

# **LEARNING OUTCOME BASED VOCATIONAL SYLLABUS**

**JOB ROLE: Dairy Farmer/Dairy Entrepreneur**  
(QUALIFICATION PACK: Ref. Id. AGR/Q4101)

**SECTOR: Agriculture**

**Class 12**



**PSS CENTRAL INSTITUTE OF VOCATIONAL EDUCATION**  
Offered by  
**Assam Higher Secondary Education Council**  
In Association with  
**Samagra Shiksha Abhijan, Assam**

# 1. COURSE OVERVIEW

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## Dairy Farmer/ Entrepreneur

A Dairy Farmer / Entrepreneur is a person who is responsible for various activities involved in dairy farm management. The Dairy Farmer takes various decisions for the viability and sustainability of the dairy farm. He / She ensure proper care of dairy animals, their health and productivity, milking and marketing of the produced milk. The job is to be performed in an efficient manner to allow the production of high quality milk and promote animal well-being and comfort. The Dairy Farmer/Entrepreneur should work independently, and have the ability to make various strategic and operational decisions pertaining to his / her area of work. The individual should have clarity and should be result oriented. The individual should also be able to demonstrate skills to use various tools.

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

- ☐ Efficiently start and manage a dairy farm: dairy Industry, input requirements, site selection, cattle selection, budget estimation, procurement of inputs, etc.
- ☐ Construct and maintain shed for cattle: Resources availability, shed construction – types, maintenance of shed; prepare and give recommended feed and water for livestock: feed Nutrients composition, feed requirements.
- ☐ Maintain health of livestock along with productivity: vaccination of cattle, nutrient requirements.
- ☐ Understand and prepare forage: forage types, types of storage.
- ☐ Effectively market dairy products like milk, curd, cheese: milk products, manufacturing, standards, market value, and marketing of the product.
- ☐ Ensure safe and clean dairy farm: hygiene maintenance.

**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 supervisor.

COURSE DURATION:	600 hrs
Class 11	: 300 hrs
Class 12	: 300 hrs

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<b>Total</b>	<b>: 600 hrs</b>
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## 2. SCHEME OF UNITS

This course is a planned sequence of instructions consisting of Units meant for developing employability and vocational competencies of students of Class 12, opting for vocational subject along with general education subjects. The unit-wise distribution of hours and marks for Class 11 is as follows:

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

<b>CLASS 12</b>			
<b>Units</b>		<b>No. of Hours for Theory and Practical =300</b>	<b>Max. Marks for Theory and Practical = 100</b>
<b>Part A</b>	<b>Employability Skills</b>		
1.	Communication Skills	25	02
2.	Self-management Skills	25	02
3.	Information and Communication Technology Skills	20	02
4.	Entrepreneurial Skills	25	02
5.	Green Skills	15	02
	<b>Total</b>	<b>110</b>	<b>10</b>
<b>Part B</b>	<b>Vocational Skills</b>		
6.	Maintain Healthy Performance of Livestock	40	10
7.	Performing Hand and Machine Milking	45	10
8.	Entrepreneurship	35	10
9.	Maintain Health & Safety at the workplace	45	10
	<b>Total</b>	<b>160</b>	<b>40</b>
<b>Part C</b>	<b>Practical Work</b>		
	Practical Examination	06	15
	Written Test	01	10
	Viva Voce	03	10
	<b>Total</b>	<b>10</b>	<b>35</b>
<b>Part D</b>	<b>Project Work/Field Visit</b>		
	Practical File/Student Portfolio	10	10
	Viva Voce	05	05
	<b>Total</b>	<b>15</b>	<b>15</b>
	<b>Grant Total</b>	<b>300</b>	<b>100</b>



# 1. TEACHING/TRAINING ACTIVITIES

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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.

# 2. ASSESSMENT AND CERTIFICATION

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**U**pon 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.

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: 2 hrs**

**Maximum Mark: 50**

	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)	5	2	2	15
2.	Understanding – (Comprehension – to be familiar with meaning and to understand conceptually, interpret, compare, contrast, explain, paraphrase, or interpret information)	3	4	2	17
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	3	1	09
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	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	1	05
	<b>Total</b>	<b>8x1=8</b>	<b>12x2=24</b>	<b>6x3=18</b>	<b>50 (26 questions)</b>



## 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 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.

**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.