcome based vocational curriculum. Their names are acknowledged in the list of contributors. The contribution of Dr. Kuldeep Singh, Associate Professor, Department of Agriculture and Animal Husbandry, PSSCIVE in coordinating the development of curricula is duly acknowledged. The support and guidance of Dr. Vinay Swarup Mehrotra, Professor and Head, Department of Agriculture and Animal Husbandry in development of the curriculum is thankfully acknowledged.

The contributions made by Dr. Vinay Swarup Mehrotra, Professor and Head, Department of Agriculture and Animal Husbandry and Curriculum Development and Evaluation Centre (CDEC), Dr. Vipin Kumar Jain, Associate Professor and Head, Department of Humanities, Science, Education and Research and Dr. Dipak D. Shudhalwar, Associate Professor and Head, Department of Engineering and Technology, PSSCIVE in development of the curriculum for the employability skills are duly acknowledged.

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1. COURSE OVERVIEW

COURSE TITLE: SMALL POULTRY FARMER

A small poultry farmer is a person who is responsible for various activities involved in rearing of small poultry birds, such as chicken and ducks. As a small poultry farmer takes various decisions for the viability and sustainability of the poultry farm. He/ She ensures proper care of the poultry birds, their health and productivity, meat or egg production and marketing of the produce.

COURSE OBJECTIVES: On completion of the course, students should be able to:

- Apply effective oral and written communication skills to interact with people and customers;
- Identify the principal components of a computer system;
- Demonstrate the basic skills of using computer;
- Demonstrate self-management skills;
- Demonstrate the ability to provide a self-analysis in context of entrepreneurial skills and abilities;
- Demonstrate the knowledge of the importance of green skills in meeting the challenges of sustainable development and environment protection;
- Describe the location and type of poultry houses;
- Explain the various types of brooders and preparation of shed to receive chicks;
- Describe the importance of environment (temperature, humidity and ventilation) in rearing chicks;
- Describe the various types of feed used for feeding, formulation of feed and vaccination in early stage of chicks;
- Describe the procedure for care and management of growing, laying/broiler birds;
- Describe the procedure for litter and water management in poultry;
- Explain the proactive measures to minimize entry of infections in farm premises;
- Identify the common poultry diseases caused by bacterial, viral, fungal, parasitic and nutritional deficiencies and describe their causal agents and control measures;

COURSE REQUIREMENTS: The learner should have the basic knowledge of science.

COURSE DURATION: 600 hrs

Class 11: 300 hrs

Class 12: 300 hrs

Total: 600 hrs

2. SCHEME OF UNITS

The unit-wise distribution of hours and marks for Class 11 is as follows:

CLASS 11			
	Units	No. of Hours for Theory and Practical = 300	Max. Marks for Theory and Practical =100
Part A	Employability Skills		
1.	Communication Skills – III	25	10
2.	Self-management Skills – III	25	
3.	Information and Communication Technology Skills – III	20	
4.	Entrepreneurial Skills – III	25	
5.	Green Skills – III	15	
	Total	110	10
Part B	Vocational Skills		
6.	Accommodation for Poultry Birds	45	40
7.	Handling Poultry Birds in Shed	40	
8.	Feeding Poultry Birds	40	
9.	Maintaining Health and Hygiene at Poultry Farm	40	
	Total	165	40
Part C	Practical Work		
	Practical Examination	06	15
	Written Test	01	10
	Viva Voce	03	10
	Total	10	35
Part D	Project Work/Field Visit/ OJT		
	Practical File/Student Portfolio	10	10
	Viva Voce	05	05
	Total	15	15
	Grand Total	300	100

The unit-wise distribution of hours and marks for Class 12 is as follows:

CLASS 12			
	Units	No. of Hours for Theory and Practical =300	Max. Marks for Theory and Practical = 100
Part A	Employability Skills		
1.	Communication Skills – IV	25	10
2.	Self-management Skills – IV	25	
3.	Information and Communication Technology Skills – IV	20	
4.	Entrepreneurial Skills – IV	25	
5.	Green Skills – IV	15	
	Total	110	10
Part B	Vocational Skills		
6.	Collection, Cleaning and Packaging of Eggs	40	
7.	Cleaning and Disinfecting Poultry Farm	30	
8.	Documentation and Recordkeeping	30	
9.	Setting Up A Small Poultry Farm	65	
	Total	165	40
Part C	Practical Work		
	Practical Examination	06	15
	Written Test	01	10
	Viva Voce	03	10
	Total	10	35
Part D	Project Work/Field Visit/OJT		
	Practical File/Student Portfolio	10	10
	Viva Voce	05	05
	Total	15	15
	Grand Total	300	100

3. TEACHING/TRAINING ACTIVITIES

The teaching and training activities have to be conducted in classroom, laboratory/ workshops and field visits. Students should be taken to field visits for interaction with experts and to expose them to the various tools, equipment, materials, procedures and operations in the workplace. Special emphasis should be laid on the occupational safety, health and hygiene during the training and field visits.

CLASSROOM ACTIVITIES

Classroom activities are an integral part of this course and interactive lecture sessions, followed by discussions should be conducted by trained vocational teachers. Vocational teachers should make effective use of a variety of instructional or teaching aids, such as audio-video materials, colour slides, charts, diagrams, models, exhibits, hand-outs, online teaching materials, etc. to transmit knowledge and impart training to the students.

PRACTICAL WORK IN LABORATORY/WORKSHOP

Practical work may include but not limited to hands-on-training, simulated training, role play, case-based studies, exercises, etc. Equipment and supplies should be provided to enhance hands-on learning experience of students. Only trained personnel should teach specialized techniques. A training plan that reflects tools, equipment, materials, skills and activities to be performed by the students should be submitted by the vocational teacher to the Head of the Institution.

FIELD VISITS/ EDUCATIONAL TOUR

In field visits, children will go outside the classroom to obtain specific information from experts or to make observations of the activities. A checklist of observations to be made by the students during the field visits should be developed by the Vocational Teachers for systematic collection of information by the students on the various aspects. Principals and Teachers should identify the different opportunities for field visits within a short distance from the school and make necessary arrangements for the visits. At least three field visits should be conducted in a year.

4. ASSESSMENT AND CERTIFICATION

The National Skills Qualifications Framework (NSQF) is based on outcomes referenced to the National Occupation Standards (NOSs), rather than inputs. The NSQF level descriptors, which are the learning outcomes for each level, include the process, professional knowledge, professional skills, core skills and responsibility. The assessment is to be undertaken to verify that individuals have the knowledge and skills needed to perform a particular job and that the learning programme undertaken has delivered education at a given standard. It should be closely linked to certification so that the individual and the employer could come to know the competencies acquired through the vocational subject or course. The assessment should be reliable, valid, flexible, convenient, cost effective and above all it should be fair and transparent. Standardized assessment tools should be used for assessment of knowledge of students. Necessary arrangements should be made for using technology in assessment of students.

KNOWLEDGE ASSESSMENT (THEORY)

Knowledge Assessment should include two components: one comprising of internal assessment and second an external examination, including theory examination to be conducted by the Board. The assessment tools shall contain components for testing the knowledge and application of knowledge. The knowledge test can be objective paper-based test or short structured questions based on the content of the curriculum.

WRITTEN TEST

It allows candidates to demonstrate that they have the knowledge and understanding of a given topic. Theory question paper for the vocational subject should be prepared by the subject experts comprising group of experts of academicians, experts from existing vocational subject experts/teachers, subject experts from university/colleges or industry. The respective Sector Skill Council should be consulted by the Central/State Board for preparing the panel of experts for question paper setting and conducting the examinations.

The blue print for the question paper may be as follows:

Duration: 3 hrs

Maximum Marks: 40

	Typology of Question	No. of Questions			Marks
		Very Short Answer (1 mark)	Short Answer (2 Marks)	Long Answer (3 Marks)	
1.	Remembering – (Knowledge based simple recall questions, to know specific facts, terms, concepts, principles, or theories; identify, define or recite, information)	3	2	2	13
2.	Understanding – (Comprehension – to be familiar with meaning and to understand conceptually, interpret, compare, contrast, explain, paraphrase, or interpret information)	2	3	2	14
3.	Application – (Use abstract information in concrete situation, to apply knowledge to new situations: Use given content to interpret a situation, provide an example, or solve a problem)	0	2	1	07
4.	High Order Thinking Skills – (Analysis and Synthesis – Classify, compare, contrast, or differentiate between different pieces of information; Organize and/ or integrate unique pieces of information from a variety of sources)	0	2	0	04
5.	Evaluation – (Appraise, judge, and/or justify the value or worth of a decision or outcome, or to predict outcomes based on values)	0	1	0	02
	Total	5 x 1=5	10 x 2=20	5 x 3=15	40 (20 questions)

SKILL ASSESSMENT (PRACTICAL)

Assessment of skills by the students should be done by the assessors/examiners on the basis of practical demonstration of skills by the candidate, using a competency checklist. The competency checklist should be developed as per the National Occupation Standards (NOSs) given in the Qualification Pack for the Job Role to bring about necessary consistency in the quality of assessment across different sectors and Institutions. The student has to demonstrate competency against the performance criteria defined in the National Occupation Standards and the assessment will indicate that they are 'competent', or are 'not yet competent'. The assessors assessing the skills of the students should possess a current experience in the industry and should have undergone an effective training in assessment principles and practices. The Sector Skill Councils should ensure that the assessors are provided with the training on the assessment of competencies. Practical examination allows candidates to demonstrate that they have the knowledge and understanding of performing a task. This will include hands-on practical exam and viva voce. For practical, there should be a team of two evaluators – the subject teacher and the expert from the relevant industry certified by the Board or concerned Sector Skill Council. The same team of examiners will conduct the viva voce.

Project Work (individual or group project) is a great way to assess the practical skills on a certain time period or timeline. Project work should be given on the basis of the capability of the individual to perform the tasks or activities involved in the project. Projects should be discussed in the class and the teacher should periodically monitor the progress of the project and provide feedback for improvement and innovation. Field visits should be organized as part of the project work. Field visits can be followed by a small-group work/project work. When the class returns from the field visit, each group might be asked to use the information that they have gathered to prepare presentations or

reports of their observations. Project work should be assessed on the basis of practical file or student portfolio.

Student Portfolio is a compilation of documents that supports the candidate's claim of competence. Documents may include reports, articles, photos of products prepared by students in relation to the unit of competency.

Viva voce allows candidates to demonstrate communication skills and content knowledge. Audio or video recording can be done at the time of viva voce. The number of external examiners would be decided as per the existing norms of the Board and these norms should be suitably adopted/adapted as per the specific requirements of the vocational subject. Viva voce should also be conducted to obtain feedback on the student's experiences and learning during the project work/field visits. Upon successful completion of the course by the candidate, the Central/ State Examination Board for Secondary Education and the respective Sector Skill Council will certify the competencies.

5. UNIT CONTENTS

CLASS 11

Part A: Employability Skills

S.No.	Units	Duration (Hrs)
1.	Communication Skills – III	25
2.	Self-management Skills – III	25
3.	Information and Communication Technology Skills – III	20
4.	Entrepreneurial Skills – III	25
5.	Green Skills – III	15
	Total	110

Unit 1: Communication Skill – III			
Learning Outcome	Theory (10 hrs)	Practical (15 hrs)	Duration (25 Hrs)
1. Demonstrate knowledge of various methods of communication	1. Methods of communication <ul style="list-style-type: none"> • Verbal • Non-verbal • Visual 	1. Writing pros and cons of written, verbal and non-verbal communication 2. Listing do's and don'ts for avoiding common body language mistakes	05
2. Identify specific communication styles	1. Communication styles- <ul style="list-style-type: none"> • Assertive • Agressive • Passive-aggressive • Submissive, etc. 	1. Observing and sharing communication styles of friends, teachers and family members and adapting the best practices 2. Role plays on communication styles.	10
3. Demonstrate basic writing skills	1. Writing skills to the following: <ul style="list-style-type: none"> • Sentence • Phrase • Kinds of Sentences • Parts of Sentence • Parts of Speech • Articles • Construction of a Paragraph 	1. Demonstration and practice of writing sentences and paragraphs on topics related to the subject	10
Total			25

Unit 2: Self-Management – III			
Learning Outcome	Theory (10 hrs)	Practical (15 hrs)	Duration (25 Hrs)
1. Demonstrate impressive appearance and grooming	1. Describe the importance of dressing appropriately, looking decent and positive body language 2. Describe the term grooming 3. Prepare a personal grooming checklist 4. Describe the techniques of self- exploration	1. Demonstration of impressive appearance and groomed personality 2. Demonstration of the ability to self- explore	10
2. Demonstrate team work skills	1. Describe the important factors that influence in team building 2. Describe factors influencing team work	1. Group discussion on qualities of a good team 2. Group discussion on strategies that are adopted for team	10

		building and team work	
3. Apply time management strategies and techniques	1. Meaning and importance of time management – setting and prioritizing goals, creating a schedule, making lists of tasks, balancing work and leisure, using different optimization tools to break large tasks into smaller tasks.	1. Game on time management 2. Checklist preparation 3. To-do-list preparation	05
Total			25

Unit 3: Information and Communication Technology - III			
Learning Outcome	Theory (08 hrs)	Practical (12 hrs)	Duration (20 Hrs)
1. Create a document on word processor	<ol style="list-style-type: none"> 1. Introduction to word processing. 2. Software packages for word processing. 3. Opening and exiting the word processor. 4. Creating a document 	1. Demonstration and practice of the following: <ul style="list-style-type: none"> • Listing the features of word processing • Listing the software packages for word processing • Opening and exit the word processor • Creating a document 	10
2. Edit, save and print a document in word processor	<ol style="list-style-type: none"> 1. Editing text 2. Wrapping and aligning the text 3. Font size, type and face 4. Header and Footer 5. Auto correct 6. Numbering and bullet 7. Creating table 8. Find and replace 9. Page numbering 10. Printing document 11. Saving a document in various formats 	1. Demonstration and practising the following: <ul style="list-style-type: none"> • Editing the text • Word wrapping and alignment • Changing font type, size and face • Inserting header and footer • Removing header and footer 	10

		<ul style="list-style-type: none"> • Using autocorrect option • Insert page numbers and bullet • Save and print a document 	
Total			20

Unit 4: Entrepreneurial Skills – III			
Learning Outcome	Theory (10 hrs)	Practical (15 hrs)	Duration (25 Hrs)
1. Describe the significance of entrepreneurial values and attitude	<ol style="list-style-type: none"> 1. Values in general and entrepreneurial values 2. Entrepreneurial value orientation with respect to innovativeness, independence, outstanding performance and respect for work 	<ol style="list-style-type: none"> 1. Listing of entrepreneurial values by the students. 2. Group work on identification of entrepreneurial values and their roles after listing or reading 2-3 stories of successful entrepreneur 3. Exhibiting entrepreneurial values in Ice breaking, rapport building, group work and home assignments 	10
2. Demonstrate the knowledge of attitudinal changes required to become an entrepreneur	<ol style="list-style-type: none"> 1. Attitudes in general and entrepreneurial attitudes 2. Using imagination/ intuition 3. Tendency to take moderate risk 4. Enjoying freedom of expression and action 5. Looking for economic opportunities 6. Believing that we can change the environment 7. Analysing situation and planning action 8. Involving in activity 	<ol style="list-style-type: none"> 1. Preparing a list of factors that influence attitude in general and entrepreneurial attitude 2. Demonstrating and identifying own entrepreneurial attitudes during the following micro lab activities like thematic appreciation test 3. Preparing a short write-up on "who am I" 	15

		4. Take up a product and suggest how its features can be improved 5. Group activity for suggesting brand names, names of enterprises, etc.	
Total			25

Unit 5: Green Skills – III			
Learning Outcome	Theory (07 hrs)	Practical (08 hrs)	Duration (15 Hrs)
1. Describe importance of main sector of green economy	1. Main sectors of green economy- E-waste management, green transportation, renewal energy, green construction, water management 2. Policy initiatives for greening economy in India	1. Preparing a poster on any one of the sectors of green economy 2. Writing a two-page essay on important initiatives taken in India for promoting green economy	08
2. Describe the major green Sectors/Areas and the role of various stakeholder in green economy	1. Stakeholders in green economy 2. Role of government and private agencies in greening cities, buildings, tourism, industry, transport, renewable energy, waste management, agriculture, water, forests and fisheries	1. Preparing posters on green Sectors/Areas: cities, buildings, tourism, industry, transport, renewable energy, waste management, agriculture, water, forests and fisheries	07
Total			15

Part B–Vocational Skills

S.No.	Units	Duration (hrs)
1.	Accommodation for Poultry Birds	45
2.	Handling Poultry Birds in Shed	40
3.	Feeding Poultry Birds	40
4.	Maintaining Health and Hygiene at Poultry Farm	40
	Total	165

Unit 1: Accommodation for Poultry Birds			
Learning Outcome	Theory (30 hrs)	Practical (15 hrs)	Duration (45 hrs)
1. Describe the opportunities in the poultry industry and the roles and functions of a Small Poultry Farmer	<ol style="list-style-type: none"> History of poultry farming Opportunities and scope in poultry industry Roles and functions of a Small Poultry Farmer 	<ol style="list-style-type: none"> Identification of opportunities in poultry industry Enlist the roles and functions of a small poultry farmer 	05
2. Describe the layout of a poultry farm and the characteristics of a good poultry housing system	<ol style="list-style-type: none"> Types of poultry housing systems - Free range or extensive system, Semi-intensive system, Intensive system (deep litter, slatted floor, slat-cum-litter, cage) Characteristics of a good poultry housing system – controlled access, comfortable flooring/bedding for birds, easy to clean, good lighting and ventilation system, effective waste, easy egg collection, facility for water, access to electricity and road, easy supply of chicks and feed, access to veterinary aid and nearness to market for sale of birds and eggs. Design and layout of a small poultry farm Lighting in poultry farm – importance of lighting in growing period and egg production Tools, equipment and materials required for the maintenance of birds 	<ol style="list-style-type: none"> Visit to poultry farm for studying the characteristics of a good poultry farm, including the following: <ul style="list-style-type: none"> Dimension of sheds Number of birds and work out space per bird Materials used for construction of poultry sheds. Facilities provided for rearing of birds Tools and equipment used at poultry farm 	10

<p>3. Describe the practices adopted for maintaining cleanliness and hygiene in poultry shed</p>	<ol style="list-style-type: none"> 1. Routine cleaning, including sanitization and fumigation of poultry farm, tools and equipment, etc. 2. Importance of temperature, relative humidity and ventilation in maintaining health and hygiene 3. Use of the personal protective equipment/ items while handling poultry birds. 	<ol style="list-style-type: none"> 1. Enlist common disinfectants, water sanitizer and chemicals used for sanitation and fumigation. 2. Use of Personal Protective Equipment (PPE) 3. Study of procedure for cleaning and sanitizing poultry farm. 	<p>15</p>
<p>4. Explain the procedure for disposal of poultry waste</p>	<ol style="list-style-type: none"> 1. Safety and cleanliness of the birds 2. Disinfection of the brooders and other poultry houses and equipment, its incorporation in the working methods and systems to promote health of the birds. 3. Methods of waste disposal in deep litter system and cage system. 4. Sanitation and hygiene of poultry house, equipment, vehicles and visitors for disease prevention and spread. 5. Monitoring of the poultry birds for optimum growth and livability. 6. Special management and care of birds during extreme climatic conditions. 	<ol style="list-style-type: none"> 1. Visit of Poultry farms to enlist important micro-environmental factors and methodology used to construct such houses to meet requirements. 2. Identify and enlist potential hazards and factors responsible for these hazards. 3. Describe the waste disposal methods used in the farm 	<p>15</p>
<p>Total</p>			<p>45</p>

Unit 2: Handling Poultry Birds in Shed			
Learning Outcome	Theory (25 hrs)	Practical (15 hrs)	Duration (40 hrs)
1. Describe the handling and monitoring of poultry birds in shed	<ol style="list-style-type: none"> 1. Preparations for placement of newly hatched chicks 2. Handling and good management practices for birds to minimize stress and for improved health and hygiene. 	<ol style="list-style-type: none"> 1. Handling of birds for different purposes viz., wing banding, de-breaking, debugging, vaccination, sexing, shifting, transportation, etc. 2. Differentiate behavior of birds during normal and stress conditions. 	20
2 Describe the procedures of biosecurity for maintaining and health and hygiene of poultry birds	<ol style="list-style-type: none"> 1. Meaning of biosecurity 2. Impact of diseases and pests on poultry production and management 3. Monitoring of birds to ensure their health and hygiene 4. Prevention and spread of diseases 5. Remedial measures to protect the birds from stress and diseases. 	<ol style="list-style-type: none"> 1. Study of management practices to be followed during extreme summer and winter 2. Steps to prevent disease outbreak 3. Study of litter management practices 	20
Total			40

Unit 3: Feeding Poultry Birds			
Learning Outcome	Theory (20 hrs)	Practical (20 hrs)	Duration (40 hrs)
1. Describe the forms of feed, supplements and additives used for feeding poultry birds	<ol style="list-style-type: none"> 1. Breeds of poultry birds 2. Role of nutrients, feed ingredients, supplements and additives in poultry ration 3. Forms of feed – mash, pellet, crumbles 4. Feed ingredients used for poultry – carbohydrates, fats, proteins, vitamins, minerals, etc. 5. Basic nutritional requirements, feeding and drinking behaviour of birds. 	<ol style="list-style-type: none"> 1. Visit to a poultry feed mill to identify the feed ingredients, storage of feed ingredients and preparation of compounded feeds. 2. Enlist different energy and protein rich feed ingredients 	10

2. Describe the procedure for procurement and quality assurance for poultry feed	<ol style="list-style-type: none"> 1. Ingredients used for feed production 2. Procurement and storage of feed ingredient and feed. 3. Adulterants and toxic substances in feed 4. Quality and process control for production of poultry feed. 5. Consequences of improper storage of feed. 6. Preparation of feed inventory and checking of stock level on a regular basis. 	Visit to feed mill to study the ingredients used for feed production, vitamins and mineral supplements, machinery, procedure of feed production and quality assurance procedure	10
3. Describe the various types of ration and their formulation for feeding poultry birds	<ol style="list-style-type: none"> 1. Types of poultry ration - broiler breeder grower ration, broiler breeder ration, broiler breeder starter ration, broiler finisher ration, broiler grower ration, broiler ration, and broiler starter ration 2. Computation of ration for different age and growth stage of poultry birds. 3. Methods for feed processing and compounding. 	Study of ingredients, types of poultry ration and steps in computation of ration.	10
4. Feed and water supply management	<ol style="list-style-type: none"> 1. Minimum feeding space requirements 2. Minimum water space requirements 3. Placement of feeding troughs and feeders 4. Placement of waterers and their cleanliness 5. Feed consumption rates for layers and broilers 6. Water consumption rates for layers and broilers 	Visit to poultry farm to study the feeding and watering equipment, spacing of equipment and procedure adopted for correct feeding	10
Total		40	

Unit 4: Maintaining Health and Hygiene at Poultry Farm			
Learning Outcome	Theory (30 hrs)	Practical (10 hrs)	Duration (40 Hrs)
1. Describe the common poultry diseases and their management	<ol style="list-style-type: none"> 1. Meaning of disease and the factors influencing occurrence of disease 2. Factors influencing spread of diseases 3. Principles of health management – prevention of disease, early recognition or detection of disease, and early treatment of disease. 4. Common poultry diseases – Avian Influenza, Exotic New Castle Disease, Fowl Pox, Infectious Bronchitis, etc. 5. Difference between healthy and sick poultry birds 6. Bio-security measures at poultry farms. 7. Beak trimming 	Visit to a poultry farm, note down the possible sources of contamination and enlist various bio-security measures taken at the farm.	20
2. Describe the various types of vaccines and vaccination schedule for poultry birds	<ol style="list-style-type: none"> 1. Types of vaccines - live, attenuated and killed 2. Handling and storage of vaccines on the poultry farm 3. Vaccination schedule for poultry birds 4. Vaccination procedures – in-vovo vaccination, intramuscular, subcutaneous injection, ocular, oral, vaccination through drinking water, etc. 	<ol style="list-style-type: none"> 1. Visit to a poultry farm to study the vaccination schedule followed at the farm for different diseases. 2. Storage of vaccines, medicines and precautions during their handling and administration. 3. Check for presence of external parasites in the birds and remedial measures taken at the farm. 	10

3. Describe the factors affecting nutrient requirements and nutrition deficiency in poultry birds	<ol style="list-style-type: none"> 1. Factors affecting nutrient requirements in poultry birds – genetics, age, sex, reproductive state, temperature, poultry production aim, etc. 2. Nutrient requirements for egg laying chickens and broilers 3. Nutrition deficiency and metabolic diseases and prevention. 	Prepare the chart of nutrition deficiency and metabolic diseases	10
Total			40

CLASS 12

Part A: Employability Skills

S.No.	Units	Duration (Hrs)
1.	Communication Skills- IV	25
2.	Self-management Skills - IV	25
3.	Information and Communication Technology Skills - IV	20
4.	Entrepreneurial Skills - IV	25
5.	Green Skills - IV	15
	Total	110

Unit 1: Communication Skills - IV			
Learning Outcome	Theory (10 hrs)	Practical (15 hrs)	Duration (25 hrs)
1. Describe the steps to active listening skills	<ol style="list-style-type: none"> 1. Importance of active listening at workplace 2. Steps to active listening 	<ol style="list-style-type: none"> 1. Demonstration of the key aspects of becoming active listener 2. Preparing posters of steps for active listening 	10
2. Demonstrate basic writing skills	<ol style="list-style-type: none"> 2. Writing skills to the following: <ul style="list-style-type: none"> • Sentence • Phrase • Kinds of Sentences • Parts of Sentence • Parts of Speech • Articles • Construction of a Paragraph 	<ol style="list-style-type: none"> 1. Demonstration and practice of writing sentences and paragraphs on topics related to the subject 	15
Total			25

Unit 2: Self-Management Skills – IV			
Learning Outcome	Theory (10 hrs)	Practical (15 hrs)	Duration (25 Hrs)
1. Describe the various factors influencing self-motivation	<ol style="list-style-type: none"> 1. Finding and listing motives (needs and desires); 2. Finding sources of motivation and inspiration (music, books, activities); expansive thoughts; living fully in the present moment; dreaming big 	<ol style="list-style-type: none"> 1. Group discussion on identifying needs and desire 2. Discussion on sources of motivation and inspiration 	10
2. Describe the basic personality traits, types and disorders	<ol style="list-style-type: none"> 1. Describe the meaning of personality 2. Describe how personality influence others 3. Describe basic personality traits 4. Describe common personality disorders- paranoid, antisocial, schizoid, borderline, narcissistic, avoidant, dependent and obsessive 	<ol style="list-style-type: none"> 1. Demonstrate the knowledge of different personality types 	15
Total			25

Unit 3: Information and Communication Technology Skills - IV			
Learning Outcome	Theory (06 hrs)	Practical (14 hrs)	Duration (20 Hrs)
1. Perform tabulation using spreadsheet application	<ol style="list-style-type: none"> 1. Introduction to spreadsheet application 2. Spreadsheet applications 3. Creating a new worksheet 4. Opening workbook and entering text 5. Resizing fonts and styles 6. Copying and moving 7. Filter and sorting 8. Formulas and functions 	<ol style="list-style-type: none"> 1. Demonstration and practice on the following: <ul style="list-style-type: none"> • Introduction to the spreadsheet application • Listing the spreadsheet applications • Creating a new worksheet • Opening the workbook and enter text • Resizing fonts and styles 	10

	<p>9. Password protection.</p> <p>10. Printing a spreadsheet.</p> <p>11. Saving a spreadsheet in various formats.</p>	<ul style="list-style-type: none"> • Copying and move the cell data • Sorting and Filter the data • Applying elementary formulas and functions • Protecting the spreadsheet with password • Printing a spreadsheet • Saving the spreadsheet in various formats 	
2. Prepare presentation using presentation application	<p>1. Introduction to presentation</p> <p>2. Software packages for presentation</p> <p>3. Creating a new presentation</p> <p>4. Adding a slide</p> <p>5. Deleting a slide</p> <p>6. Entering and editing text</p> <p>7. Formatting text</p> <p>8. Inserting clipart and images</p> <p>9. Slide layout</p> <p>10. Saving a presentation</p> <p>11. Printing a presentation document.</p>	<p>1. Demonstration and practice on the following:</p> <ul style="list-style-type: none"> • Listing the software packages for presentation • Explaining the features of presentation • Creating a new presentation • Adding a slide to presentation. • Deleting a slide • Entering and edit text • Formatting text • Inserting clipart and images • Sliding layout • Saving a presentation • Printing a presentation document 	10
Total			20

Unit 4: Entrepreneurial Skills - IV

Learning Outcome	Theory (10 hrs)	Practical (15 hrs)	Duration (25 Hrs)
1. Identify the general and entrepreneurial behavioural competencies	<p>1. Barriers to becoming entrepreneur</p> <p>2. Behavioural and entrepreneurial competencies – adaptability/decisiveness, initiative/perseverance, interpersonal skills, organizational skills, stress management,</p>	<p>1. Administering self- rating questionnaire and score responses on each of the competencies</p> <p>2. Collect small story/ anecdote of prominent successful entrepreneurs</p> <p>3. Identify entrepreneurial competencies reflected in each story and connect it to the</p>	

	valuing service and diversity	definition of behavioural competencies 4. Preparation of competencies profile of students	10
2. Demonstrate the knowledge of self-assessment of behavioural competencies	1. Entrepreneurial competencies in particular: self-confidence, initiative, seeing and acting on opportunities, concern for quality, goal setting and risk taking, problem solving and creativity, systematic planning and efficiency, information seeking, persistence, influencing and negotiating, team building	1. Games and exercises on changing entrepreneurial behaviour and development of competencies for enhancing self-confidence, problem solving, goal setting, information seeking, team building and creativity	15
Total			25

Unit 5: Green Skills - IV

Learning Outcome	Theory (05 hrs)	Practical (10 hrs)	Duration (15 Hrs)
1. Identify the role and importance of green jobs in different sectors	1. Role of green jobs in toxin-free homes, 2. Green organic gardening, public transport and energy conservation, 3. Green jobs in water conservation 4. Green jobs in solar and wind power, waste reduction, reuse and recycling of wastes, 5. Green jobs in green tourism 6. Green jobs in building and construction 7. Green jobs in appropriate technology 8. Role of green jobs in Improving energy and raw materials use	1. Listing of green jobs and preparation of posters on green job profiles 2. Prepare posters on green jobs.	15

	<p>9. Role of green jobs in limiting greenhouse gas emissions</p> <p>10. Role of green jobs minimizing waste and pollution</p> <p>11. Role of green jobs in protecting and restoring ecosystems</p> <p>12. Role of green jobs in support adaptation to the effects of climate change</p>		
Total			15

Part B–Vocational Skills

S.No.	Units	Duration (Hrs)
1.	Collection, Cleaning and Packaging of Eggs	40
2.	Cleaning and Disinfecting Poultry Farm	30
3.	Documentation and Recordkeeping	30
4.	Setting Up a Small Poultry Farm	65
	Total	165

Unit 1: Collection, Cleaning and Packaging of Eggs			
Learning Outcome	Theory (20 hrs)	Practical (20 hrs)	Duration (40 hrs)
1. Describe arrangements and activities for egg collection, storage, cleaning, packaging and transportation	<p>1. Laying of eggs by Layers – factors affecting egg production, etc.</p> <p>2. Arrangements for safely and timely, collection (hand or automated system), cleaning and washing (manual or automated) and packaging of eggs (manual and automated)</p> <p>3. Arrangements for transportation of eggs.</p> <p>4. Use of Personal Protective Equipment - gloves, hairnets,</p>	<p>1. Visit to a farm to study the facilities for collection and storage of eggs at the farm and the precautions during collection, handling, transport and storage of eggs.</p> <p>2. Discussion on precautions to be taken for inspection of birds prior to egg collection</p>	15

	masks, goggles, etc.		
2. Describe the parameters for judging the quality of eggs	<ol style="list-style-type: none"> 1. Parts of an egg 2. Quality of eggs – interior and exterior 3. Determining interior quality of eggs through candling - egg grades are AA, A, B, and Inedible 4. Exterior quality – egg grades are A (clean), B (slight stains) and dirty (moderate to excess stains) 5. Grading based on egg shape, shell texture and thickness, body checks, etc. 6. Egg grading equipment 	Visit to a poultry farm to study the process of candling and quality determination of eggs	15
3. Describe the procedure for cleaning, packaging and transportation of eggs	<ol style="list-style-type: none"> 1. Cleaning of eggs – wet and dry cleaning methods 2. Washing of eggs 3. Packaging materials used for packing eggs – plastic and cardboard fillers 4. Health risks associated with different types of egg fillers 5. Transportation of eggs 	Visit to a poultry farm to study the process of cleaning, washing, packaging and transportation of eggs	10
Total			40

Unit 2: Cleaning and Disinfecting Poultry Farm			
Learning Outcome	Theory (20 hrs)	Practical (10 hrs)	Duration (30 Hrs)
1. Maintain cleanliness in poultry sheds	<ol style="list-style-type: none"> 1. Tools/equipment required for the cleaning processes. 2. Cleaning the poultry sheds, including the following: <ul style="list-style-type: none"> • Removal of bedding material, dust and spider webs • Brushing of floor • Scrubbing of feed pans, fan blades and other equipment • Cleaning of water lines and disposal water after cleaning • Checking and blocking of rodent stations 	Visit to a poultry farm to study the tools, equipment and materials required for cleaning and disinfecting poultry sheds	15
2. Describe the process of disinfection of poultry sheds and bio-security measures to minimize risk of pests and diseases	<ol style="list-style-type: none"> 1. Equipment and materials used for disinfection 2. Disinfectants and method of disinfection to minimize the risk of diseases, such as bird flu through human contact. 3. Minimization of risk of diseases through bio-security measures, such as: 4. Signage for bio-security 5. Use of Personal Protective Equipment (PPE) 6. Foot washing baths at the entrance of sheds 7. Minimizing and scheduling vehicle 	Visit to the poultry farm to study the procedure of disinfection of poultry sheds and biosecurity measures used there.	15

	<p>movements and disinfection of tyres and equipment</p> <p>8. Sanitizing waterers to prevent contamination.</p> <p>9. Pest and rodents control programs</p>		
Total			30

Unit 3: Documentation and Record Keeping			
Learning Outcome	Theory (20 hrs)	Practical (10 hrs)	Duration (30 hrs)
1. Describe various types of documents and records to be maintained in poultry farming	<p>1. Importance and need of documentation and maintenance of records</p> <p>2. Importance of various types of farm registers and records—attendance register, equipment register, feed additives and medicine register, petty items and miscellaneous purchase register, layer farm register, broiler farm register, health and medical records, financial records, production records, sales record, etc.</p>	Discussion on the importance of the various types of registers and records maintained in a poultry farm	10
2. Describe the various aspects of maintaining health and medical record	1. Health and medical record, including bird mortalities, disease outbreaks, treatment dates, symptoms, vaccination records, medicines used, logbook of visitors to the farm, etc.	Discussion on the importance of health and medical records maintained in a poultry farm	05
3. Describe the various aspects of maintaining production record	1. Production records, including the number and breeds of birds started, type of feed,	Discussion on the importance of production record maintained in a poultry farm	05

	growth (body weight) over a period of time, egg production, feed consumption, water use, average rate of egg production, dressed weight of all broilers, and feed conversions.		
4. Describe the various aspects of maintaining financial record	<ol style="list-style-type: none"> 1. Financial records, including purchases or expenditure made on various items, such as birds, feed, supplements, equipment, electricity, bedding, medications, tools, labor, disinfectants, etc. 2. Sales records, such as sale of eggs and meat, etc. 3. Expenditure and income record 	Discussion on the importance of financial and sales record maintained in a poultry farm	10
Total			30

Unit 4: Setting Up a Small Poultry Farm

Learning Outcome	Theory (40 hrs)	Practical (25 hrs)	Duration (65 hrs)
1. Describe the types and benefits of poultry farms	<ol style="list-style-type: none"> 1. Types of poultry farms – chicken farms (layers and broilers), duck farm, emu farm, guinea fowl farm, duck farm, turkey farm, etc. 2. Small scale broiler farm for meat production 3. Small scale layer farm for egg production 4. Benefits of poultry farm 	Visit to various poultry farms to study the difference between the scale of production and size of the farm	10
2. Choose the poultry sector and type of bird	<ol style="list-style-type: none"> 1. Choosing the poultry sector - meat production (broilers breeding) or egg production (layers breeding) 2. Selection of bird – breeds and market demand 	Discussion on the selection of the poultry sector, market demand, breeds of poultry birds,	10

<p>3. Describe the various aspects of a well-constructed poultry house and arrangement of poultry birds, equipment and materials</p>	<ol style="list-style-type: none"> 1. Design and layout of a small scale poultry farm 2. Materials required for construction of poultry sheds for small scale poultry production 3. Materials required for setting up small scale poultry farm, including the following <ol style="list-style-type: none"> 10. Feeders 11. Waterers 12. Nests 13. Cages 14. Coops 15. Crates 16. Incubator 17. Egg tray 18. Lighting instruments 19. Perches 20. Brooders or heaters 21. Ventilation system 22. Waste disposal system 	<p>Visit to a poultry farm to study the design, construction and materials of a poultry farm</p>	<p>15</p>
<p>4. Describe the procedure for resource generation and management of poultry for profit</p>	<ol style="list-style-type: none"> 1. Determination of flock size and space requirements 2. Preparing a business plan 3. Financial and human resources and management – Bank loan for setting up small poultry farms 4. Economics of poultry farming 5. Marketing of poultry farm produce – 3 Ps 6. Profit and Loss 	<ol style="list-style-type: none"> 1. Discussion on the determination of flock size and the various aspects of a business plan 2. Preparation of a business plan for setting up a small scale poultry farm 	<p>20</p>
<p>5. Describe the various acts and regulations and organisations related to poultry</p>	<ol style="list-style-type: none"> 1. The Prevention & Control of Infectious and Contagious Disease in Animals Act, 2009 2. Food Safety & Standards Act, 2006 3. Bureau of Indian Standards (BIS) & ISO 22000:2005 4. The Prevention of Cruelty to Animals Act, 1960 	<ol style="list-style-type: none"> 1. Discussion on the acts and regulations governing poultry production and marketing of eggs and meat. 2. Visit to organisations dealing with poultry promotion and development 	<p>10</p>

	5. Organisations involved in poultry development – National Poultry Development Board, Poultry federation of India, National Egg Coordination Committee, Agriculture Council of India, Central Poultry Development Organisations, National Smallholder Poultry Development Trust.	
Total		65

6. ORGANISATION OF FIELD VISITS

In a year, at least 03 visits to a nearby Poultry farms should be organized for the students to expose them to the various routine activities undertaken at the farm. During the visit, students observe and obtain the following information from the owner or the supervisor of the Poultry:

1. Design and layout of poultry farm
2. Type of poultry housing system
3. Activities involved in the rearing of poultry birds.
4. Identification of various disinfectants, sanitizers and fumigation materials for cleaning and disinfection of the tools/ equipment and shed
5. Maintenance of comfortable environment for chicks- light, ventilation, temperature, etc.
6. Tools, equipment and materials used in poultry production
7. Monitoring of poultry birds and regular cleaning of the shed, floor and water containers.
8. Feed compositions for the poultry birds and feed preparation with appropriate mixture of feed and supplements.
9. Birds infested with external parasites and how parasites are controlled.
10. Different types of vaccines for different diseases.
11. Recording and maintenance of registers and records
12. Collection, cleaning, washing, storage and packaging of eggs
13. Bio-security measures undertaken
14. Handling emergency situation in workplace and during any farm operation.
15. Marketing of eggs and poultry birds.

7. LIST OF EQUIPMENT AND MATERIALS

The list given below is suggestive and an exhaustive list should be prepared by the vocational teacher. Only basic tools, equipment and accessories should be procured by the schools so that the routine tasks can be performed by the students regularly for practice and acquiring adequate practical experience. The suggestive list of tools, equipment and materials are as follows:

Automatic Vaccinator	Beak Trimmer	Bell Type Automatic Waterer
Chick box	Circular Feeder	Drugs/Medicines
Egg candler	Egg Packing Machine	Egg Washer
Feed	Hatching egg trays	Incubator
Laying Boxes	Linear Feeder	Linear Waterer/Channel Type Waterer
Manual Drinker	Nest Boxes	Nipple Drinker
Pan and Jar Type Waterer	Rake	Reflectors/ Hovers
Spade	Sprayer	Water basins (plastic/wood/GI with Grill)
Weighing Balances		

8. VOCATIONAL TEACHER'S/ TRAINER'S QUALIFICATION AND GUIDELINES

Qualification and other requirements for appointment of vocational teachers/ trainers on contractual basis should be decided by the State/UT. The suggestive qualifications and minimum competencies for the vocational teacher should be as follows:

Qualification	Minimum Competencies	Age Limit
Bachelors in Veterinary Science <u>OR</u> Post-graduation in agriculture/ life science with specialization in Poultry Science/ Livestock Production Management/Animal Genetics & Breeding/ from a recognized Institute/University, with at least two years' work experience.	<ul style="list-style-type: none"> • Effective communication skills (oral and written) • Basic computing skills 	18-37 years (as on Jan. 01 (year)) Age relaxation to be provided as per Govt. rules

9. LIST OF CONTRIBUTORS

1. **Dr. Asitbaran Mandal**
Ex-Director
Central Avian Research Institute (CARI), Izatnagar, Bareilly, Uttar Pradesh
2. **Dr. Sanjeev Kumar**
Principal Scientist
Central Avian Research Institute (CARI), Izatnagar, Bareilly, Uttar Pradesh
3. **Dr. Ajit Singh Yadav**
Principal Scientist
Central Avian Research Institute (CARI), Izatnagar, Bareilly, Uttar Pradesh
4. **Dr. Subrat Kumar Bhanja**
Principal Scientist
Central Avian Research Institute (CARI), Izatnagar, Bareilly, Uttar Pradesh
5. **Dr. Vinay Swarup Mehrotra**
Professor & Head, Department of Agriculture and Animal Husbandry,
PSS Central Institute of Vocational Education, Shyamla Hills, Bhopal – 462 103
6. **Dr. Kuldeep Singh**
Associate Professor
Department of Agriculture and Animal Husbandry, PSS Central Institute of
Vocational Education (PSSCIVE), Bhopal.
7. **Dr. Richa Tiwari**
Consultant (Contractual)
Department of Agriculture and Animal Husbandry, PSS Central Institute of
Vocational Education (PSSCIVE), Bhopal.



PSS CENTRAL INSTITUTE OF VOCATIONAL EDUCATION

(a constituent unit of NCERT, under MHRD, Government of India)

Shyamla Hills, Bhopal- 462 013, M.P., India

<http://www.psscive.ac.in>