

# CURRICULUM OF “HEAD WORKER” *Level-3*



**National Vocational & Technical  
Training Commission**

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## Introduction

### Definition/ Description of the training programme for Poultry Management (Head Worker)

Poultry industry plays vital role to reduce malnutrition, alleviate poverty and promoting cost-effective growth. It is one of the largest Agro based segments of Pakistan having an investment of more than 1,190 billion rupees. Poultry Industry of Pakistan continuously reducing the gap between supply and demand of meat protein by producing quality and cheapest protein. Being cheapest available animal protein source for our masses, poultry is also playing as an effective check upon the increasing animal protein prices. Poultry Industry generates employment and provides source of income to more than 1.5 million people of Pakistan directly & indirectly. In our country per capita consumption of meat is only 8.22 kilo grams and 96.75 eggs annually (Economic survey of Pakistan). Whereas developed world is consuming about 40 kilo grams meat and over 300 eggs per capita per year. As per standard of World Health Organization, daily requirement of animal protein for a person is 27 grams whereas public is consuming 17 grams only. Therefore, we are already consuming less animal protein as per required standards.

Poultry management includes all principles and practices involved in production of layer for the purpose of eggs, rearing of broiler for the meat purpose and hatchery unit for the breeding purpose. Poultry industry is one of the sectors which converted their traditional ways of production into fully mechanized system within a short period of time. In latest scenario almost 90 percent of poultry industry rearing their birds on modern mechanized system rather than old traditional ways. Fully controlled system required skilled manpower to operate efficiently which is a major challenge for the industry of Pakistan. Meanwhile, current growth pace of poultry industry produces high demand for skilled labour.

The competency based national vocational qualifications have been developed by NAVTTC to train the unskilled human resource on the technical and entrepreneurial skills to be employed / self-employed and inevitably set sustainable impact on their lives by increase in their livelihood income.

Training Course is based on competency standards which are defined by the industry and the traditional role of a trainer changes and shifts towards the facilitation of training. A trainer encourages and assists trainees to learn for themselves. Trainees are likely to work in groups (pairs) and all doing something different. Some are doing practical tasks in the farm, some writing, some not even in the classroom or farm but in another part of the building using specialist equipment, working on computers doing research on the Internet or the library. As trainees learn at different pace they might well be at different stages in their learning, thus learning must be tailored to suit individual needs. The following facilitation methods (teaching strategies) are generally employed

### Purpose of the training programme

The Poultry Management programme is to engage young people with a programme that will provide them with the knowledge, skills and understanding to start this career. The specific objectives of developing these qualifications are as under:

- Improve the professional competence of the trainees
- Provide opportunities for recognition of skills attained through non-formal or informal pathways
- Improve the quality and effectiveness of training and assessment for Poultry Industry

## **Competencies to be gained after completion of course**

- Maintain Safety at Site
- Work in a Team Environment
- Perform Computer Applications
- Maintain Inventory at Site
- Perform Feeding and Water System Management
- Perform Basic Hatchery Operations

## **Trainee entry level**

The entry requirement for this qualification would be Matric with science. Age 18 years or above

## **Minimum qualification of trainer**

Teaching staff qualification should be BS.(Hons.)/DVM with experience of 1-2 years in relevant field

## **Recommended trainer: trainee ratio**

The recommended maximum trainer: trainee ratio for this programme is 1 trainer for 25 trainees.

## **Medium of instruction i.e., language of instruction**

Instruction will be Urdu and English.

## **Duration of the course (Total time, Theory & Practical time)**

This curriculum comprises 15 modules. The recommended delivery time is 600 hours. Delivery of the course could therefore be full time, 5 days a week, for 6 months. Training providers are at liberty to develop other models of delivery, including part-time and evening delivery.

The full structure of the course is as follow:

<b>Module Level-3</b>	<b>Theory<sup>1</sup> Days/hours</b>	<b>Workplace<sup>2</sup> Days/hours</b>	<b>Total hours</b>
<b>Module 1</b> Maintain Safety at Site	13	45	58
<b>Module 2</b> Work in a Team Environment	15	33	48
<b>Module 3</b> Perform Computer Applications	12	48	60
<b>Module 4</b> Maintain inventory at site	15	45	60
<b>Module 5</b> Perform Feeding, watering and light Management	12	51	63
<b>Module 6</b> Perform Basic hatchery operations	14	66	80

## Sequence of the modules

Each module covers a range of learning components. These are intended to provide detailed guidance to teachers (for example the Learning Elements component) and give them additional support for preparing their lessons (for example the Materials Required component). The detail provided by each module will contribute to a standardized approach to teaching, ensuring that training providers in different parts of the country have clear information on what should be taught. Each module also incorporates the industrial needs of Pakistan.

The distribution table is shown below:

### Level-3

<b>Module 1:</b> Maintain Safety at Site	<b>Module 6:</b> Perform basic Hatchery Operations
<b>Module 2:</b> Work in a Team Environment	
<b>Module 3:</b> Perform Computer Applications	
<b>Module 4:</b> Maintain inventory at site	
<b>Module 5:</b> Perform Feeding, watering and light Management	

<sup>1</sup> Learning Module hours in training provider premises

<sup>2</sup> Training workshop, laboratory and on-the-job workplace

## Summary – overview of the curriculum

Module Title and Aim	Learning Units	Theory Days/hours	Workplace Days/hours	Timeframe of modules
<b>Module 1: Maintain Safety at site</b>  <b>Aim:</b> The aim of this module to develop advanced knowledge, skills and understanding to maintain safety at site.	<b>LU1.</b> Maintain Safe Work Condition at site <b>LU2.</b> Perform fire fighting <b>LU3.</b> Carry first aid treatment <b>LU4.</b> Perform electrical work safely at workplace	17	63	80
<b>Module 2: Work in a team environment</b>  <b>Aim:</b> The aim of this module to develop advanced knowledge, skills and understanding to work in a team environment.	<b>LU1.</b> Obtain and convey workplace information <b>LU2.</b> Participate in workplace meetings and discussions <b>LU3.</b> Identify own role and responsibility within team <b>LU4.</b> Support the co-workers	20	30	50
<b>Module 3: Perform Computer Applications</b>  <b>Aim:</b> The aim of this module to develop advanced knowledge, skills and understanding to perform computer applications	<b>LU1.</b> Prepare spreadsheet using MS Excel <b>LU2.</b> Prepare a presentation using MS Power Point	12	48	60

Module Title and Aim	Learning Units	Theory Days/hours	Workplace Days/hours	Timeframe of modules
<b>Module 4: Maintain Inventory at site</b>  <b>Aim:</b> The aim of this module to develop advanced knowledge, skills and understanding to maintain inventory at site.	<b>LU1.</b> Explore capacities and utilizations of site items <b>LU2.</b> Maintain toolbox <b>LU3.</b> Manage inventory of tools, equipment's and consumable items	11	69	80
<b>Module 5: Perform Feeding, watering and light Management</b>  <b>Aim:</b> The aim of this module to develop advanced knowledge, skills and understanding to Perform feeding and water system management.	<b>LU1.</b> Measure Poultry bird feed <b>LU2.</b> Prepare feed manually <b>LU3.</b> Execute light schedule <b>LU4.</b> Perform water management	30	150	180
<b>Module 6: Perform basic hatchery Operations</b>  <b>Aim:</b> The aim of this module to develop advanced knowledge, skills and understanding to Perform basic hatchery operations.	<b>LU1.</b> Perform selection of settable eggs <b>LU2.</b> Maintain environmental condition in incubators <b>LU3.</b> Carry out hatch pull <b>LU4.</b> Perform Hatchery sanitation	30	120	150

## Modules

### LEVEL 3

#### Module 1 : Maintain Safety at Site

**Objective of the module:** After this module candidate will be able to maintain safety at sit.

<b>Duration:</b>	80 Hours	<b>Theory:</b>	17hours	<b>Practical:</b>	63 hours
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Learning Unit	Learning Outcomes	Learning Elements	Duration	Materials Required	LearningPlace
LU1. Maintain safe work condition at site	<b>Trainee will be able to:</b> <ol style="list-style-type: none"> <li>1. Recognize the safety signs and symbols</li> <li>2. Identify potential hazards at site</li> <li>3. Identify the risk of slip, trip and fall at site</li> <li>4. Perform protection measures as per job requirements</li> <li>5. Label and store medicines and chemicals as per Material Safety Data Sheet (MSDS)</li> </ol>	<ul style="list-style-type: none"> <li>• Hazards in poultry system</li> <li>• Farm protection SOPs</li> <li>• Safety signs and symbols and their importance</li> <li>• Biosecurity at poultry shed</li> <li>• <b><u>Practical Activity</u></b></li> <li>• Plan Biosecurity for poultry shed</li> <li>• Wear PPEs as per protocol</li> </ul>	<b>Total:</b> 13 hrs  <b>Theory:</b> 4 hrs  <b>Practical:</b> 9 hrs	<b>Consumable</b> <ul style="list-style-type: none"> <li>• White board marker</li> <li>• Duster</li> <li>• Different chemicals</li> <li>• PPEs</li> <li>• Pen</li> <li>• Note book</li> </ul>	Class room/site
				<b>Non-Consumable</b> <ul style="list-style-type: none"> <li>• Material Safety Data Sheet (MSDS)</li> </ul>	



				<ul style="list-style-type: none"> <li>• Safety signs and symbol chart</li> <li>• PPEs</li> <li>• White Board</li> <li>• Multimedia</li> <li>• Computer System</li> </ul>	
<b>LU2.</b> Perform fire fighting	<b>Trainee will be able to:</b> <ol style="list-style-type: none"> <li>1. Identify source of fire.</li> <li>2. Identify classes of fire</li> <li>3. Raise fire alarms</li> <li>4. Select fire extinguishers</li> <li>5. Check expiry of fire extinguisher</li> <li>6. Check wind direction</li> <li>7. Locate emergency exits</li> <li>8. Perform PASS (Pull, aim, squeeze and sweep) on fire extinguisher</li> </ol>	<ul style="list-style-type: none"> <li>• Knowledge to prevent fire at poultry farm</li> <li>• Workplace fire safety</li> <li>• Fire extinguishers and their working and importance</li> </ul> <p><b><u>Practical Activity</u></b></p> <ul style="list-style-type: none"> <li>• Functioning of fire extinguishers</li> <li>• Demonstration on how to respond in case of emergency</li> </ul>	<b>Total:</b> 25 hrs  <b>Theory:</b> 4 hrs  <b>Practical:</b> 21 hrs	<div><b>Consumable</b></div> <ul style="list-style-type: none"> <li>• White board marker</li> <li>• Duster</li> <li>• PPEs</li> <li>• Pen</li> <li>• Note book</li> </ul> <div><b>Non-Consumable</b></div> <ul style="list-style-type: none"> <li>• Fire extinguisher</li> <li>• PPEs</li> <li>• White Board</li> <li>• Multimedia</li> <li>• Computer</li> </ul>	Class room/site

<b>LU3.</b> Carry out first aid treatment	<ol style="list-style-type: none"> <li>1. Follow COVID-19 SOP's</li> <li>2. Identify basic elements for first aid kit</li> <li>3. Maintain a fully stocked first aid kit</li> <li>4. Check expiry date of medicines</li> <li>5. First aid treatment for minor injuries</li> </ol>	<ul style="list-style-type: none"> <li>• COVID and its causes and prevention</li> <li>• First Aid kit and its elements</li> <li>• Basic treatment protocol</li> </ul> <p><b><u>Practical Activity</u></b></p> <ul style="list-style-type: none"> <li>• Demonstration of first aid box</li> <li>• Perform mock first aid treatment for minor injuries</li> </ul>	<p><b>Total:</b></p> <p>25 hrs</p> <p><b>Theory:</b></p> <p>4 hrs</p> <p><b>Practical:</b></p> <p>21 hrs</p>	<p><b>Consumable</b></p> <ul style="list-style-type: none"> <li>• PPEs</li> <li>• White board marker</li> <li>• Duster</li> <li>• Note book</li> <li>• Pen</li> </ul> <p><b>Non-Consumable</b></p> <ul style="list-style-type: none"> <li>• White Board</li> <li>• Multimedia</li> <li>• Computer System</li> <li>• First aid kit</li> </ul>	<p>Class room/site</p>
<b>LU4.</b> Perform Basic electrical work safely at workplace	<ol style="list-style-type: none"> <li>1. Check the connectivity of earthing with power equipment</li> <li>2. Check leads and cable for any visual damage before use</li> <li>3. Tag damaged lead, cable and connection points and report to the supervisor</li> </ol>	<ul style="list-style-type: none"> <li>• Electrical circuits and its components</li> <li>• Basic electrical safety</li> <li>• Safety rules and its elements</li> </ul> <p><b><u>Practical Activity</u></b></p> <ul style="list-style-type: none"> <li>• Report formation in case of faulty electrical appliance</li> <li>• Perform inspection of electrical system</li> </ul>	<p><b>P</b></p>	<p><b>Consumable</b></p> <ul style="list-style-type: none"> <li>• White board marker</li> <li>• Duster</li> <li>• PPEs</li> <li>• Note book</li> <li>• Pen</li> </ul> <p><b>Non-Consumable</b></p> <ul style="list-style-type: none"> <li>• PPEs</li> <li>• Computer</li> <li>• Leads</li> <li>• White Board</li> <li>• Multimedia</li> </ul>	<p>Class room/site</p>

## Module 2 Work in a Team Environment

**Objective of the module:** This module covers the knowledge and skills required to install, configure and troubleshoot hardware components / peripheral devices and device drivers on computers

<b>Duration:</b>	50Hours	<b>Theory:</b>	20hours	<b>Practical:</b>	30hours
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Learning Unit	Learning Outcomes	Learning Elements	Duration	Materials Required	Learning Place
<b>LU1.</b> Obtain and convey workplace information	<b>Trainee will be able to:</b> <ol style="list-style-type: none"> <li>1. Assess the specific and relevant information from the appropriate sources</li> <li>2. Convey the information using the appropriate medium and ideas</li> <li>3. Use appropriate non-verbal communication</li> <li>4. Identify appropriate lines of communication with supervisors and colleagues</li> </ol>	<ul style="list-style-type: none"> <li>• Describe the importance of effective communication</li> <li>• State different Sources of information</li> <li>• State different mode of communication</li> <li>• Explain types of non-verbal communication</li> <li>• Explain mode of communication while operating machines</li> <li>• Explain the method of recording the information/instructions.</li> </ul> <p><b><u>Practical Activity:</u></b></p> <ul style="list-style-type: none"> <li>• Role Play each trainee introduce himself.</li> </ul>	<b>Total:</b> 17 hrs  <b>Theory:</b> 5 hrs  <b>Practical:</b> 12hrs	<div>Consumable</div> <ul style="list-style-type: none"> <li>• White board marker</li> <li>• Duster</li> <li>• Note book</li> <li>• Pen</li> </ul> <div>Non-Consumable</div> <ul style="list-style-type: none"> <li>• White Board</li> <li>• Multimedia</li> <li>• Computer system</li> </ul>	Class Room/site

	<p>5. Use the defined workplace procedures for storage of information</p> <p>6. Inform co-workers and superiors about any deviation</p>	Convey the job description and company general rules and regulations to fellow workers			
<b>LU2.</b> Participate In workplace meetings and discussions	<p><b>Trainee will be able to:</b></p> <p>1. Express your own opinions</p> <p>2. Listen other's point of view without interruption</p> <p>3. Prepare simple questions about workplace procedures</p>	<ul style="list-style-type: none"> <li>Express your own opinions</li> <li>Listen other's point of view without interruption</li> <li>Prepare simple questions about workplace procedures</li> <li>Describe the protocol of meeting</li> <li>Describe the role and objective of team.</li> </ul> <p><b><u>Practical Activity:</u></b></p> <p>Participate in mock meeting for preparation to perform job.</p>	<p><b>Total:</b></p> <p>11 hrs</p> <p><b>Theory:</b></p> <p>5 hrs</p> <p><b>Practical:</b></p> <p>6hrs</p>	<p><b>Consumable</b></p> <ul style="list-style-type: none"> <li>Note book</li> <li>Pen</li> <li>White board marker</li> <li>Duster</li> </ul> <p><b>Non-Consumable</b></p> <ul style="list-style-type: none"> <li>White Board</li> <li>Multimedia</li> <li>Computer System</li> </ul>	Class Room

<b>LU3.</b> Identify own role and responsibility within team	<b>Trainee will be able to:</b> <b>1.</b> Identify the individual role and responsibilities within the team environment. <b>2.</b> Recognize the roles and responsibility of other team members. <b>3.</b> Share report with co-workers.	<ul style="list-style-type: none"> <li>Describe the importance of creating cooperative work environment</li> <li>Describe the role and objective of team.</li> <li>Explain risk of failure team work on the project.</li> <li>Describe the importance of resolving the co-worker's problems</li> <li>State plan work and organize required resources in coordination with team</li> </ul> <p><b><u>Practical Activity:</u></b></p> <p>Role Play, get instruction regarding job order from supervisor and convey it to coworkers according</p>	<b>Total:</b> 11 hrs. <b>Theory:</b> 5 hrs. <b>Practical:</b> 6 hrs.	<div>Consumable</div> <ul style="list-style-type: none"> <li>Note book</li> <li>Pen</li> <li>White board marker</li> <li>Duster</li> </ul> <div>Non-Consumable</div> <ul style="list-style-type: none"> <li>White Board</li> <li>Multimedia</li> <li>Computer System</li> </ul>	Class Room
<b>LU4.</b> Support the co-workers	<b>Trainee will be able to:</b> <b>1.</b> Hand over the required materials and tools timely to interfacing team	<ul style="list-style-type: none"> <li>Describe the importance of creating cooperative work environment</li> <li>Describe the importance of resolving the co-worker's problems</li> </ul> <p><b><u>Practical Activity:</u></b></p>	<b>Total:</b> 11 hrs. <b>Theory:</b> 5 hrs. <b>Practical:</b> 6hrs	<div>Consumable</div> <ul style="list-style-type: none"> <li>Note Book</li> <li>Pen</li> <li>White board marker</li> <li>Duster</li> </ul> <div>Non-Consumable</div>	Class Room

	<p><b>2.</b> Work together with co-workers in an effective manner</p> <p><b>3.</b> Address the problems of co-worker effectively</p> <p><b>4.</b> Report to immediate boss</p>	<ul style="list-style-type: none"> <li>• Role Play, Support and guide stressed co-worker in his work-related activity</li> </ul>		<ul style="list-style-type: none"> <li>• White Board</li> <li>• Multimedia</li> <li>• Computer System</li> </ul>	
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## Module 3 : Perform Computer Applications

**Objective of the module:** This module covers the knowledge and skills required to prepare office documents, take offline and online backups, and perform files conversions efficiently.

<b>Duration:</b>	60Hours	<b>Theory:</b>	12 hours	<b>Practical:</b>	48 hours
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Learning Unit	Learning Outcomes	Learning Elements	Duration	Materials Required	Learning Place
LU1. Prepare spreadsheet using MS Excel	<b>Trainee will be able to:</b> <ol style="list-style-type: none"> <li>1. Create worksheet as per given data</li> <li>2. Format the worksheet according to given criteria</li> <li>3. Apply formulas according to the requirement</li> <li>4. Generate Charts/Graphs according to the given data</li> <li>5. Print Worksheet according to requirements</li> </ol>	<ul style="list-style-type: none"> <li>• Understanding of spreadsheet</li> <li>• Knowledge of inserting / deletion rows / columns,</li> <li>• Knowledge of formulas &amp; functions</li> <li>• Understanding of sorting, filtering, conditional formatting, Pivot tables, Freeze Panes</li> </ul> <p><b><u>Practical Activity</u></b></p> <ul style="list-style-type: none"> <li>• Practice to prepare result sheet automatic grade calculation</li> <li>• Practice to prepare attendance sheet and calculate average</li> </ul>	<b>Total:</b> 30 hrs	<b>Consumable</b>	Computer Lab
			<b>Theory:</b> 6 hrs  <b>Practical:</b> 24 hrs	<ul style="list-style-type: none"> <li>• White board marker</li> <li>• Duster</li> <li>• Note book</li> <li>• Pen</li> </ul> <p><b>Non-Consumable</b></p> <ul style="list-style-type: none"> <li>• Computer System</li> <li>• Printer</li> <li>• White board</li> <li>• Multimedia</li> </ul>	

		<p>number weekly present students</p> <ul style="list-style-type: none"> <li>Practice to prepare fee voucher according to template</li> </ul>			
<p><b>LU2.</b> Prepare a presentation using MS Power Point</p>	<p><b>Trainee will be able to:</b></p> <ol style="list-style-type: none"> <li>1. Insert slides with different layouts according to requirements of presentation.</li> <li>2. Insert text, tables, images, etc. according to the requirement.</li> <li>3. Apply a set of effects to animate the slide according to requirement.</li> <li>4. Apply slide transitions on slides according to requirement.</li> <li>5. Apply sound effects on objects/text/images according to requirement.</li> </ol>	<ul style="list-style-type: none"> <li>Understanding of different presentation software (Google slides Prezi, MS Power point, open office etc.)</li> <li>knowledge of blank / template</li> <li>describe transition effects to slides</li> <li>knowledge of animations to text and objects on slides</li> <li>Knowledge of rehearse timing</li> <li>Understanding of inserting audio / video</li> </ul> <p><b><u>Practical Activity</u></b></p> <ul style="list-style-type: none"> <li>Practice to prepare presentation with animation and video</li> </ul>	<p><b>Total:</b></p> <p>30 hrs</p> <p><b>Theory:</b></p> <p>6 hrs</p> <p><b>Practical:</b></p> <p>24 hrs</p>	<p><b>Consumable</b></p> <ul style="list-style-type: none"> <li>Note book</li> <li>Pen</li> <li>White board marker</li> <li>Duster</li> <li>MS PowerPoint</li> </ul> <p><b>Non-Consumable</b></p> <ul style="list-style-type: none"> <li>Computer System</li> <li>Printer</li> <li>White Board</li> <li>Multimedia</li> </ul>	Computer Lab



## Module 4 : Maintain Inventory at Site

**Objective of the module:** This module covers the knowledge and skills required to perform Browsing, Download / upload Data, create email accounts, Sort emails, Manage Address Book, archive email and Send/Receive emails.

**Duration: 80Hours**

**Theory: 11Hours**

**Practice: 69Hours**

Learning Unit	Learning Outcomes	Learning Elements	Duration	Materials Required	Learning Place
<b>LU1.</b> Explore capacities and utilization of site items	<b>Trainee will be able to:</b> <ol style="list-style-type: none"> <li>1. Identify capacity of shed and hatchery machinery and equipment as per manufacturers specifications</li> <li>2. Identify standard tools supplied with machines</li> <li>3. Identify spares/consumable materials</li> </ol>	<ul style="list-style-type: none"> <li>• Machinery used at hatchery and shed</li> <li>• Calculate capacity of shed</li> </ul> <p><b><u>Practical Activity</u></b></p> <ul style="list-style-type: none"> <li>• Practice calculates shed capacity and dimensions</li> <li>• Identification of machinery and its usage at shed/hatchery</li> </ul>	<p><b>Total:</b> 25 hrs</p> <p><b>Theory:</b> 4hrs</p> <p><b>Practical:</b> 21 hrs</p>	<p><b>Consumable</b></p> <ul style="list-style-type: none"> <li>• Note book</li> <li>• Pen</li> <li>• Log register</li> <li>• White board marker</li> <li>• Duster</li> </ul> <p><b>Non-Consumable</b></p> <ul style="list-style-type: none"> <li>• Computer System</li> <li>• Printer</li> <li>• White Board</li> <li>• Multimedia</li> </ul>	Class room/site

<b>LU2.</b> Maintain tool box	<b>Trainee will be able to:</b> <ol style="list-style-type: none"> <li>1. Check physical condition of tools</li> <li>2. Place tools in tool box as per layout</li> <li>3. Perform preventive maintenance of tools as per standards</li> <li>4. Perform corrective maintenance of tools as per standards</li> <li>5. Clean tools after use</li> </ol>	<ul style="list-style-type: none"> <li>• Toolbox maintenance and its importance</li> <li>• Cleaning SOPs for toolbox</li> </ul> <p><b><u>Practical Activity</u></b></p> <p>Practice to inspect toolbox</p> <p>Practice to arrange and clean different tools as per mock situation</p>	<p><b>Total:</b></p> <p>28 hrs</p> <p><b>Theory:</b></p> <p>4 hrs</p> <p><b>Practical:</b></p> <p>24 hrs</p>	<p><b>Consumable</b></p> <ul style="list-style-type: none"> <li>• White board marker</li> <li>• Duster</li> <li>• Note book</li> <li>• Pen</li> <li>• Log register</li> </ul> <p><b>Non-Consumable</b></p> <ul style="list-style-type: none"> <li>• Computer System</li> <li>• Tool box</li> <li>• White Board</li> <li>• Multimedia</li> </ul>	<p>Class room/site</p>
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<b>LU3. Manage</b> Inventory of tools, equipment and consumable items	<b>Trainee will be able to:</b> <ol style="list-style-type: none"> <li>1. Count number of tools, equipment and consumable items as per record</li> <li>2. Report for faulty tools and equipment</li> <li>3. Generate demand for consumable items, defective tools and equipment</li> <li>4. Prepare record of all tools, equipment and consumable items</li> </ol>	<ul style="list-style-type: none"> <li>• Toolbox requirement at hatchery and shed</li> <li>• Inventory preparation elements</li> </ul> <p><b><u>Practical Activity</u></b></p> <ul style="list-style-type: none"> <li>• Arrange tools according to mock situation</li> <li>• Prepare demand for the required tools</li> </ul>	<b>Total:</b> 27hrs  <b>Theory:</b> 3 hrs  <b>Practical:</b> 24hrs	<div>Consumable</div> <ul style="list-style-type: none"> <li>• Note book</li> <li>• Pen</li> <li>• White board marker</li> <li>• Duster</li> <li>• Log register</li> </ul> <div>Non-Consumable</div> <ul style="list-style-type: none"> <li>• White Board</li> <li>• Multimedia</li> <li>• Computer System</li> </ul>	Class room/site
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## Module 5 : Perform Feeding, Watering and Light Management

**Objective of the module:** This module covers the skills and required knowledge to perform feeding, watering and light management. The underpinning knowledge regarding poultry bird feed, light and watering will be sufficient to provide the basis for the job at workplace.

**Duration:** 180hours **Theory:** 30hours **Practical:** 150hours

Learning Unit	Learning Outcomes	Learning Elements	Duration	Materials Required	Learning Place
<b>LU1.</b> Measure poultry birds feed	<p><b>The trainee will be able to:</b></p> <ol style="list-style-type: none"> <li>1. Interpret feed manual</li> <li>2. Calculate total feed bags per shed</li> <li>3. Adjust the numbers of the feeder according to the total feed</li> <li>4. Calculate the feed according to the age of bird</li> <li>5. Calculate the feed according to the type of poultry bird</li> </ol>	<ul style="list-style-type: none"> <li>• Knowledge of weighing balance</li> <li>• Importance of feed according to bird's requirement</li> <li>• Knowledge of feed requirement according to bird type, age and production</li> <li>• Types of feed</li> <li>• Understanding of different feeding methods</li> <li>• Knowledge of feeding tools, equipment and management</li> </ul>	<p><b>Total:</b> 40hrs</p> <p><b>Theory:</b> 05hrs</p> <p><b>Practical:</b> 35hrs</p>	<p><b>Consumable</b></p> <ul style="list-style-type: none"> <li>• Note book</li> <li>• Pencil</li> <li>• Sharpener</li> <li>• Eraser</li> <li>• White board marker</li> <li>• Duster</li> </ul> <p><b>Non-Consumable</b></p> <ul style="list-style-type: none"> <li>• Computer System</li> <li>• White Board</li> <li>• Multimedia</li> <li>• Feed manuals</li> </ul>	Class room/Poultry farm

	<p>6. Calculate the feed according to the production of the bird</p> <p>7. Maintain record</p>	<p><b><u>Practical Activity:</u></b></p> <ul style="list-style-type: none"> <li>• Practice of feed calculation</li> <li>• Practice to interpret feed manual</li> <li>• Practice to maintain record of feed bags</li> <li>• Practice to calculate number of feeders according to bird's requirement</li> </ul>		<ul style="list-style-type: none"> <li>• Record register</li> <li>• Calculator</li> </ul>	
<p><b>LU2.</b> Prepare feed manually</p>	<p><b>Trainee will be able to:</b></p> <ol style="list-style-type: none"> <li>1. Arrange raw materials as per requirement</li> <li>2. Measure quality of feed ingredients as per SOPs</li> <li>3. Perform weighing according to requirement</li> <li>4. Perform grinding of ingredients</li> <li>5. Perform mixing of ingredients</li> </ol>	<ul style="list-style-type: none"> <li>• Describe types of raw material</li> <li>• Understanding of physical analysis of raw materials</li> <li>• Knowledge of grinding and mixing Protocol</li> <li>• Describe types of grinder and mixers</li> <li>• Understanding of feed storage SOPs and conditions</li> </ul> <p><b><u>Practical Activity: -</u></b></p> <ul style="list-style-type: none"> <li>• Practice of physical analysis of raw materials</li> </ul>	<p><b>Total</b></p> <p>40hrs</p> <p><b>Theory:</b></p> <p>10hrs</p> <p><b>Practical:</b></p> <p>30hrs</p>	<p><b>Consumable</b></p> <ul style="list-style-type: none"> <li>• Note book</li> <li>• Pencil</li> <li>• Sharpener</li> <li>• Eraser</li> <li>• White board marker</li> <li>• Duster</li> <li>• Feed ingredients</li> <li>• PPEs</li> </ul> <p><b>Non-Consumable</b></p> <ul style="list-style-type: none"> <li>• Computer System</li> <li>• Printer</li> <li>• Scanner</li> </ul>	<p>Class room/Poultry farm</p>

	<p>6. Store prepared feed according to work instruction</p> <p>7. Maintain record</p>	<ul style="list-style-type: none"> <li>Practice to grind and mix raw materials</li> <li>Practice to maintain record of feed manufacturing</li> </ul>		<ul style="list-style-type: none"> <li>White Board</li> <li>Multimedia</li> <li>Feed manuals</li> <li>Record register</li> <li>Calculator</li> <li>Weighing balance</li> <li>Feed grinder</li> <li>Feed mixer</li> <li>Feed bags</li> </ul>	
<p><b>LU3.</b> Execute light schedule</p>	<p><b>Trainee will be able to:</b></p> <ol style="list-style-type: none"> <li>1. Arrange tool and materials for light management</li> <li>2. Maintain light management for broiler</li> <li>3. Maintain light management for layer</li> <li>4. Maintain light management for breeder</li> <li>5. Perform troubleshooting for light</li> </ol>	<ul style="list-style-type: none"> <li>Knowledge of light requirement according to bird type and age</li> <li>Knowledge of lighting sources</li> <li>Knowledge of alternative light sources during troubleshooting</li> <li>Understanding of basic tools and material for lighting</li> </ul> <p><b><u>Practical Activity: -</u></b></p> <ul style="list-style-type: none"> <li>Practice of lighting schedule</li> <li>Practice to perform troubleshooting for light</li> </ul>	<p><b>Total</b></p> <p>55hrs</p> <p><b>Theory:</b></p> <p>10hrs</p> <p><b>Practical:</b></p> <p>45hrs</p>	<p><b>Consumable</b></p> <ul style="list-style-type: none"> <li>Note book</li> <li>Pencil</li> <li>Sharpener</li> <li>Eraser</li> <li>White board marker</li> <li>Duster</li> <li>Bulb</li> </ul> <p><b>Non-Consumable</b></p> <ul style="list-style-type: none"> <li>Computer System</li> <li>White Board</li> <li>Multimedia</li> <li>Feed manuals</li> </ul>	<p>Class room/Poultry farm</p>

				<ul style="list-style-type: none"> <li>Record register</li> <li>Calculator</li> <li>Lux meter</li> <li>Light manuals for every breed</li> </ul>	
<b>LU4.</b> Perform water management	<p><b><i>You must be able to:</i></b></p> <ol style="list-style-type: none"> <li>1. Arrange tool and materials for water management</li> <li>2. Collect water sample according to SOPs</li> <li>3. Measure water pH</li> <li>4. Maintain water pH</li> <li>5. Perform chlorination as per SOPs</li> <li>6. Calculate water intake</li> <li>7. Maintain water temperature</li> <li>8. Maintain water odour</li> <li>9. Maintain Total Dissolve Solids level (TDS)</li> <li>10. Maintain water system management</li> </ol>	<ul style="list-style-type: none"> <li>Knowledge of water quality</li> <li>Understanding of watering tools, equipment and management</li> <li>Knowledge of water quality testing</li> <li>Knowledge of chlorination</li> </ul> <p><b><u>Practical Activity: -</u></b></p> <ul style="list-style-type: none"> <li>Practice to calculate daily water requirement</li> <li>Practice to perform water sampling</li> <li>Practice to check water pH</li> <li>Practice of water chlorination</li> </ul>	<p><b>Total</b></p> <p>45hrs</p> <p><b>Theory:</b></p> <p>05hrs</p> <p><b>Practical:</b></p> <p>40hrs</p>	<p><b>Consumable</b></p> <ul style="list-style-type: none"> <li>Note book</li> <li>Pencil</li> <li>Sharpener</li> <li>Eraser</li> <li>White board marker</li> <li>Duster</li> <li>Chemicals</li> <li>Water sample bottles</li> </ul> <p><b>Non-Consumable</b></p> <ul style="list-style-type: none"> <li>Computer System</li> <li>White Board</li> <li>Multimedia</li> <li>Feed manuals</li> <li>Record register</li> <li>Calculator</li> <li>Water line</li> </ul>	Class room/Poultry farm

				<ul style="list-style-type: none"><li>• pH meter</li><li>• Drinkers</li><li>• Water tank</li><li>• TDS meter</li><li>• PPEs</li></ul>	
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## Module 6 : Perform Basic Hatchery Operations

**Objective of the module:** After this module candidate will be able to perform Hatchery operations.

**Duration:** 150 hours    **Theory:** 30 hours    **Practical:** 120 hours

Learning Unit	Learning Outcomes	Learning Elements	Duration	Materials Required	Learning Place
<b>LU1:</b> Perform selection of settable eggs	<b>The trainee will be able to:</b> <ol style="list-style-type: none"> <li>1. Wear PPEs</li> <li>2. Separate eggs on physical basis</li> <li>3. Perform grading of eggs</li> <li>4. Perform candling of eggs</li> <li>5. Maintain record</li> </ol>	<ul style="list-style-type: none"> <li>• Describe parameters of physical analysis of eggs</li> <li>• Understanding the importance and procedure of egg candling</li> <li>• Understanding importance and procedures of egg grading</li> <li>• Knowledge of record keeping</li> <li>• Knowledge of PPEs</li> </ul> <p><b><u>Practical Activity:</u></b></p> <ul style="list-style-type: none"> <li>• Practice the physical analysis of settable eggs</li> <li>• Practice the candling procedure</li> <li>• Practice to maintain record</li> </ul>	<p><b>Total:</b> 38hrs</p> <p><b>Theory:</b> 08hrs</p> <p><b>Practical:</b> 30hrs</p>	<p><b>Consumable</b></p> <ul style="list-style-type: none"> <li>• Note book</li> <li>• Pencil</li> <li>• Eraser</li> <li>• Sharpener</li> <li>• White board marker</li> <li>• Duster</li> <li>• Eggs</li> <li>• Stock register</li> <li>• PPEs</li> </ul> <p><b>Non-Consumable</b></p> <ul style="list-style-type: none"> <li>• Computer System</li> <li>• White Board</li> </ul>	Class room/Hatchery

				<ul style="list-style-type: none"> <li>• Multimedia</li> <li>• PPEs</li> <li>• Weighing balance</li> <li>• Candler</li> </ul>	
<b>LU2:</b> Maintain environmental condition in incubator	<b>Trainee will be able to:</b> <ol style="list-style-type: none"> <li>1. Calibrate the incubation tools</li> <li>2. Maintain temperature in setter and Hatcher</li> <li>3. Maintain relative humidity in setter and Hatcher</li> <li>4. Maintain air quality</li> </ol>	<ul style="list-style-type: none"> <li>• Knowledge of PPEs</li> <li>• Knowledge of incubator tools and equipment</li> <li>• Describe types and capacity of incubator</li> <li>• Knowledge of standard environmental conditions for incubation</li> </ul> <p><b><u>Practical Activity:</u></b></p> <ul style="list-style-type: none"> <li>• Practice to calibrate incubation tools</li> <li>• Practice to maintain environmental conditions of incubator</li> </ul>	<b>Total:</b> 30hrs  <b>Theory:</b> 05hrs  <b>Practical:</b> 25hrs	<div>Consumable</div> <ul style="list-style-type: none"> <li>• Note book</li> <li>• Pencil</li> <li>• Eraser</li> <li>• Sharpener</li> <li>• White board marker</li> <li>• Duster</li> </ul> <div>Non-Consumable</div> <ul style="list-style-type: none"> <li>• Computer System</li> <li>• White Board</li> <li>• Multimedia</li> <li>• Incubator</li> <li>• Hygrometer</li> <li>• Thermometer</li> </ul>	Class room/Hatchery

				<ul style="list-style-type: none"> <li>• Ammonia meter</li> <li>• Carbon dioxide meter</li> </ul>	
<b>LU3.</b> Carry out Hatch pull	<b>Trainee will be able to:</b> <ol style="list-style-type: none"> <li>1. Remove un- hatched eggs</li> <li>2. Perform egg breakout analysis</li> <li>3. Maintain record</li> </ol>	<ul style="list-style-type: none"> <li>• Knowledge about PPEs</li> <li>• Understanding of hatch window</li> <li>• Knowledge of record keeping</li> </ul> <p><b><u>Practical Activity</u></b></p> <ul style="list-style-type: none"> <li>• Practice of egg break out analysis</li> <li>• Practice to maintain record</li> </ul>	<b>Total:</b> 20hrs  <b>Theory:</b> 5hrs  <b>Practical:</b> 15hrs	<div>Consumable</div> <ul style="list-style-type: none"> <li>• Note book</li> <li>• Pencil</li> <li>• Eraser</li> <li>• Sharpener</li> <li>• White board marker</li> <li>• Duster</li> <li>• PPEs</li> </ul> <div>Non-Consumable</div> <ul style="list-style-type: none"> <li>• Computer System</li> <li>• White Board</li> <li>• Multimedia</li> <li>• PPEs</li> <li>• Petri dishes</li> <li>• Buckets</li> </ul>	Class room/Hatchery

				<ul style="list-style-type: none"> <li>Log register</li> </ul>	
<b>LU4.</b> Perform hatchery sanitation	<b>Trainee will be able to:</b> <ol style="list-style-type: none"> <li>1. Arrange tools and material</li> <li>2. Remove organic waste as per SOPs</li> <li>3. Perform dry cleaning of site as per SOPs</li> <li>4. Perform wet cleaning of site as per SOPs</li> <li>5. Perform disinfection of equipment and site as per SOPs</li> <li>6. Perform sanitization of equipment and site as per SOPs</li> <li>7. Maintain record</li> </ol>	<ul style="list-style-type: none"> <li>Understanding of PPEs</li> <li>Knowledge of tools and material required for sanitation of equipment and hatchery</li> <li>Understanding of different disinfectants used at hatchery</li> <li>Knowledge of record keeping</li> <li>Describe the importance of sanitation</li> <li>Understanding of dry and wet cleaning procedures</li> <li>Understanding of disinfection and sanitation procedures</li> <li>Explain disposal of organic waste materials at hatchery</li> </ul> <p><b><u>Practical Activity:</u></b></p> <ul style="list-style-type: none"> <li>Practice to remove organic waste at hatchery</li> <li>Practice dry and wet cleaning at hatchery</li> </ul>	<b>Total:</b> 62hrs  <b>Theory:</b> 12hrs  <b>Practical:</b> 50hrs	<b>Consumable</b> <ul style="list-style-type: none"> <li>White board marker</li> <li>Duster</li> <li>PPEs</li> <li>Cleaning chemicals</li> <li>Sanitizers</li> <li>Disinfectants</li> </ul> <b>Non-Consumable</b> <ul style="list-style-type: none"> <li>Computer System</li> <li>White Board</li> <li>Multimedia</li> <li>Log register</li> <li>Dry cleaning tools</li> <li>Wet cleaning tools</li> </ul>	Class room/Hatchery

		<ul style="list-style-type: none"> <li>• Practice of disinfection and sanitization of equipment/tools and hatchery</li> <li>• Practice to maintain record</li> </ul>		<ul style="list-style-type: none"> <li>• Baskets for organic waste</li> <li>• Spade</li> <li>• Wheel barrow</li> <li>• Record register</li> </ul>	
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## General assessment guidance for “*Head Worker*”

Good practice in Pakistan makes use of sessional and final assessments, the basis of which is described below. Good practice by vocational training providers in Pakistan is to use a combination of these sessional and final assessments, combined to produce the final qualification result.

**Sessional assessment** is going on all the time. Its purpose is to provide feedback on what students are learning:

- To the student: to identify achievement and areas for further work
- To the teacher: to evaluate the effectiveness of teaching to date, and to focus future plans.

Assessors need to devise sessional assessments for both theoretical and practical work. Guidance is provided in the assessment strategy

**Final assessment** is the assessment, usually on completion of a course or module, which says whether or not the student has "passed". It is – or should be – undertaken with reference to all the objectives or outcomes of the course, and is usually fairly formal. Considerations of security – ensuring that the student who gets the credit is the person who did the work – assume considerable importance in final assessment.

### Methods of assessment

For lessons with a high quantity of theory, written or oral tests related to learning outcomes and/ or learning content can be conducted. For workplace lessons, assessment can focus on the quality of planning the related process, the quality of executing the process, the quality of the product and/or evaluation of the process.

Methods include direct assessment, which is the most desirable form of assessment. For this method, evidence is obtained by direct observation of the student's performance.

Examples for direct assessment of Head worker:

- Work performances, for example perform feeding and water system management
- Demonstrations, for example basic hatchery operations
- Direct questioning, where the assessor would ask the student why he is preparing for a particular application.

- Paper-based tests, such as short answer questions on health and safety, communication skills etc.

Indirect assessment is the method used where the performance could not be watched and evidence is gained indirectly.

Examples for indirect assessment of Head worker include:

- Work products, Project portfolio
- Workplace documents, such as a report about how to maintain safety at site, inventory at site etc.

Indirect assessment should only be a second choice. (In some cases, it may not even be guaranteed that the work products were produced by the person being assessed.)

### **Principles of assessment**

All assessments should be valid, reliable, fair and flexible:

Fairness means that there should be no advantages or disadvantages for any assessed person. For example, it should not happen that one student gets prior information about the type of work performance that will be assessed, while another candidate does not get any prior information.

Reliability means that the assessment is consistent and reproducible. The results for the particular application should be the same.

Flexibility means that the assessor has to be flexible concerning the assessment approach. For example, if there is a power failure during the assessment, the assessor should modify the arrangements to accommodate the students' needs.

### **Assessment strategy for “Head Worker”**

This curriculum consists of 6 modules

- Maintain Safety at Site
- Work in a Team Environment
- Perform Computer Applications
- Maintain Inventory at Site
- Perform Feeding and Water System Management
- Perform Basic Hatchery Operations

## **Sessional assessment**

The Sessional assessment for all modules shall be in two parts: theoretical assessment and practical assessment. The Sessional marks shall contribute to the final qualification.

Theoretical assessment for all learning modules must consist of a written paper lasting at least half-hour per module. This can be short answer questions.

For practical assessment, all procedures and methods for the modules must be assessed on a sessional basis. Guidance is provided below under Planning for assessment.

## **Final assessment**

Final assessment shall be in two parts: theoretical assessment and practical assessment. The final assessment marks shall contribute to the final qualification.

The final theoretical assessment shall consist of short-answer questions. This part shall cover the technical, functional and generic modules:

### **For Level -3**

- Module 1: Maintain Safety at Site
- Module 2: Work in a Team Environment
- Module 3: Perform Computer Applications
- Module 4: Maintain Inventory at Site
- Module 5: Perform Feeding and Water System Management
- Module 6: Perform Basic Hatchery Operations

For the final practical assessment each student shall be assessed over a period of one day, with Four-hour sessions for each student. During this period, each student must be assessed on his/her ability to the following parameters of security services;

- Area of responsibility
- Tasks
- Guards
- Resources and duties



## Complete list of tools and equipment

Sr#	Description	Quantity
1	Air inlet	5
2	Bulb	As per requirement
3	Calculator	25
4	Candler	5
5	Compressed air system	1
6	Computers	26
7	Cooling pads	2
8	Dust bin	10
9	Egg Storage cabinet	2
10	Egg trolleys	5
11	Eggs transport cart	2
12	Emergency standby electric plants	1
13	Feeder	10
14	Fire Buckets	5
15	Fire Extinguishers	5
16	Fumigator	5
17	Grinder	1
18	Heater	5
19	Incubator	1
20	Internet router	2
21	Lux meter	2
22	Measuring Tape	25
23	Mixer	2
24	Multimeter	2
25	Paint brush	25
26	Petri dish	25
27	pH Meter	1
28	Plastic crate	5
29	Printer	1

30	Racker	5
31	Refrigerator	1
32	Relative humidity sensors	1
33	Safety Blankets	5
34	Scanner	1
35	Shell grit box	10
36	Shifting trays	5
37	Showers (Bath)	5
38	Spade	10
39	Spray pumps	5
40	Stamp	10
41	TDS meter	1
42	Temperature Sensors	1
43	Thermometer wet bulb	5
44	Ventilation Fan	5
45	Water drinkers	10
46	Water tank	2
47	Weighing balance	5
48	Wheel barrow	5
49	Wiper	10
50	Wire Brush	10
51	Hygrometer	1
52	Ammonia meter	1
53	Carbon dioxide meter	1

## List of consumable supplies

Sr. #	Description	Quantity
1.	Cleaning chemicals	As per requirement
2.	Feed manuals	25
3.	First aid Kit	2
4.	Hose pipe	100 ft
5.	Plastic sheets	As per requirement
6.	PPEs	25 sets
7.	Rice husk	As per requirement
8.	Stationary Items	25 sets
9.	Syringes	5 Box

## Credit values

The credit value of the National Certificate Security Services is defined by estimating the amount of time/ instruction hours required to complete each competency unit and competency standard. The NVQF uses a standard credit value of 1 credit = 10 hours of learning (Following Higher Education Commission (HEC) guidelines).

The credit values are as follows:

Competency Standard	Estimate of hours	Credit
<b>Module:1</b> Maintain Safety at Site	80	8
<b>Module:2</b> Work in a Team Environment	50	5
<b>Module:3</b> Perform Computer Applications	60	6
<b>Module:4</b> Maintain Inventory at Site	80	8
<b>Module:5</b> Perform Feeding and Water System Management	180	18
<b>Module:6</b> Perform Basic Hatchery Operations	150	15
<b>Total</b>	<b>600</b>	<b>60</b>

## Members of the Curriculum Development Committee

Sr. #	Name	Designation
1.	Mr. Muhammad Ishaq	Deputy Director (TE) /Coordinator/r NAVTTC HQ
2.	Ms. Saima Asghar	DACUM Facilitator, Lahore
3.	Mr. Shahid Javaid	Assistant Professor, Department of Poultry, UVAS Pattoki
4.	Hafiz Rao Abdul Latif	Lecturer, UVAS Lahore
5.	Mr. Shaharyar Ali	MPhil. Scholar, UVAS Lahore
6.	Mr. Mohammad Saleem Minhas	Broiler Farmer Farms, Sialkot
7.	Mr. Faizan Nawaz Qureshi	Farm Supervisor, Poultry Research Institute, Rawalpindi
8.	Mr. Raja Shahid Khan	Veterinary Officer, Poultry Research Institute, Jabba Mansehra
9.	Mr. Mohammad Saeed Ahmad	Agriculture Officer, UVAS, Pattoki
10.	Mr Nazim Khawar Butt	Owner, poultry & hatchery, Lahore
11.	Ms. Maryum Shakir	Ms. Scholar (Agriculture Deptt) Lahore
12.	Ms. Maria Ubaid	M. Phil. Research Punjab University, Lahore
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14.	Syed Fawad Ali	Assistant Professor, Sindh Agriculture University, Tandojam
15.	Ms. Hamna	Food Technologist. GCU, Faisalabad

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5.	Ms. Ayesha Siddique	Instructor, Community College, Faisalabad
6.	Hafiz Rao Abdul Latif	Lecturer, UVAS Lahore
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