

LEARNING OUTCOMES BASED VOCATIONAL CURRICULUM

JOB ROLE: ANIMAL HEALTH WORKER

(Ref. Id.AGR/Q4804)

Classes 9 and 10



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. Gandhi

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Animal Health Worker

April, 2020

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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), Govt. 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 Animal Health Worker (AGR/Q4804). 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 fulfill 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 that aims 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. For spearheading the scheme, the PSS Central Institute of Vocational Education (PSSCIVE) was entrusted the responsibility to develop competency based curricula, 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 need 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 fulfill 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 curricula 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, and 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 competency based modular curricula 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, 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 amendments made in the curriculum document.

The PSSCIVE, Bhopal remains committed in bringing about reforms in the vocational education 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.

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

Bhopal
April 2020

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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 for Education, Research and 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 in the development of curricula.

We are grateful to contributors and reviewers for their earnest effort and contributions in the development of this learning outcome based curriculum. Their names are acknowledged in the list of contributors and reviewers.

We are also grateful to Dr. Kuldeep Singh, Course Coordinator, Department of Agriculture and Animal Husbandry, PSSCIVE, Bhopal for his contributions.

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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PSSCIVE Team

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1. COURSE OVERVIEW

COURSE TITLE: ANIMAL HEALTH WORKER

An Animal Health Worker also known as Community Animal Health Worker / Community Resource Person (Veterinary) or Livestock Service Provider is a person selected from his/her own community to provide a set of "Minor Veterinary services" required for a given job role as per the provision of Indian Veterinary Council Act (No. 52 of 1984). He / she works under indirect or distant supervision of registered veterinarian, under over-all monitoring of any registered development / private / producer led agency.

An Animal Health Worker provides preventive health care, assistance in contagious disease control and basic first aid services to farm animal and poultry, mostly in the outdoor setting. He / she also play a role in veterinary extension, disaster management and other environmental, public health related services.

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

- Provide preventive care to animals as per guideline of veterinarian: Implement preventive care measures e.g. vaccination, deworming, bio-security, etc.
- Provide basic first aid to animals: Understand symptom of diseases, provide care as directed by veterinarian, cleaning and washing of wound, dressing of wound, apply ointments, first aid.
- Assist public agencies in animal disease control: Create awareness about the disease preventive measures, data collection, disease reporting, and maintaining bio-security provision, prevention of risky practices, culling and disposal of animals.
- Assist in animal husbandry extension: Promotion of best practices and appropriate technologies related to farming e.g. feeding, housing, management, breeding etc.

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

COURSE LEVEL: On completion of this course, a student can take up a higher level course for a job role in dairy management, such as dairy farmer.

COURSE DURATION: 400 hrs

Class 9	:	200 hrs
Class10	:	200 hrs
Total	:	400 hrs

2. SCHEME OF UNITS AND ASSESSMENT

The unit-wise distribution of hours and marks for Class 9 is as follows:

CLASS 9			
Units		No. of Hours for Theory and Practical =200	Max. Marks for Theory and Practical = 100
Part A	Employability Skills		
1.	Communication Skills	20	02
2.	Self-management Skills	10	02
3.	Information and Communication Technology Skills	20	02
4.	Entrepreneurial Skills	15	02
5.	Green Skills	10	02
	Total	75	10
Part B	Vocational Skills		
6.	Restraining of Animals	15	20
7.	Implementation of Preventive Animal Health Care	30	
8.	Veterinary First Aid	30	
9.	Prevention and Control of Infectious and Contagious Diseases	20	
		95	20
Part C	Practical Work		
	Practical Examination	06	15
	Written Test	01	10
	Viva Voce	03	10
		10	35
Part D	Project Work/Field Visit		
	Practical File/Student Portfolio	10	10
	Viva Voce	05	05
		15	15
Part E	Continuous and Comprehensive Evaluation (CCE)		
		5	20
	Total	200	100

The unit-wise distribution of hours and marks for Class 10 is as follows:

CLASS 10			
Units		No. of Hours for Theory and Practical =200	Max. Marks for Theory and Practical = 100
Part A	Employability Skills		
1.	Communication Skills	20	02
2.	Self-management Skills	10	02
3.	Information and Communication Technology Skills	20	02
4.	Entrepreneurial Skills	15	02
5.	Green Skills	10	02
		75	10
Part B	Vocational Skills		
6.	Assisting in Veterinary Extension Services	15	20
7.	Development Program Implementation and Marketing in Livestock Sector	20	
8.	Assisting in Animal Welfare, Breed Conservation and Disaster Management	25	
9.	Implementation of Animal Breeding Services in Small Farm Animals	35	
		95	20
Part C	Practical Work		
	Practical Examination	06	15
	Written Test	01	10
	Viva Voce	03	10
		10	35
Part D	Project Work/Field Visit		
	Practical File/Student Portfolio	10	10
	Viva Voce	05	05
		15	15
Part E	Continuous and Comprehensive Evaluation (CCE)		
		5	20
	Total	200	100

Assessment will include two components: one comprising of internal assessment and second component is external examination including theory and practical examinations to be conducted by the Board.

WRITTEN TEST:

It allows candidates to demonstrate that they have the knowledge and understanding of a given topic. Question paper for the vocational subject may 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 recommended by the respective Sector Skill Council. The Central/State Examination Board will use the services of the relevant experts for setting up the question papers and conducting the examinations.

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

Duration: 3 hrs;

Max. Mark: 30

	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)	2	1	2	10
2.	Understanding – (Comprehension – to be familiar with meaning and to understand conceptually, interpret, compare, contrast, explain, paraphrase, or interpret information)	1	2	2	11
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	1	1	05
4.	High Order Thinking Skills – (Analysis & 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	1	0	02
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	3x1=3	6x2=12	5x3=15	30 (14 questions)

PRACTICAL EXAMINATION

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. **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.

Project Work (individual or group projects) are 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 organised 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, etc. **Viva voce** should also be conducted to obtain feedback on the student's experiences and learning during the project work/field visits.

CONTINUOUS AND COMPREHENSIVE EVALUATION

Continuous and Comprehensive Evaluation (CCE) refers to a system of school-based evaluation of students that covers all aspects of student's development. In this scheme, the term 'continuous' is meant to emphasize that evaluation of identified aspects of students 'growth and development' is a continuous process rather than an event, built into the total teaching-learning process and spread over the entire span of academic session. The second term 'comprehensive' means that the scheme attempts to cover both the scholastic and the co-scholastic aspects of students' growth and development. For details, please refer to the CCE manual of Central Board of Secondary Education (CBSE).

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 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 ten field visits should be conducted in a year

4. CERTIFICATION

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 9

Part A: Employability Skills

S.No.	Units	Duration (Hrs)
1.	Communication Skills – I	20
2.	Self-management Skills – I	10
3.	Information and Communication Technology Skills-I	20
4.	Entrepreneurial Skills – I	15
5.	Green Skills - I	10
Total		75

Unit 1: Communication Skills – I			
Learning Outcome	Theory (08 hrs)	Practical (12 hrs)	Total Duration (20 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 elements of communication cycle	1. Meaning of communication 2. Importance of communication skills 3. Elements of communication cycle– (i) sender, (ii) ideas, (iii) encoding, (iv) communication channel, (v) receiver, (vi) decoding and (vii) feedback	1. Draw a diagram of communication cycle 2. Role plays on communication process related to the sector/job role	05
3. Identify the factors affecting our perspectives in communication	1. Perspectives in communication 2. Factors affecting perspectives in communication <ul style="list-style-type: none"> - Visual perception - Language - Past experience 	1. Group discussion on factors affecting perspectives in communication 2. Sharing of experiences on factors affecting	05

	<ul style="list-style-type: none"> - Prejudices - Feelings - Environment 	<p>perspectives</p> <p>3. Sharing experiences on factors affecting communication at workplace</p>	
4. Demonstrate the knowledge of basic writing skills	<p>1. Writing skills related to the following:</p> <ul style="list-style-type: none"> - Phrases - Kinds of sentences - Parts of sentence - Parts of speech - Use of articles - Construction of a paragraph 	1. Demonstration and practice of writing sentences and paragraphs on topics related to the subject	05
Total			20

Unit 2: Self-management – I			
Learning Outcome	Theory (05 hrs)	Practical (05 hrs)	Total Duration (10 Hrs)
1. Apply stress management techniques	<p>1. Meaning and importance of stress management</p> <p>2. Stress management techniques – physical exercise, yoga, meditation</p> <p>3. Enjoying, going to vacations and holidays with family and friends</p> <p>4. Taking nature walks</p>	<p>1. Exercises on stress management techniques – yoga, meditation, physical exercises</p> <p>2. Preparing a write-up on an essay on experiences during a holiday trip</p>	06
2. Demonstrate the ability to work independently	<p>1. Importance of the ability to work independently</p> <p>2. Describe the types of self-awareness</p> <p>3. Describe the meaning of self-motivation and self-regulation</p>	<p>1. Setting goals</p> <p>2. Planning and finishing tasks in a specific period, with no help or directives</p> <p>3. Demonstration on working independently</p> <p>4. Demonstration on the qualities required for working independently</p>	04
Total			10

Unit 3: Information and Communication Technology Skills – I

Learning Outcome	Theory	Practical	Duration (20 Hrs)
1. Describe the role of Information and Communication Technology (ICT) in day-to-day life and workplace	<ol style="list-style-type: none"> 1. Introduction to ICT 2. Role and importance of ICT in personal life and at workplace 3. ICT in our daily life (examples) 4. ICT tools - Mobile, tab, radio, TV, email, etc. 	<ol style="list-style-type: none"> 1. Discussion on the role and importance of ICT in personal life and at workplace. 2. Preparing posters / collages for showing the role of ICT at workplace 	04
2. Identify components of basic computer system and their functions	<ol style="list-style-type: none"> 1. Computer system - Central Processing Unit (CPU), memory, motherboard, storage devices 2. Hardware and software of a computer system 3. Role and functions of Random Access Memory(RAM) and Read Only Memory(ROM) 4. Role and functions of Central Processing Unit 5. Procedure for starting and shutting down a computer 	<ol style="list-style-type: none"> 1. Connecting the cables and peripherals to the Central Processing Unit 2. Starting and shutting down a computer 3. Group discussion on the various aspects of hardware and software 	07
3. Demonstrate use of various components and peripherals of computer system	<ol style="list-style-type: none"> 1. Peripherals devices and their uses – mouse, keyboard, scanner, webcam, etc. of a computer system 	<ol style="list-style-type: none"> 1. Identification of various parts and peripherals of a computer 2. Demonstration and practice on the use of mouse 3. Demonstration and practice on the use of keyboard 4. Demonstration of the uses of printers, webcams, scanner and other peripheral devices 5. Drawing diagram of computer system and labelling it 	05
4. Demonstrate basic computer skills	<ol style="list-style-type: none"> 1. Primary operations on a computer system – input, process, storage, output, communication networking, etc. 	<ol style="list-style-type: none"> 1. Identification of the various input and output units and explanation of their purposes 	04
Total			20

Unit 4: Entrepreneurial Skills – I			
Learning Outcome	Theory (06 hrs)	Practical (09 hrs)	Total Duration (15 Hrs)
1. Identify various types of business activities	1. Types of businesses – service, manufacturing, hybrid 2. Types of businesses found in our community 3. Business activities around us	1. Prepare posters of business activities found in cities/villages, using pictures 2. Discuss the various types of activities, generally adopted by small businesses in a local community 3. Best out of waste 4. Costing of the product made out of waste 5. Selling of items made from waste materials 6. Prepare list of businesses that provides goods and services in exchange for money	09
2. Demonstrate the knowledge of distinguishing characteristics of entrepreneurship	1. Meaning of entrepreneurship development 2. Distinguishing characteristics of entrepreneurship 4. Role and rewards of entrepreneurship	1. Prepare charts showing advantages of entrepreneurship over wages 2. Group discussions on role and features of entrepreneurship 3. Lectures/presentations by entrepreneurs on their experiences and success stories 6. Identify core skills of successful entrepreneur	06
Total			15

Unit 5: Green Skills – I			
Learning Outcome	Theory (07 hrs)	Practical (03 hrs)	Total Duration (10 Hrs)
1. Demonstrated the knowledge of the factors influencing natural resource conservation	1. Introduction to environment, 2. Relationship between society and environment, ecosystem and factors causing imbalance 3. Natural resource conservation 4. Environment protection and conservation	1. Group discussion on hazards of deteriorating environment 2. Prepare posters showing environment conservation 3. Discussion on various factors that influence our environment	05
2. Describe the importance of green economy and green skills	1. Definition of green economy 2. Importance of green economy	1. Discussion on the benefits of green skills and importance of green economy 2. Prepare a Poster showing the importance of green economy with the help of newspaper/ magazine cuttings	05
Total			10

Part B–Vocational Skills

S.No.	Units	Duration (Hrs)
1.	Restraining of Animals	15
2.	Implementation of Preventive Animal Health Care	30
3.	Veterinary First Aid	30
4.	Prevention and Control of Infectious and Contagious Diseases	20
	Total	95

Unit 1: Restraining of Farm Animals			
Learning Outcome	Theory 05 Hrs	Practical 10 Hrs	Duration (15 Hrs)
1. Explain the external body parts of animals.	1. Major body parts of cattle 2. Purposes of handling the animals 3. General principles of animal handling	1. Note down the important body parts of different livestock species and draw outline diagram of cattle and label it with different body parts.	4

		<ol style="list-style-type: none"> 2. Note down the important body parts of different livestock species and draw outline diagram of cattle and label it with different body parts 3. Talk to animal workers about day to day handling of animals and note down their practical feedback. 	
2. Describe animal behavior in relation to handling.	<ol style="list-style-type: none"> 1. Behavioral considerations in animal handling <ol style="list-style-type: none"> a. Fundamental animal instincts b. Sensitivity to contrast c. Kicking Habit d. Maternal instincts e. Hesitation and aversion towards unfamiliar environment etc. 	<ol style="list-style-type: none"> 1. Note down the basic behavior of cattle in the farm. 	3
3. Identify the flight zone and point of balance in animals.	<ol style="list-style-type: none"> 1. Elements of animal handling <ol style="list-style-type: none"> a) Flight zone b) Blind spot c) Point of balance. 	<ol style="list-style-type: none"> 3. Draw outline diagram of cattle explaining the concept of flight zone and blind spot. 	2
4. Explain about the use of tools and equipment used in restraining animals	<ol style="list-style-type: none"> 1. Approaching the farm animals 2. Restraining of individual cow and buffalo 3. Restraining body parts of the animal 4. Restraining the animal as a whole 5. Tools and equipment used in restraining of farm animals 	<ol style="list-style-type: none"> 1. Visit to any livestock farm and observe various restraining techniques 2. Identify and note down use of various equipment used in restraining of farm animals 	4
5. Follow personal safety measures and use of personal protective equipment.	<ol style="list-style-type: none"> 1. Safe practices in animal handling 2. Abnormal behaviour in farm animals 	<ol style="list-style-type: none"> 1. List various personal hygiene measure sat animal farm 2. List various personal protective equipment (PPE) 	2

Total	15
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Unit 2: Implementation of Preventive Animal Health Care			
Learning Outcome	Theory	Practical	Duration (30 hrs)
1. Identify the methods adopted for prevention of common animal diseases prevalent in local context.	<ol style="list-style-type: none"> 1. Occurrence and reporting of endemic diseases. 2. Prevention and control of common livestock diseases 	<ol style="list-style-type: none"> 1. Identify the various equipment used in restraining the farm animals. 2. Visit a nearby government veterinary hospital and note down the disease reporting system being used there. 	6
2. Identify the common diseases of farm animals.	<ol style="list-style-type: none"> 1. Common diseases of farm animals <ol style="list-style-type: none"> a. Foot and mouth disease (FMD) b. Anthrax c. Black quarter (BQ) d. Haemorrhagic e. Septicaemia (BQ) f. Brucellosis g. Mastitis 	<ol style="list-style-type: none"> 1. Describe symptom of given notifiable diseases e.g. FMD, HS, BQ etc. 	6
3. List the vaccination schedule of the animals.	<ol style="list-style-type: none"> 1. Vaccine 2. Vaccination schedule for farm animals: <ol style="list-style-type: none"> a. Primary vaccination b. Booster vaccination c. Revaccination. 	<ol style="list-style-type: none"> 1. Note down the vaccination schedule followed at the farm in the preceding quarter.' 2. Talk to the animal handler of the farm about handling of vaccines and method of vaccination and prepare a report on it. 	4
4. Describe the pre and post vaccination care about animals.	<ol style="list-style-type: none"> 1. Pre-vaccination care of farm animals 2. Ideal conditions of animals for vaccination 3. Post-vaccination care of farm animals 	<ol style="list-style-type: none"> 1. Enlist side effects of vaccination 2. List the precautions to be adopted while vaccination 	4
5. Collect samples for laboratory diagnosis.	<ol style="list-style-type: none"> 1. Handling of vaccines Administration of vaccines 2. Components of vaccination documentation 3. Disposal of vaccines 	<ol style="list-style-type: none"> 1. Visit a nearby livestock farm. Note down the vaccination schedule followed at the farm in the preceding quarter. 2. Talk to the animal handler of the farm about 	4

		handling of vaccines and method of vaccination and prepare a report on it.	
6. Illustrate preventive deworming, spraying or other methods for control of parasites.	1. Deworming Parasitic infestation in animal a. Aims of deworming b. Choice and selection of de-wormer c. Administration of dewormers d. Control of ectoparasites	1. List methods of controlling ectoparasites on animal body 2. Talk to the animal health workers about deworming and control of ectoparasites in the farm. Prepare a report on the same. 3. Look for the ectoparasites on the animal body and draw their pictures.	6
Total			30

Unit 3: Veterinary First Aid

Learning Outcome	Theory	Practical	Duration (30 Hrs)
1. Explain the routes of disease transmission in animals.	1. Different routes of disease transmission 2. Practices for prevention of disease transmission	1. Enlist different routes of disease transmission in animals.	4
2. Control various infectious diseases in farm animals Illustrate the.	1. Controlling infectious diseases 2. Livestock first aid kit	1. Enlist the item of livestock kit.	4
3. Perform the cleaning and washing of muzzle, mouth, hooves, feet etc. with prepared aseptic solution.	1. Preparation of antiseptic solutions 2. Cleaning and washing of body parts of animal	1. Prepare potassium permanganate solution. 2. Visit to dairy farm and perform cleaning and washing of muzzle, of young calves.	4
4. Describe the first aid of non-infectious conditions e.g. indigestion, tympani, diarrhoea etc.	1. First aid Measures for non-infectious conditions:- a) Indigestion, b) Constipation c) Tympani d) Impaction e) Diarrhoea etc.	1. Visit a nearby livestock farm and look for animals suffering from tympani, diarrhea and constipation 2. Discuss with the farm workers about the treatment that they	6

		administer to the animals under such conditions.	
5. Provide first aid in accidental situations in animals e.g. poisoning, burn injury etc.	1. First aid measures in cases of: a. Poisoning b. Sun stroke c. Electrocution d. Burn injuries e. Prolapse of uterus	1. Visit a nearby livestock farm and attend an emergency case of animal, provide first aid and record your treatment.	4
6. Explain the handling of superficial wound and injury.	1. Wound and its types 2. Management of bleeding and wounded animals 3. Managing prolapse of uterus	1. Classify various types of wounds and their characteristics	4
7. Describe initial support and post operative care in cases related to birth of animals e.g. prolapse of uterus.	1. Providing initial support in emergent cases like prolapsed of Uterus	1. Attend a case of prolapse of uterus in nearby farm.	4
Total			30

Unit 4: Prevention and Control of Infectious and Contagious Diseases

Learning Outcome	Theory	Practical	Duration (20 Hrs)
1. Describe the important animal diseases and their control and preventive measures.	1. Types of farm animal diseases 2. Factors affecting spread of diseases 3. Routes of disease transmission 4. Epidemic diseases 5. Agencies involved in control of epidemic animal diseases 6. Measures for controlling the outbreak of animal diseases 7. Infectious and contagious diseases 8. Reporting cases of animal diseases	1. Visit to dairy farm and note down the preventive measures taken by the farm workers in controlling the spread of animal diseases. 2. Search the records of the farm for the past six months and note down the animal disease reporting system followed there.	6

2. Describe the various diseases due to movement of the animal and prevention of such diseases.	<ol style="list-style-type: none"> 1. Diseases due to movement of animals 2. Prevention of diseases during animal movement 3. Methods for tracking animal movements 	<ol style="list-style-type: none"> 1. Visit a nearby check post and note down the recorded animal movement in that check post. 2. Draw suggestive outline of a GIS system for tracking movement of farm animals. 	6
3. Apply one health approach	<ol style="list-style-type: none"> 1. 'One Health' approach 2. Objectives of 'One health' approach 3. Livestock value chain 4. Benefits of livestock value chain 	<ol style="list-style-type: none"> 1. Make the livestock value chain for milk production in dairy cattle. 2. Visit a nearby dairy farm and record the value chain of their products from the producer to the consumer. 	3
4. Explain Bio-security and perform disposal of undesirable farm animals	<ol style="list-style-type: none"> 1. Bio-security 2. Culling and disposal of undesirable farm animals 	<ol style="list-style-type: none"> 1. Note down the farm cleaning and disinfection procedure practiced in the farm. 2. Collect labels of at least two disinfectants used in your surroundings. Note down the active disinfecting chemical in the disinfectants. 	5
Total			20

CLASS 10

Part A - Employability Skills

S.No.	Units	Duration (Hrs)
1.	Communication Skills – II	20
2.	Self-management Skills – II	10
3.	Information and Communication Technology Skills – II	20
4.	Entrepreneurial Skills – II	15
5.	Green Skills– II	10
	Total	75

Unit 1: Communication Skills – II			
Learning Outcome	Theory (12 Hrs)	Practical (08 Hrs)	Duration (20 Hrs)
1. Demonstrate knowledge of various methods of communication	1. Methods of communication - 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	04
2. Provide descriptive and specific feedback	1. Communication cycle and importance of feedback 2. Meaning and importance of feedback 3. Descriptive feedback - written comments or conversations 4. Specific and non-specific feedback	1. Constructing sentences for providing descriptive and specific feedback	04
3. Apply measures to overcome barriers in communication	1. Barriers to effective communication – types and factors 2. Measures to overcome barriers in effective communication	1. Enlisting barriers to effective communication 2. Applying measures to overcome barriers in communication	04
4. Apply principles of communication	1. Principles of effective communication 2. 7 Cs of effective communication	1. Constructing sentences that convey all facts required by the receiver 2. Expressing in a manner that shows respect to the receiver of the message 3. Exercises and games on applying 7Cs of effective communication	04
5. Demonstrate basic writing skills	10 Writing skills to the following: - 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	04
Total			20

Unit 2: Self-management Skills – II			
Learning Outcome	Theory (05 Hrs)	Practical (05 Hrs)	Duration (10 Hrs)
1. Apply stress management techniques	<ol style="list-style-type: none"> 1. Meaning and importance of stress management 2. Stress management techniques – physical exercise, yoga, meditation 3. Enjoying, going to vacations and holidays with family and friends 4. Taking nature walks 	<ol style="list-style-type: none"> 1. Exercises on stress management techniques – yoga, meditation ,physical exercises 2. Preparing a write-up an essay on experiences during a holiday trip 	06
2. Demonstrate the ability to work independently	<ol style="list-style-type: none"> 1. Importance of the ability to work independently 2. Describe the types of self-awareness 3. Describe the meaning of self-motivation and self-regulation 	<ol style="list-style-type: none"> 1. Demonstration on working independently 2. Goals 3. Planning of an activity 4. Executing tasks in a specific period, with no help or directives 5. Demonstration on the qualities required for working independently 	04
Total			10

Unit 3: Information and Communication Technology Skills– II			
Learning Outcome	Theory (08 Hrs)	Practical (12 Hrs)	Duration (20 Hrs)
1. Distinguish between different operating systems	<ol style="list-style-type: none"> 1. Classes of operating systems 2. Menu, icons and task bar on the desktop 3. File concept, file operations, file organization, directory structures, and file- system structures 4. Creating and managing files and folders 	<ol style="list-style-type: none"> 1. Identification of task bar, icons, menu, etc. 2. Demonstration and practicing of creating, renaming and deleting files and folders, saving files in folders and sub-folders, restoring files and folders from recycle bin 	17

2. Apply basic skills for care and maintenance of computer	1. Importance and need of care and maintenance of computer - Cleaning computer components - Preparing maintenance schedule - Protecting computer against viruses - Scanning and cleaning viruses and removing SPAM files, temporary files and Folders	1. Demonstration of the procedures to be followed for cleaning, care and maintenance of hardware and software	03
Total			20

Unit 4: Entrepreneurial Skills – II

Learning Outcome	Theory (06 Hrs)	Practical (09 Hrs)	Duration (15 Hrs)
1. List the characteristics of successful entrepreneur	1. Entrepreneurship and society 2. Qualities and functions of an entrepreneur 3. Role and importance of an entrepreneur 4. Myth about entrepreneurship 5. Entrepreneurship as a career option	1. Writing a note on entrepreneurship as career option 2. Collecting success stories of first generation and local entrepreneurs 3. Listing the entrepreneurial qualities – analysis of strength and weaknesses 4. Group discussion of self-qualities that students feel are needed to become successful entrepreneur 5. Collect information and related data for a business 6. Make a plan in team for setting up a business	15
Total			15

Unit 5: Green Skills – I

Learning Outcome	Theory (05)	Practical (05)	Duration (10 Hrs)
1. Demonstrated the knowledge of the factors influencing natural resource conservation	1. Introduction to environment, 2. Relationship between society and environment,	1. Group discussion on hazards of deteriorating environment 2. Prepare posters showing environment conservation	05

	ecosystem and factors causing imbalance 3. Natural resource conservation 4. Environment protection and conservation	3. Discussion on various factors that influence our environment	
2. Describe the importance of green economy and green skills	1. Definition of green economy 2. Importance of green economy	1. Discussion on the benefits of green skills and importance of green economy 2. Prepare a Poster showing the importance of green economy with the help of newspaper/ magazine cuttings	05
Total	34	41	75

Part B–Vocational Skills

S.No.	Units	Duration (Hrs)
1.	Assisting in Veterinary Extension Services	15
2.	Development Program Implementation and Marketing in livestock Sector	20
3.	Animal Welfare, Breed Conservation and Disaster Management	25
4.	Implementation of Animal Breeding Services in Dairy Animals	35
	Total	95

Unit 1: Assisting in Veterinary Extension Services

Learning Outcome	Theory	Practical	Duration (15 Hrs)
1. Describe the extension services and importance of technology adoption.	1. Technologies and practices for productivity enhancement and profitability of livestock farming a. Farm practices b. Feed and feeding c. Disease prevention d. Farming system 2. Animal waste utilization	1. Enlist the technologies, which have been adopted as standards in livestock productivity enhancement and profitability of farming.	2
2. Maintain and keep records of animal farm.	1. Maintenance of farm records 2. Types of farm record 3. Types of Record keeping a) Manual record keeping b) Electronic record keeping e. Clean milk Production	1. Visiting dairy farms and learning about the different records i.e. breeding record, feed record, calving record, milking record, vaccination record etc for proper management of the farm.	4

<p>3. Illustrate the basics of animal nutrition, common feed ingredients and local sources for same.</p>	<p>1. Feed and Feeding a. Preparation of balanced ration using locally available feed materials b. Benefits of balanced ration c. Disease prevention</p>	<p>1. Learning about preparing the balanced ration for feeding animals 2. Use of the ingredients in right proportion 3. Increasing profitability in animal production, benefits and constraints management.</p>	<p>3</p>
<p>4. Describe the importance selection of quality farm inputs</p>	<p>1. Farming system a. Organic farming b. Integrated livestock farming c. Biogas production d. Vermi - composting</p>	<p>1. Different resources used in farming, for increasing inputs and outputs of livestock production system and factors responsible for them 2. Visit any established livestock farm. Check the various records maintained and their entries. 3. Visit any biogas plant. Note down important parts of the biogas unit 4. Visit a vermicompost unit. Note down different steps of vermicompost production.</p>	<p>3</p>
<p>5. Demonstrate the knowledge of selection and procurement of feed and fodder.</p>	<p>1. Selection and procurement of feed and fodder a. Procurement of fodder seed, fertilizer and pesticide b. Procurement of farm equipments c. Incentives for Purchase of Agricultural Machines d. Implements incentives for setting up of custom hiring centres of agricultural machines e. Procurement of animals</p>	<p>1. Talk to the animal workers about day-to-day handling of animals and note down their practical feedback.</p>	

6. Explain Animal Husbandry extension activities	<ol style="list-style-type: none"> 1. Information and Communication Technology (ICT) in Animal Husbandry Extension Services 2. Relevant knowledge 3. Agencies providing livestock extension services in India 4. Use of mobile phones in extension services in animal husbandry 5. Initiatives by the central government 	<ol style="list-style-type: none"> 1. Note down how mobile services help numbers in dissemination of information. 2. Surf the Internet and find out the recent initiatives of the government 	3
Total			15

Unit 2: Development Program Implementation and Marketing In Livestock Sector			
Learning Outcome	Theory	Practical	Duration (20 Hrs)
1. Describe the government and private development programs related to livestock.	<ol style="list-style-type: none"> 1. Awareness programs for the farmers 2. Need for Awareness programs for the farmers 3. National programmes for animal husbandry and livestock 	1. Note down the various awareness programmes organised in livestock sector.	4
2. Explain how to mobilize and handhold activities of farmer groups.	<ol style="list-style-type: none"> 1. Types of Awareness programs based on contact method 2. Steps for organizing Awareness programs 	1. Enlist the various types of awareness programme for animal husbandry and livestock	4
3. Describe the basic economics of livestock based business activities.	<ol style="list-style-type: none"> 1. Economics of livestock based business activities 2. Types of costs in livestock based enterprise 3. Returns from livestock based enterprise 4. Financial aspects and risk management 5. Starting livestock-based enterprise 	<ol style="list-style-type: none"> 1. Note down the capital investments required to start a new dairy farm enterprise 2. Write the various types of cost included in the variable cost. 	4

<p>4. Describe the basics of livestock product markets and marketing</p>	<p>1. Marketing of Livestock Products</p> <ol style="list-style-type: none"> Live animal marketing Livestock products marketing Marketing of high value food products such as:- <ul style="list-style-type: none"> • Milk and milk products marketing • Meat marketing • Broiler marketing • Egg marketing <p>2. Commercial live stock products marketing such as:-</p> <ul style="list-style-type: none"> • Marketing of wool • Marketing of hides and skins <p>3. Constrains in livestock marketing</p> <p>4. Importance of National Agriculture Market (E-NAM)</p>	<p>1. Note down the milk marketing channels existing in your area.</p> <p>2. Visit a livestock market. Note down how the animals are sold in the market</p>	<p>8</p>
<p>Total</p>			<p>20</p>

Unit 3: Animal Welfare, Breed Conservation and Disaster Management

Learning Outcome	Theory	Practical	Duration (25 Hrs)
<p>1. Explain and prevents cruelty to animals.</p>	<p>1. Prevention of cruelty to animals</p> <ol style="list-style-type: none"> Major forms of cruelty to animals Prevention of Cruelty to Animals Act, 1960" <p>2. Farming indigenous breeds of livestock</p> <ol style="list-style-type: none"> Important traits of indigenous animals Central government projects farming indigenous breeds of livestock 	<p>1. Note down instances of cruelty being inflicted on animals in your area. 2. Note down instances of cruelty in a nearby slaughterhouse</p> <p>Note down indigenous cattle breeds found in India along with their place of origin.</p>	<p>8</p>

2. Describe about the basics of disaster management.	<ol style="list-style-type: none"> Types of disaster: <ol style="list-style-type: none"> Natural Man-made Various aspects of Disaster preparedness for safety of animals Salient features of Disaster preparedness plan 	<ol style="list-style-type: none"> Visit any district head office of the Animal Husbandry Department and note down the detailed disaster preparedness programme. List various things to prepare emergency kit for Disaster preparedness 	10
3. Mention the breeds of indigenous animals and importance of their conservation.	<ol style="list-style-type: none"> Important indigenous breeds of livestock and poultry Important features of indigenous breeds of livestock Importance of indigenous breeds Importance of conservation of indigenous breeds 	<ol style="list-style-type: none"> Enlist important indigenous breeds of live stock 	7
Total			25

Unit 4: Implementation of Animal Breeding Services in Dairy Animals

Learning Outcome	Theory	Practical	Duration (35 Hrs)
1. Identify and select animal for milk production.	<ol style="list-style-type: none"> Selection of animals for milk production 	<ol style="list-style-type: none"> Visit a dairy farm. Examine and recommend animals for selection of purchase. Interact with dairy farmers for desirable traits that they would look for in the animals to be purchased. 	6
2. Describe the basic reproductive physiology and genetics in case of small animal.	<ol style="list-style-type: none"> Reproductive anatomy of cattle and buffalo Basic physiology of reproduction of cattle and buffalo, <ol style="list-style-type: none"> Oestrus and Oestrus Phases of estrous cycle i). Follicular phase, ii). Luteal phase Basic animal breeding methods <ol style="list-style-type: none"> Inbreeding Outbreeding Techniques and methods of oestrus detection Visually observable signs Use of teaser bull 	<ol style="list-style-type: none"> Draw a sketch of female reproductive tract in cattle Visit a livestock farm. Record visually observable signs of oestrus Talk to the animal workers about day-to-day practices in detection of oestrus. 	8

	<ul style="list-style-type: none"> e. Per-rectal examination for confirmation of oestrus f. Use oestrus detection aids 		
3. Describe how artificial insemination in farm animals	<ul style="list-style-type: none"> 1. Artificial insemination technique 2. Advantages of Artificial Insemination(AI) 3. Limitations of Artificial Insemination(AI) 4. Thumb Rule of Artificial Insemination(AI) 5. Rectovaginal technique of artificial insemination in cattle and buffalo <ul style="list-style-type: none"> - Thawing of semen - Loading of artificial insemination gun - Deposition of semen in female genital tract 7. Handling of frozen semen straw and safety procedures in handling of liquid nitrogen containers and frozen semen 	<ul style="list-style-type: none"> 1. Visit an AI centre and interact with the technician about the set-up and instruments used in the technique. 2. Observe the technique of thawing. 3. Visit any AI Centre. Record the way technicians handle the instruments. 4. Talk to workers in the centre and enquire about handling of frozen semen container. 	8
4. Explain various infertility problems and handling of same in small animals.	<ul style="list-style-type: none"> 1. Management of unproductive animals <ul style="list-style-type: none"> a. Repeat Breeding b. General guidelines for the treatment and management of repeat breeding animals c. Anoestrous treatment and management. d. General guidelines for management and treatment of anoestrous e. Understanding Cystic Ovaries 4. Abortion: causes and prevention. 	<ul style="list-style-type: none"> 1. Visit to dairy farm and record various infertility problems if any in last one year 2. Visit to dairy farm to observe management of different infertility problems. 3. Visit any livestock farm and enquire about common conditions, which affect the fertility of the animals. 4. Talk to the animal workers about day-to-day management of maintaining good fertility in the farm 	7

Unit 4: Implementation of Animal Breeding Services in Dairy Animals			
Learning Outcome	Theory	Practical	Duration (35 Hrs)
5. Keep Record and monitor performance of breeding services.	1. Post insemination support, data recording and performance monitoring of breeding services 2. Post Insemination Advice to Farmer 3. Post Insemination follow-up by the Animal Health Worker 4. Significance of data recording in artificial Insemination programme 5. Evaluating success / Performance monitoring of AI Services	1. Visit any livestock farm. Study different registers used for keeping farm records. 2. Talk to the animal health workers and learn how to maintain farm records.	6
Total			35

6. ORGANISATION OF FIELD VISITS

In a year, at least 10 visits to a nearby dairy farm/educational tours should be organised for the students to expose them to the various routine activities undertaken at a good dairy farm.

Visits to a nearby dairy farm should facilitate the students to observe for themselves the following:

Location, Site, Isolation room, Quarantine room, calf room, ration room, heifer room, calving box, young animal room, bull shed, travis, sick animal and veterinary dispensary, post-mortem platform, concentrate and fodder go downs, chaffing shed, silo pits, milk house, manure disposal area, During the visit, students observe and obtain the following information from the owner or the supervisor of the dairy:

1. Understand management of animals in heat.
2. Identification of various breeds of cattle and buffalo.
3. Identification of various breeds of cattle and buffalo improved through the technique of selection.
4. Understand the need for livestock housing.
5. Understand the optimization of available resources at the farm and housing needs of animals.
6. Check if equipment, materials and accommodation are suitable for reception of the livestock, prior to their arrival.
7. Dairy farm feed storage structures.
8. Comparison of healthy and unhealthy animals.

9. Various wellbeing and welfare measures being adopted for the animals.
10. Animals infested with external parasites and how they are controlled.
11. Understand management of animals in heat.
12. Understand various aspects of management of pregnant animal such as nutrition, accommodation etc.
13. Observe management of calves such as housing, hygiene, colostrum feeding etc.
14. Observe various pre milking, milking and post milking activities.
15. Various mastitis detection methods.
16. Precautions taken form astitis.
17. Various equipment of a milking machine.
18. Parts of the milking machine and their functions.
19. Different methods of for age conservation.

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.

- | | |
|---|--|
| 1. Electric dehorner | 21. Grooming brush |
| 2. Burdizzo castrator | 22. Various feeds and fodders |
| 3. Tagging set | 23. Measuring appliances |
| 4. Tattooing set | 24. Milking bucket |
| 5. Branding numbers | 25. Post milking teat dip |
| 6. Drenching bottles | 26. Milk can |
| 7. Mouth gags | 27. Milk strainer |
| 8. Muzzle | 28. Broom |
| 9. Housing models | 29. Disinfectants |
| 10. Models of different breeds | 30. bull exerciser |
| 11. Hoof trimmer | 31. Medicines |
| 12. Ropes | 32. Thermometer |
| 13. Metal chains | 33. Trocar and cannula |
| 14. Bull nose ring | 34. Apron |
| 15. Bull nose punch | 35. Gloves- 25pair |
| 16. Bull leader | 36. Gumboots- 25pair |
| 17. Animal awakener | 37. Masks-100 |
| 18. Artificial insemination (AI)cylinder with liquid nitrogen and semen straw | 38. Dangris -25 |
| 19. AI gun | 39. CMT reagent and CMT Paddle for detection of mastitis |
| 20. Hosepipe | 40. pH trip |

8. VOCATIONAL TEACHERS/ TRAINER - 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:

S.No.	Qualification	Minimum Competencies	Age Limit
1.	Post-graduation in Dairying/ Animal Husbandry from a recognized Institute /University, with at least 1 year 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

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