



Skill India
कौशल भारत - कुशल भारत



**APPAREL MADE-UPS HOME FURNISHING
SECTOR SKILL COUNCIL**

Facilitator Guide



Sector
Apparel

Sub-Sector
Apparel, Made-Ups & Home Furnishing

Occupation
Quality Assurance

Reference ID: AMH/Q0104, Version 1.0
NSQF level: 5

**Apparel
Quality
Analyst**

Apparel, Made-Ups & Home Furnishing Sector Skill Council

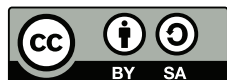
Email: info@sscamh.com

Website: www.sscamh.com

Phone: (+91) 011 - 40160600

Printed in India by AMHSSC

Attribution-ShareAlike: CC BY-SA



Disclaimer

The information contained herein has been obtained from various reliable sources. Apparel, Made-Ups & Home Furnishing Sector Skill Council disclaims all warranties to the accuracy, completeness or adequacy of such information. Apparel, Made-Ups & Home Furnishing Sector Skill Council shall have no liability for errors, omissions, or inadequacies, in the information contained herein, or for interpretations thereof. Every effort has been made to trace the owners of the copyright material included in the book. The publishers would be grateful for any omissions brought to their notice for acknowledgements in future editions of the book. No entity in Apparel, Made-Ups & Home Furnishing Sector Skill Council shall be responsible for any loss whatsoever, sustained by any person who relies on this material. All pictures shown are for illustration purpose only. The coded boxes in the book called Quick Response Code (QR code) will help to access the e-resources linked to the content. These QR codes are generated from links and YouTube video resources available on Internet for knowledge enhancement on the topic and are not created by AMHSSC. Embedding of the link or QR code in the content should not be assumed endorsement of any kind. Apparel, Made-Ups & Home Furnishing Sector Skill Council is not responsible for the views expressed or content or reliability of linked videos. AMHSSC cannot guarantee that these links/QR codes will work all the time as we do not have control over availability of the linked pages.





Shri Narendra Modi
Prime Minister of India

“

Skill development of the new generation is a national need and is the foundation of Aatmnirbhar Bharat

”



Acknowledgements

Apparel, Made-ups & Home Furnishing Sector Skill Council would like to express its gratitude to all the individuals and institutions who contributed in different ways towards the preparation of this “Facilitator Guide”. Without their contribution it could not have been completed. Special thanks are extended to those who collaborated in the preparation of its different modules. Sincere appreciation is also extended to all who provided peer review for these modules.

The preparation of this facilitator guide would not have been possible without the Apparel Industry’s support. Industry feedback has been extremely encouraging from inception to conclusion and it is with their input that we have tried to bridge the skill gaps existing today in the industry.

This facilitator guide is dedicated to the aspiring youth who desire to achieve special skills which will be a lifelong asset for their future endeavours.

About this Guide

The facilitator guide (FG) for Apparel Quality Analyst is primarily designed to facilitate skill development and training of people, who want to become professional Apparel Quality Analyst. The facilitator guide is aligned to the Qualification Pack (QP) and the National Occupational Standards (NOS) as drafted by the **Sector Skill Council** and ratified by National Skill Development Corporation (NSDC).

It includes the following National Occupational Standards (NOSs)-

1. AMH/N0108: Analyze and Classify Garment Defects in Apparel Production
2. AMH/N0109: Analyze Data and Prepare Quality Insights Reports
3. AMH/N0110: Integrate Digital and AI Tools in Quality Assurance Systems
4. AMH/N0111: Utilize AI-Based Analytics for Quality Monitoring
5. AMH/N0112: Apply Quality Control Tools and Techniques
6. AMH/N0113: Document, Report, and Visualize Quality Data
7. AMH/N0620: Promote and sustain safety, health, and security in workplace, while fostering Gender and Persons with Disabilities (PWD) Sensitization
8. AMH/N0621: Adhere to industry, regulatory, and organizational standards and embrace environmentally sustainable practices
9. DGT/VSQ/N0102: Employability Skills (60 Hours)

Post this training, the participants will be able to perform tasks as Apparel Quality Analyst. We hope that this Facilitator Guide provides a sound learning support to our young friends to build a lucrative career in the Apparel, Made-Ups & Home Furnishing Sector Skill Council of our country.

Symbols Used



Ask



Explain



Elaborate



Notes



Objectives



Do



Demonstrate



Activity



Team Activity



Facilitation Notes



Practical



Say



Resources



Example



Summary



Role Play



Learning Outcomes



Exercise

Table of Contents

S. No	Modules and Units	Page No
1.	Introduction and Orientation to Apparel Quality Analyst (Bridge Module)	1
	Unit 1.1 - Apparel Quality Analyst Profession Insights	3
2.	Analyse and Classify Garment Defects in Apparel Production (AMH/N0108)	9
	Unit 2.1 - Garment Defects and Quality Evaluation	11
	Unit 2.2 - Quality Documentation and Inspection Practices	15
3.	Analyse Data and Prepare Quality Insights Reports (AMH/N0109)	19
	Unit 3.1 - Production Quality Control Processes	21
	Unit 3.2 - Quality Documentation and Records	25
4.	Integrate Digital and AI Tools in Quality Assurance Systems (AMH/N0110)	31
	Unit 4.1 - AI Quality Systems Fundamentals	33
	Unit 4.2 - AI Quality Data Analysis	37
5.	Utilise AI-Based Analytics for Quality Monitoring (AMH/N0111)	43
	Unit 5.1 - AI-Powered Quality Analysis and Improvement	45
6.	Apply Quality Control Tools and Techniques (AMH/N0112)	51
	Unit 6.1 - Quality Control Analysis Techniques	53
	Unit 6.2 - Quality Improvement Documentation Practices	57
7.	Document, Report, and Visualise Quality Data (AMH/N0113)	63
	Unit 7.1 - Documentation Reporting	65
	Unit 7.2 - Data Analysis	69
8.	Promote and Sustain Safety, Health, and Security in Workplace, while Fostering Gender and Persons with Disabilities (PwD) Sensitisation (AMH/N0620)	75
	Unit 8.1 - Workplace Safety and Compliance	77
	Unit 8.2 - Equipment Operations and Documentation	81
	Unit 8.3 - Quality Environment and Sustainability	85



S. No	Modules and Units	Page No
9.	Adhere to Industry, Regulatory, and Organisational Standards and Embrace Environmentally Sustainable Practices (AMH/N0621)	91
	Unit 9.1 - Professional Conduct and Workplace Compliance	93
	Unit 9.2 - Legal Compliance and Sustainable Practices	97
	Unit 9.3 - Sustainable Resource and Waste Management	101
10.	Employability Skills (DGT/VSQ/N0102) (60 Hours)	107
	Employability Skills is available at the following location :	
	https://www.skillindiadigital.gov.in/content/list	
	Scan the QR code below to access the ebook	
		
11.	Annexures	109
	Annexure I: Training Delivery Plan	110
	Annexure II: Assessment Criteria	134
	Annexure III: List of QR Codes Used in PHB	140





Skill India
कौशल भारत - कुशल भारत

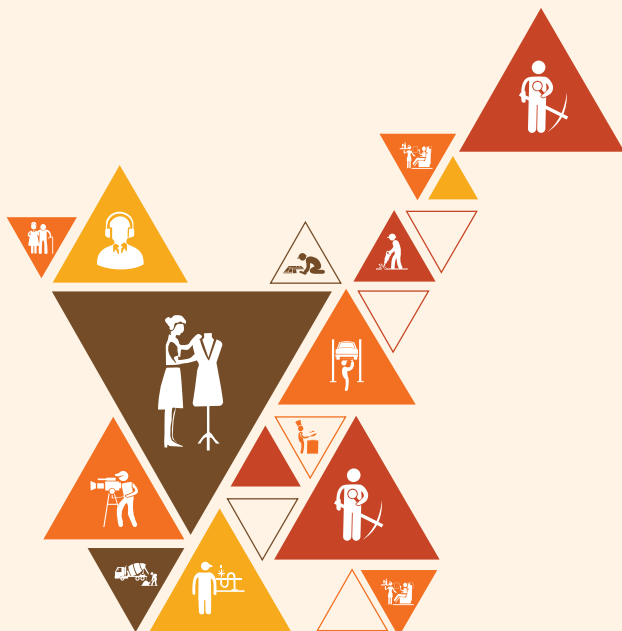


सत्यमेव जयते
GOVERNMENT OF INDIA
MINISTRY OF SKILL DEVELOPMENT
& ENTREPRENEURSHIP



1. Introduction and Orientation to Apparel Quality Analyst

Unit 1.1 - Apparel Quality Analyst Profession Insights



Bridge Module

Key Learning Outcomes



By the end of this module, the participants will be able to:

1. Describe the size and scope of the apparel industry and the production processes within it.
2. Discuss the specific roles and responsibilities of an Apparel Quality Analyst in ensuring production standards.
3. Outline the various employment opportunities available for an Apparel Quality Analyst across different industry settings.
4. Elucidate the critical role that an Apparel Quality Analyst plays throughout each stage of the apparel production process.

Unit 1.1: Apparel Quality Analyst Profession Insights

Unit Objectives

By the end of this unit, the participants will be able to:

1. Describe the structural size, scope, and production workflows defining the modern apparel industry.
2. Discuss the operational responsibilities and professional duties assigned to an Apparel Quality Analyst.
3. Outline the diverse career pathways and placement settings available to an Apparel Quality Analyst.
4. Elucidate the exact function and impact of an Apparel Quality Analyst during manufacturing stages.

Resources to be Used

Participant handbook, Notepad, pen, whiteboard, markers, presentation slides, overhead projector or large screen, computer/laptop with internet connection.

Do

- Welcome the participants and introduce yourself, including your experience in the apparel manufacturing and quality assurance industry.
- Explain the agenda and objectives of the session, providing an overview of the apparel industry, the role of an Apparel Quality Analyst, career opportunities, and quality management across manufacturing stages.
- Hand out the participant handbook, notepad, and pen to each participant.
- Ensure that the whiteboard, markers, and computer/laptop with internet connection are set up and functioning properly.
- Make sure the presentation slides showing the apparel manufacturing process, industry statistics, and career pathways are ready for display on the overhead projector or large screen.
- Ask participants to introduce themselves briefly and share their interest or prior experience in the apparel or textile industry.
- Inform participants that the session will include discussions, an ice-breaker activity, a demonstration, and a roleplay.
- Ensure that all participants are comfortable with the room setup and can clearly view the presentation and demonstration materials.

Say

- Welcome everyone to this session on Apparel Quality Analyst Profession Insights.
- By the end of this session, you will understand the size, scope, and production workflow of the modern apparel industry.
- You will learn about the responsibilities, professional duties, and importance of an Apparel Quality Analyst in maintaining garment quality throughout manufacturing.

- We will also explore the various career opportunities and work environments available for Apparel Quality Analysts in the apparel sector.
- This session will help you understand how quality professionals contribute to producing garments that meet customer expectations and international quality standards.

Ask

- What types of garments do you think are manufactured in the apparel industry?
- Why do you think quality is important in garment manufacturing?
- What responsibilities do you think an Apparel Quality Analyst performs during production?
- In which organisations or industries do you think an Apparel Quality Analyst can find employment?
- How can maintaining good quality improve a company's reputation and customer satisfaction?

Activity

1. **Name of the Activity:** Threading our journey together
2. **Objective:** To help participants and the trainer become familiar with one another, create a comfortable learning environment, and introduce participants to the apparel quality analyst course and its objectives.
3. **Type of activity:** Interactive group activity
4. **Resources:** Participant handbook, notepad, pen, whiteboard, markers, and name tags (optional).
5. **Duration of the activity:** 15 minutes
6. **Instructions:**
 - Divide the participants into groups of 4–5 members each.
 - Welcome the participants, introduce yourself, and provide a brief overview of the Apparel Quality Analyst course and its objectives.
 - Ask each participant to introduce themselves by sharing their name, educational background or work experience, reason for joining the course, and one learning expectation.
 - Record the participants' expectations on the whiteboard under the heading "Our Learning Goals."
 - Pair participants to briefly discuss their career goals and expectations, then invite a few pairs to introduce each other to the class.
 - Conclude by explaining how the course content, practical activities, demonstrations, and assessments will help participants achieve their learning and career goals.
7. **Outcome:** Participants will become familiar with the trainer and fellow participants, feel comfortable participating in the learning process, understand the objectives of the apparel quality analyst course, and begin building a collaborative classroom environment.

Elaborate

- The apparel industry is one of the world's largest manufacturing sectors, covering fibre production, fabric manufacturing, garment production, finishing, quality assurance, retail, exports, and fashion merchandising.
- Garment production follows a systematic workflow that includes fabric inspection, pattern making, cutting, stitching, finishing, quality inspection, packing, and shipment.
- Apparel Quality Analysts are responsible for monitoring product quality throughout the manufacturing process by identifying defects, verifying measurements, and ensuring compliance with buyer specifications.
- Quality Analysts work closely with production teams to identify quality issues, recommend corrective actions, and improve manufacturing efficiency.
- Career opportunities for Apparel Quality Analysts are available in garment manufacturing units, export houses, buying offices, quality testing laboratories, retail quality departments, and third-party inspection agencies.

Explain

- The modern apparel industry operates through an integrated production system where each department contributes to producing high-quality garments efficiently.
- An Apparel Quality Analyst ensures that raw materials, in-process garments, and finished products comply with organisational quality standards and customer requirements.
- During manufacturing, the Quality Analyst conducts inspections at multiple stages to detect defects early, reduce rework, and improve overall productivity.
- Apparel Quality Analysts require strong observation skills, technical knowledge of garments, analytical thinking, communication skills, and attention to detail.
- With experience and additional certifications, an Apparel Quality Analyst can progress to positions such as Senior Quality Analyst, Quality Assurance Executive, Quality Manager, Technical Auditor, or Compliance Manager.

Demonstrate

Using a production workflow chart or video of a garment manufacturing unit, demonstrate each stage of apparel production, from fabric inspection to final packing. Explain where the Apparel Quality Analyst performs inspections, the quality parameters evaluated at each stage, and how inspection findings influence production quality and customer satisfaction.

Role Play

1. **Name of the Roleplay:** Quality inspection across the production line
2. **Objective of the Roleplay:** To help participants understand the responsibilities and decision-making role of an Apparel Quality Analyst at different stages of garment manufacturing.
3. **Resources:** Participant handbook, pen, Notepad, whiteboard, markers, presentation slides, overhead projector or large screen, computer/laptop with internet connection, sample inspection checklists.
4. **Time Duration:** 20 minutes
5. **Instructions:**
 - Divide participants into small groups.
 - Assign each participant a role such as Fabric Inspector, Cutting Supervisor, Stitching Operator, Finishing Supervisor, Apparel Quality Analyst, and Production Manager.
 - Present a production scenario where garments move through different manufacturing stages.
 - Ask the participant playing the Apparel Quality Analyst to inspect the garments at each stage, identify quality issues, communicate with production staff, and recommend corrective actions.
 - Encourage other participants to respond according to their assigned roles and resolve the quality concerns collaboratively.
 - Invite each group to perform their roleplay before the class and discuss how quality decisions affected the production process.
6. **Outcome:** Participants will develop an understanding of the professional responsibilities, communication requirements, and decision-making role of an Apparel Quality Analyst throughout the garment manufacturing process.

Notes for Facilitation

- Use real examples from apparel manufacturing units to explain production workflows and quality responsibilities.
- Encourage participants to actively relate each manufacturing stage to the role of the Apparel Quality Analyst.
- Display garment samples or images wherever possible to improve practical understanding.
- Emphasise that quality inspection is a preventive process carried out throughout production rather than only after garments are completed.
- Encourage questions and discussions on career opportunities, workplace responsibilities, and quality practices followed in the apparel industry.
- Maintain an engaging learning environment through discussions, practical examples, demonstrations, activities, and roleplays that reflect real workplace situations.

Answers to Exercises for PHB

Multiple Choice Questions:

1. b. To inspect and ensure garment quality
2. d. Banking
3. b. To identify and correct defects early
4. b. Export house
5. b. Attention to detail

Descriptive Questions:

1. Refer to Unit 1.1: Apparel Quality Analyst Profession Insights
Topic 1.1.1 Apparel Industry Size and Scope
2. Refer to Unit 1.1: Apparel Quality Analyst Profession Insights
Topic 1.1.2 Apparel Quality Analyst Professional Profile
3. Refer to Unit 1.1: Apparel Quality Analyst Profession Insights
Topic 1.1.3 Apparel Quality Analyst Career Pathways
4. Refer to Unit 1.1: Apparel Quality Analyst Profession Insights
Topic 1.1.4 Quality Analyst Impact in Manufacturing
5. Refer to Unit 1.1: Apparel Quality Analyst Profession Insights
Topic 1.1.4 Quality Analyst Impact in Manufacturing





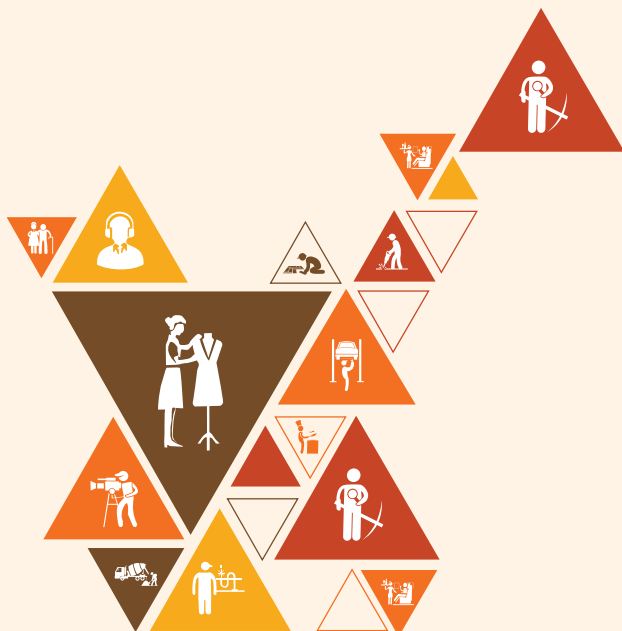
Skill India
कौशल भारत - कुशल भारत



2. Analyse and Classify Garment Defects in Apparel Production

Unit 2.1 - Garment Defects and Quality Evaluation

Unit 2.2 - Quality Documentation and Inspection Practices



AMH/N0108

Key Learning Outcomes



By the end of this module, the participants will be able to:

1. Describe common garment defects, their causes, and the methods used to identify, classify, and handle them.
2. Compare major and minor garment defects based on their type, severity, frequency, and quality standards, and evaluate their impact on garment quality and customer satisfaction.
3. Explain the garment production process and correlate fabric, material, and process-related issues with garment defects and their root causes.
4. Interpret inspection reports and defect records to identify defect patterns, production trends, and opportunities for quality improvement.
5. Prepare visual defect classification boards, standard operating procedures (SOPs), and defect documentation using photographs, timestamps, and traceability records.
6. Discuss safe workplace inspection practices, garment defect validation after repairs, and benchmarking of defect rates against organisational and industry quality standards.

Unit 2.1: Garment Defects and Quality Evaluation

Unit Objectives

By the end of this unit, the participants will be able to:

1. Describe common garment defects, their causes, and methods of identification, classification, and correction.
2. Compare major and minor garment defects by type, severity, frequency, and quality standards, and evaluate their impact on quality and customer satisfaction.
3. Explain the garment production process and correlate defects with fabric, material, and process issues.
4. Prepare inspection reports and defect data to identify trends, evaluate production performance, and improve quality.

Resources to be Used

Participant handbook, Notepad, pen, whiteboard, markers, presentation slides, overhead projector or large screen, computer/laptop with internet connection, sample garment pieces with defects, defect inspection checklist, measuring tape, quality inspection report format.

Do

- Greet the participants and introduce yourself, highlighting your experience in apparel quality assurance, garment inspection, or quality management.
- Clearly state the unit's objectives and outline what participants will learn about garment defects, quality evaluation, inspection methods, and reporting.
- Ensure all participants have their participant handbook, notepad, and pen ready for note-taking and active participation.
- Check that the whiteboard, markers, and computer/laptop with internet connection are functioning properly before starting the session.
- Ensure that the presentation slides and sample defective garments are prepared on the overhead projector or large screen for demonstration.
- Ask participants to briefly share any garment defects they have observed in clothing they own or have purchased.
- Inform participants about the interactive nature of the session, encouraging discussions, demonstrations, and practical inspection activities.
- Arrange seating for clear visibility of the presentation screen and easy access to the garment samples during demonstrations.
- Keep track of time to ensure all concepts, demonstrations, activities, and discussions are completed effectively.
- Conclude the session by summarising the importance of identifying, classifying, recording, and analysing garment defects to maintain product quality and customer satisfaction.

Say

- Welcome to today's session on Garment Defects and Quality Evaluation. This session will help you understand how garment defects affect product quality and customer satisfaction.
- By the end of this session, you will be able to identify, classify, evaluate, and report different types of garment defects.
- We will discuss common garment defects, their causes, severity, quality standards, and methods used to inspect garments.
- You will also learn how defects originate during different production stages and how inspection reports help improve manufacturing quality.
- Let us explore how effective quality evaluation contributes to consistent production standards and customer confidence.

Ask

- What types of garment defects have you noticed while purchasing or using clothing?
- Why do you think some garment defects are considered more serious than others?
- At which stage of garment production do you think most defects occur?
- How can identifying recurring defects help improve production quality?
- Why is accurate defect reporting important in garment manufacturing?

Elaborate

- Garment defects are faults or imperfections that reduce the appearance, functionality, durability, or quality of a garment and may occur during fabric production, cutting, sewing, finishing, or packaging.
- Garment defects are classified as major or minor based on their severity, visibility, effect on usability, and compliance with quality standards.
- Different production stages such as fabric inspection, cutting, stitching, pressing, finishing, and packing contribute to different types of defects, making process monitoring essential.
- Quality inspectors use visual inspection, measurement tools, defect classification systems, and inspection checklists to identify and record garment defects accurately.
- Inspection reports and defect data help identify recurring quality issues, monitor production performance, support corrective actions, and improve overall manufacturing quality.

Explain

- Common garment defects include stitching defects, seam defects, fabric defects, measurement variations, shade variations, finishing defects, and accessory-related defects.
- Major defects significantly affect garment performance, safety, or customer acceptance, whereas minor defects have limited impact on usability but may affect appearance.
- Defect analysis helps identify whether the root cause lies in fabric quality, raw materials, machine settings, operator performance, or production processes.

- Inspection reports document defect types, frequency, location, severity, and corrective actions, enabling quality teams to monitor trends and improve manufacturing performance.
- Continuous monitoring and analysis of defect data support preventive actions, reduce production losses, and enhance customer satisfaction.

Demonstrate

Participants will examine sample garment pieces containing different defects such as seam puckering, skipped stitches, shade variation, open seams, stains, measurement variations, and fabric flaws. They will identify the defects, classify them as major or minor, determine their probable causes, and record their observations using a standard garment inspection report format.

Activity

1. **Name of the Activity:** Garment defect identification and classification
2. **Objective of the activity:** To help participants identify common garment defects, classify them based on severity, and prepare a basic inspection report.
3. **Resources:** Participant handbook, pen, notepad, whiteboard, markers, presentation slides, overhead projector or large screen, computer/laptop with internet connection, sample garments with defects, defect inspection checklist, inspection report format.
4. **Time Duration:** 30 minutes
5. **Instructions:**
 - Display several sample garments containing different types of defects.
 - Divide participants into small groups and provide each group with garment samples and inspection checklists.
 - Ask each group to identify the defects, classify them as major or minor, and note the possible causes.
 - Have each group prepare a simple inspection report showing the defect type, severity, location, and suggested corrective action.
 - Invite each group to present their findings and discuss how defect trends can improve production quality.
6. **Outcome:** Participants will be able to identify garment defects, classify them according to quality standards, analyse possible causes, and prepare a basic garment inspection report.

Notes for Facilitation



- Encourage participants to relate garment defects to clothing they have observed in daily life or retail stores.
- Use real garment samples, photographs, and defect charts to help participants distinguish between different defect types.
- Explain the relationship between production processes, defect occurrence, and quality standards using practical examples.
- Promote active participation through group inspection exercises, discussions, and defect analysis activities.
- Summarise each activity with key learning points on defect identification, classification, reporting, and continuous quality improvement in apparel manufacturing.

Unit 2.2: Quality Documentation and Inspection Practices

Unit Objectives

By the end of this unit, the participants will be able to:

1. Prepare visual defect charts, SOPs, and traceable quality records.
2. Discuss workplace inspection, repaired garment validation, and defect benchmarking against quality standards.

Resources to be Used

Participant handbook, Notepad, pen, whiteboard, markers, presentation slides, overhead projector or large screen, computer/laptop with internet connection, sample garment inspection reports, visual defect charts, SOP templates, quality checklists, traceability records.

Do

- Greet the participants and introduce yourself, highlighting your experience in garment quality inspection, documentation, or quality management.
- Clearly state the unit's objectives and outline what participants will learn about quality documentation, inspection practices, SOPs, and quality records.
- Ensure all participants have their participant handbook, notepad, and pen ready for note-taking and active participation.
- Check that the whiteboard, markers, and computer/laptop with internet connection are functioning properly before starting the session.
- Ensure that the presentation slides, sample inspection reports, visual defect charts, and SOP templates are prepared on the overhead projector or large screen for demonstration.
- Ask participants to briefly share why maintaining accurate inspection records is important in garment manufacturing.
- Inform participants about the interactive nature of the session, encouraging discussions, demonstrations, and documentation exercises.
- Arrange seating for clear visibility of the presentation screen and easy participation in group activities.
- Keep track of time to ensure all concepts, demonstrations, activities, and discussions are completed effectively.
- Conclude the session by summarising the importance of quality documentation, standardised inspection practices, and traceable records in ensuring consistent product quality.

Say

- Welcome to today's session on Quality Documentation and Inspection Practices. This session will help you understand how proper documentation supports effective quality management in garment manufacturing.

- By the end of this session, you will be able to prepare visual defect charts, standard operating procedures, and traceable quality records.
- We will discuss workplace inspections, repaired garment validation, and methods of benchmarking defects against quality standards.
- You will also learn how standardised documentation improves consistency, traceability, and continuous quality improvement.
- Let us explore how accurate records and systematic inspection practices contribute to high-quality garment production.

Ask



- Why is it important to maintain proper quality records during garment production?
- What information should be included in an inspection report or defect record?
- Why should repaired garments be inspected before they are approved?
- How can visual defect charts help quality inspectors during inspections?
- Why is defect benchmarking important for maintaining consistent quality standards?

Elaborate



- Quality documentation provides a systematic record of inspection results, defects, corrective actions, and production quality, ensuring transparency and traceability.
- Visual defect charts help inspectors quickly identify and classify garment defects by providing standard references for comparison during inspections.
- Standard Operating Procedures (SOPs) establish uniform inspection methods, ensuring consistency, accuracy, and compliance with organisational quality standards.
- Workplace inspections verify that garments meet specified quality requirements at different stages of production, reducing defects before final dispatch.
- Traceable quality records and defect benchmarking support trend analysis, continuous improvement, compliance with quality standards, and effective decision-making.

Explain



- Visual defect charts illustrate different defect types, enabling inspectors to identify and classify defects accurately during quality inspections.
- SOPs define the standard sequence of inspection activities, documentation requirements, acceptance criteria, and reporting procedures.
- Repaired garment validation confirms that identified defects have been corrected without introducing additional quality issues before approval.
- Quality records such as inspection reports, repair records, and traceability documents provide evidence of quality control activities throughout production.
- Defect benchmarking compares inspection results against established quality standards to evaluate production performance and identify opportunities for quality improvement.

Demonstrate

Participants will review sample visual defect charts, inspection reports, SOPs, repaired garment records, and traceability documents. They will identify defect classifications, verify compliance with inspection procedures, validate repaired garments, and compare inspection results against established quality standards.

Activity

1. **Name of the Activity:** Preparing quality documentation and validating garments
2. **Objective of the activity:** To help participants prepare quality documentation, use visual defect charts, validate repaired garments, and benchmark inspection results against quality standards.
3. **Resources:** Participant handbook, pen, notepad, whiteboard, markers, presentation slides, overhead projector or large screen, computer/laptop with internet connection, sample garment inspection reports, visual defect charts, SOP templates, quality checklists, repaired garment samples, traceability records.
4. **Time Duration:** 30 minutes
5. **Instructions:**
 - Display sample visual defect charts, inspection reports, SOPs, and traceability records.
 - Divide participants into small groups and provide each group with garment samples and quality documentation templates.
 - Ask each group to identify defects using the visual defect chart and complete the inspection report following the SOP.
 - Have participants inspect repaired garments, validate whether the repairs meet quality requirements, and compare the results with quality benchmarks.
 - Invite each group to present their documentation and discuss how proper records support quality improvement and traceability.
6. **Outcome:** Participants will be able to prepare quality documentation, use visual defect charts, validate repaired garments, maintain traceable quality records, and benchmark inspection results against quality standards.

Notes for Facilitation

- Encourage participants to examine real inspection documents and understand the importance of accurate and complete quality records.
- Use actual visual defect charts, SOPs, and garment samples to demonstrate standard inspection practices.
- Explain how traceable documentation supports quality audits, customer requirements, and continuous improvement initiatives.
- Promote active participation through documentation exercises, inspection demonstrations, and group discussions.
- Summarise each activity by reinforcing the importance of standardised documentation, inspection consistency, repaired garment validation, and defect benchmarking in apparel quality management.

Answers to Exercises for PHB

Multiple Choice Questions:

1. c. By type, severity, frequency, and quality standards
2. b. To identify defect trends and improve quality
3. b. To standardise defect identification and inspection
4. b. Validate the repair to ensure the defect is corrected
5. b. To compare quality performance with standards

Descriptive Questions:

1. Refer to Unit 2.1: Garment Defects and Quality Evaluation
Topic 2.1.2 Major and Minor Garment Defects
2. Refer to Unit 2.1: Garment Defects and Quality Evaluation
Topic 2.1.3 Production Process Defect Correlation
3. Refer to Unit 2.1: Garment Defects and Quality Evaluation
Topic 2.1.4 Inspection Report and Analysis
4. Refer to Unit 2.2: Quality Documentation and Inspection Practices
Topic 2.2.1 Visual Quality Documentation Systems
5. Refer to Unit 2.2: Quality Documentation and Inspection Practices
Topic 2.2.2 Inspection and Defect Benchmarking



Skill India
कौशल भारत - कुशल भारत



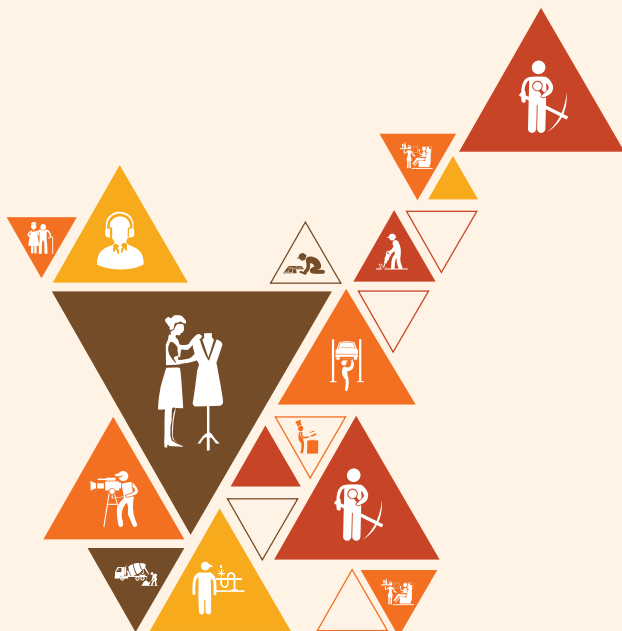
सत्यमेव जयते
GOVERNMENT OF INDIA
MINISTRY OF SKILL DEVELOPMENT
& ENTREPRENEURSHIP



3. Analyse Data and Prepare Quality Insights Reports

Unit 3.1 - Production Quality Control Processes

Unit 3.2 - Quality Documentation and Records



AMH/N0109

Key Learning Outcomes



By the end of this module, the participants will be able to:

1. Explain the organisational hierarchy and the core steps involved in monitoring quality across various stages of production.
2. Describe how to inspect raw materials, fabrics, patterns, and templates to ensure they meet specified quality standards before cutting.
3. Outline the process for checking machine settings and attachments to align them with required production standards.
4. Prepare control charts to track and maintain quality insights effectively.
5. Analyse critical details within production and inspection documents, including trim cards, measurement charts, and sample types.
6. Complete and maintain all necessary documentation related to production and quality inspection workflows.

Unit 3.1: Production Quality Control Processes

Unit Objectives

By the end of this unit, the participants will be able to:

1. Elaborate on production quality monitoring methods used to evaluate garment quality, identify defects, and maintain compliance with quality standards.
2. Describe the procedures for inspecting raw materials to verify their quality, specifications, and suitability for garment production.
3. Explain the process of pattern and template verification to ensure dimensional accuracy, design conformity, and production consistency.
4. Elucidate the importance of machine setting verification in maintaining process accuracy, minimising defects, and achieving consistent garment quality.

Resources to be Used

Participant handbook, notepad, pen, whiteboard, markers, presentation slides, overhead projector or large screen, computer/laptop with internet connection, sample fabrics and trims, pattern templates, measuring tape, machine setting checklist, raw material inspection checklist, quality monitoring records.

Do

- Greet participants and introduce yourself, creating a welcoming environment for learning and collaboration.
- State the unit's objectives clearly, highlighting what participants will learn about production quality monitoring, raw material inspection, pattern verification, and machine setting verification.
- Review the agenda with participants to give them a clear understanding of the structure and what to expect during the session.
- Ensure all participants have the necessary materials, such as participant handbooks, notepads, and pens, ready for active note-taking.
- Verify the proper functioning of the presentation slides, overhead projector, or large screen.
- Check that the computer or laptop with an internet connection is ready and working to support demonstrations and learning activities.
- Encourage participants to introduce themselves briefly and share any experience they have with garment production or quality inspection.
- Inform participants about the session's interactive nature, emphasising opportunities for demonstrations, discussions, activities, and question-and-answer sessions.
- Arrange seating to ensure clear visibility of the screen and easy access to sample materials used during demonstrations.
- Conclude the session by summarising the importance of quality control processes in ensuring consistent garment quality and reducing production defects.

Say

- Welcome to today's session on Production Quality Control Processes. We will explore the essential quality control activities carried out during garment production.
- By the end of this session, you will understand how production quality is monitored and how inspections help maintain product quality and consistency.
- We will discuss raw material inspection, pattern and template verification, and machine setting verification used in apparel manufacturing.
- You will also learn how these quality control processes help prevent defects, improve production efficiency, and ensure compliance with quality standards.
- I encourage you to actively participate in the demonstrations and activities to understand how quality control supports successful garment production.

Ask

- Why is continuous quality monitoring important during garment production?
- What problems can occur if raw materials are not inspected before production begins?
- Why should patterns and templates be verified before garment cutting starts?
- How can incorrect machine settings affect garment quality?
- How do quality control processes help reduce production defects and customer complaints?

Elaborate

- Production quality monitoring involves continuous inspection of garments during different production stages to identify defects and maintain compliance with quality standards.
- Raw material inspection verifies the quality, specifications, dimensions, colour consistency, and physical properties of fabrics, trims, and accessories before production.
- Pattern and template verification ensures dimensional accuracy, design conformity, and consistency with approved production specifications before cutting operations begin.
- Machine setting verification confirms that production equipment is correctly calibrated to achieve accurate stitching, minimise defects, and maintain consistent garment quality.
- Effective quality control processes improve production efficiency, reduce rework and wastage, ensure product consistency, and enhance customer satisfaction.

Explain

- Production quality monitoring includes in-process inspections, defect identification, measurement verification, quality audits, and compliance checks carried out throughout garment manufacturing.
- Raw material inspection involves checking fabrics, trims, and accessories against approved specifications for defects, colour, GSM, dimensions, shrinkage, and overall suitability for production.
- Pattern and template verification ensures that approved patterns, templates, and marker plans accurately reflect garment measurements, style specifications, and construction requirements.

- Machine setting verification involves checking machine parameters such as stitch length, thread tension, needle type, pressure settings, and equipment calibration before and during production.
- Regular monitoring of raw materials, patterns, machine settings, and production processes enables early defect detection, reduces process variation, and supports continuous quality improvement.

Demonstrate

Participants will examine sample fabrics, trims, approved patterns, templates, and machine setting checklists. They will observe how raw materials are inspected, patterns and templates are verified against specifications, machine settings are checked before production, and quality monitoring records are maintained to ensure consistent garment quality.

Activity

1. **Name of the Activity:** Production quality control inspection exercise
2. **Objective of the Activity:** To help participants perform basic production quality monitoring by inspecting raw materials, verifying patterns and templates, checking machine settings, and recording inspection observations.
3. **Resources:** Participant handbook, pen, notepad, whiteboard, markers, presentation slides, overhead projector or large screen, computer/laptop with internet connection, sample fabrics and trims, pattern templates, measuring tape, machine setting checklist, raw material inspection checklist, quality monitoring records.
4. **Time Duration:** 25 minutes
5. **Instructions:**
 - Display sample raw materials, approved patterns, templates, and machine setting checklists.
 - Divide participants into small groups and provide each group with inspection checklists and sample materials.
 - Ask participants to inspect the raw materials, verify the patterns and templates against specifications, and review machine settings using the provided checklist.
 - Instruct each group to record their observations in the quality monitoring record and identify any deviations requiring corrective action.
 - Invite each group to present their findings and discuss how these quality control activities help prevent production defects.
6. **Outcome:** Participants will gain practical experience in monitoring production quality, inspecting raw materials, verifying patterns and templates, checking machine settings, and maintaining basic quality inspection records.

Notes for Facilitation

- Encourage participants to handle actual garment materials, patterns, and inspection tools wherever possible to strengthen practical understanding.
- Use real-world examples of production defects caused by poor raw material inspection, incorrect patterns, or improper machine settings.
- Demonstrate the use of inspection checklists and quality monitoring records to reinforce standard quality control practices.
- Promote active participation through group discussions, inspection exercises, and problem-solving activities related to production quality issues.
- Conclude each activity by summarising the importance of systematic production quality control processes in achieving consistent garment quality, reducing defects, and improving manufacturing efficiency.

Unit 3.2: Quality Documentation and Records

Unit Objectives

By the end of this unit, the participants will be able to:

1. Describe the production and inspection documents used in apparel manufacturing, including trim cards, measurement charts, and sample specifications.
2. Explain the organisational hierarchy in the apparel industry and the responsibilities of personnel involved in production and quality inspection.
3. Prepare control charts and analyse production and inspection records to monitor quality trends and identify process deviations.
4. Explain accurate production and inspection records to ensure quality control, traceability, and regulatory compliance.

Resources to be Used

Participant handbook, notepad, pen, whiteboard, markers, presentation slides, overhead projector or large screen, computer/laptop with internet connection, sample production documents, trim cards, measurement charts, sample specifications, control charts, inspection reports, production records, quality record templates.

Do

- Greet participants and introduce yourself, creating a welcoming environment for learning and collaboration.
- State the unit's objectives clearly, highlighting what participants will learn about quality documentation, production records, organisational hierarchy, and control chart analysis.
- Review the agenda with participants to give them a clear understanding of the structure and what to expect during the session.
- Ensure all participants have the necessary materials, such as participant handbooks, notepads, and pens, ready for active note-taking.
- Verify the proper functioning of the presentation slides, overhead projector, or large screen.
- Check that the computer or laptop with an internet connection is ready and working to support demonstrations and learning activities.
- Encourage participants to introduce themselves briefly and share any experience they have with production documentation or quality records.
- Inform participants about the session's interactive nature, emphasising opportunities for demonstrations, discussions, activities, and question-and-answer sessions.
- Arrange seating to ensure clear visibility of the screen and easy access to sample production documents during demonstrations.
- Conclude the session by summarising the importance of maintaining accurate quality documentation and production records for effective quality management and traceability.

Say

- Welcome to today's session on Quality Documentation and Records. We will explore the documents and records used to monitor and maintain quality in apparel manufacturing.
- By the end of this session, you will understand how production and inspection documents support quality control and traceability.
- We will discuss production documents, organisational hierarchy, control charts, and production record maintenance.
- You will also learn how accurate documentation helps identify quality trends, supports decision-making, and ensures compliance with organisational and regulatory requirements.
- I encourage you to actively participate in the demonstrations and activities to understand how quality documentation contributes to efficient apparel manufacturing.

Ask

- Why is proper documentation important during garment production and quality inspection?
- What information is commonly recorded in production and inspection documents?
- How does the organisational hierarchy support quality control in apparel manufacturing?
- Why are control charts useful for monitoring production quality?
- How do accurate production records improve traceability and regulatory compliance?

Elaborate

- Production and inspection documents such as trim cards, measurement charts, sample specifications, inspection reports, and quality checklists provide standard references for manufacturing and quality control.
- The organisational hierarchy defines the roles and responsibilities of production supervisors, quality inspectors, line managers, and quality assurance personnel in maintaining product quality.
- Control charts help monitor production performance, identify quality variations, detect process deviations, and support timely corrective actions.
- Production and inspection records provide traceable evidence of quality control activities, inspections, corrective actions, and production performance.
- Accurate documentation improves communication, supports continuous quality improvement, facilitates audits, and ensures compliance with organisational and industry quality standards.

Explain

- Production documents such as trim cards, measurement charts, and sample specifications communicate approved product requirements to production and quality teams.
- The organisational hierarchy establishes accountability by assigning specific production, inspection, supervision, and quality assurance responsibilities to designated personnel.
- Control charts visually represent production and inspection data, enabling quality teams to distinguish normal process variation from abnormal quality deviations.

- Production and inspection records include details such as inspection findings, defect reports, production quantities, corrective actions, approvals, and traceability information.
- Maintaining complete and accurate quality records supports product traceability, customer confidence, regulatory compliance, and continuous process improvement.

Demonstrate

Participants will examine sample trim cards, measurement charts, sample specifications, inspection reports, production records, and control charts. They will identify the purpose of each document, interpret control chart data, understand reporting responsibilities within the organisational hierarchy, and observe how production records support quality control and traceability.

Activity

1. **Name of the Activity:** Preparing and analysing quality documentation
2. **Objective of the Activity:** To help participants identify production and inspection documents, prepare basic quality records, analyse control charts, and understand the organisational responsibilities involved in quality management.
3. **Resources:** Participant handbook, pen, notepad, whiteboard, markers, presentation slides, overhead projector or large screen, computer/laptop with internet connection, sample trim cards, measurement charts, sample specifications, inspection reports, production records, control charts, quality documentation templates.
4. **Time Duration:** 25 minutes
5. **Instructions:**
 - Display sample production documents, inspection reports, measurement charts, trim cards, and control charts.
 - Divide participants into small groups and provide each group with sample quality documentation and record templates.
 - Ask participants to identify the purpose of each document, assign the responsible personnel based on the organisational hierarchy, and review the production records for completeness.
 - Instruct each group to analyse the control chart, identify any quality trends or process deviations, and recommend suitable corrective actions.
 - Invite each group to present their observations and explain how proper documentation supports quality control, traceability, and regulatory compliance.
6. **Outcome:** Participants will gain practical experience in preparing and interpreting production and inspection documents, analysing control charts, understanding organisational responsibilities, and maintaining accurate quality records.

Notes for Facilitation

- Encourage participants to examine actual production documents and understand how each document contributes to quality assurance.
- Use real examples of trim cards, measurement charts, control charts, and inspection reports to demonstrate standard documentation practices.
- Explain the relationship between accurate documentation, traceability, quality audits, and regulatory compliance using practical industry examples.
- Promote active participation through document review exercises, control chart analysis, and collaborative group discussions.
- Conclude each activity by reinforcing the importance of accurate quality documentation, systematic record maintenance, organisational accountability, and data-driven quality improvement in apparel manufacturing.

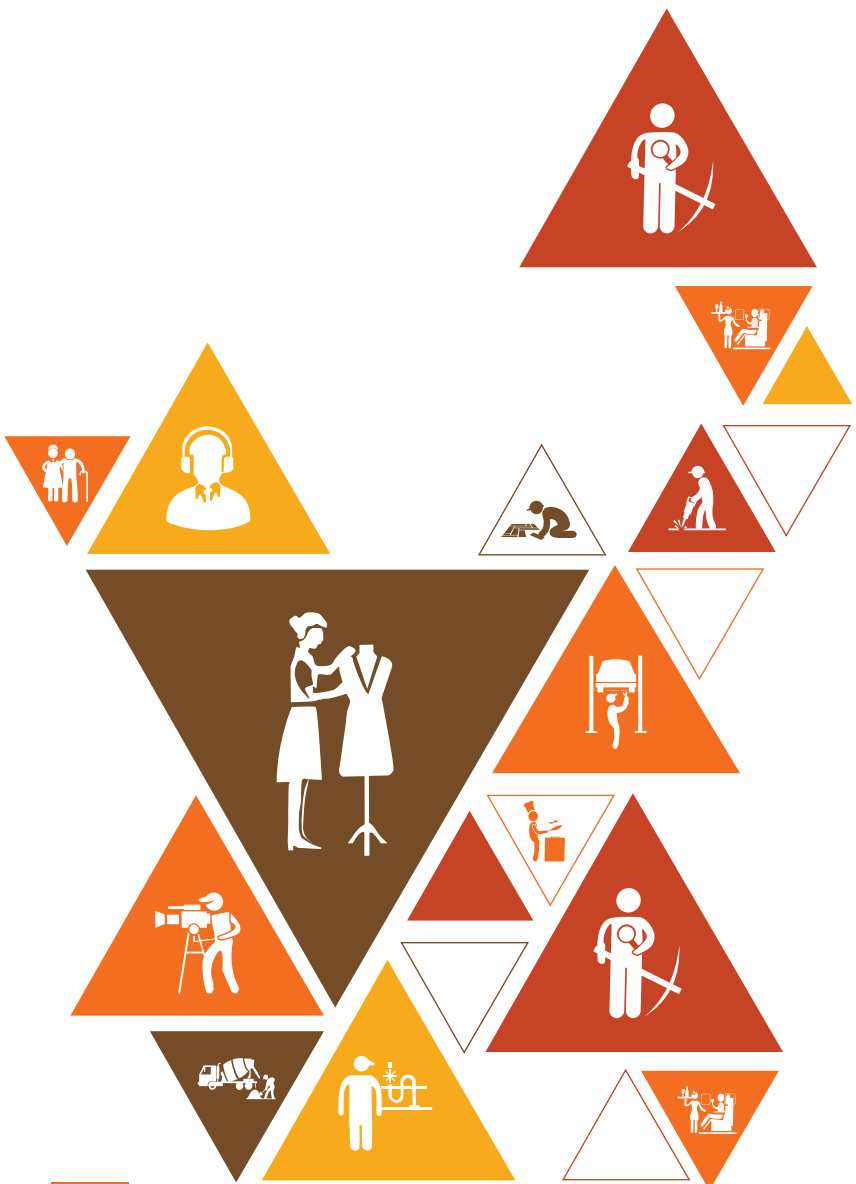
Answers to Exercises for PHB

Multiple Choice Questions:

1. b. Measurement chart
2. b. To identify defects and verify quality standards
3. a. To monitor process performance and identify deviations
4. b. To ensure production and quality requirements are met
5. b. To support quality control, traceability, and compliance

Descriptive Questions:

1. Refer to Unit 3.2: Quality Documentation and Records
Topic 3.2.1 Production Inspection Documents
2. Refer to Unit 3.1: Production Quality Control Processes
Topic 3.1.1 Production Quality Monitoring
3. Refer to Unit 3.1: Production Quality Control Processes
Topic 3.1.2 Raw Material Inspection
4. Refer to Unit 3.2: Quality Documentation and Records
Topic 3.2.3 Control Chart Analysis
5. Refer to Unit 3.2: Quality Documentation and Records
Topic 3.2.1 Production Inspection Documents





Skill India
कौशल भारत - कुशल भारत



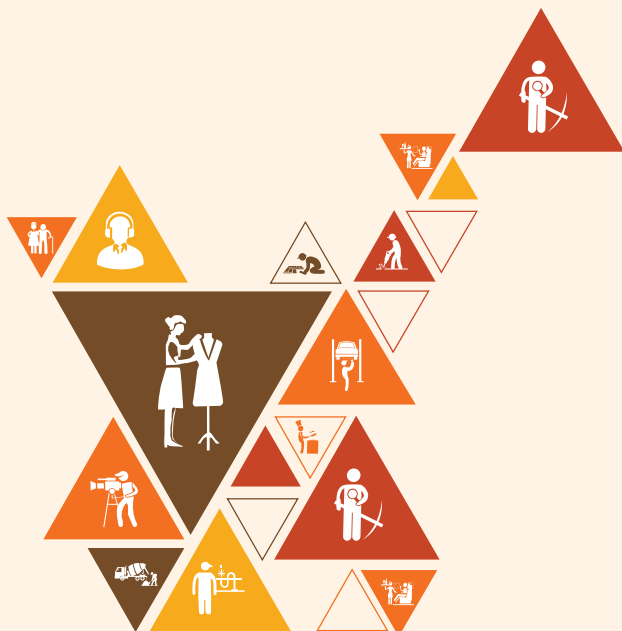
सत्यमेव जयते
GOVERNMENT OF INDIA
MINISTRY OF SKILL DEVELOPMENT
& ENTREPRENEURSHIP



4. Integrate Digital and AI Tools in Quality Assurance Systems

Unit 4.1 - AI Quality Systems Fundamentals

Unit 4.2 - AI Quality Data Analysis



AMH/N0110

Key Learning Outcomes



By the end of this module, the participants will be able to:

1. Explain the role and importance of digital and AI-enabled tools in apparel quality assurance and production monitoring.
2. Describe different AI-based inspection systems, digital dashboards, and their applications in detecting garment defects and monitoring quality.
3. Compare AI-enabled inspection systems and digital quality dashboards to monitor production performance and apparel quality in real time.
4. Outline production data, quality reports, and defect trends generated by AI tools to identify patterns and determine root causes.
5. Elaborate on the effectiveness of AI-integrated quality assurance systems in reducing defects, improving efficiency, and ensuring compliance with quality standards.
6. Discuss the corrective and preventive actions using AI-driven insights to improve product quality and production performance.
7. Prepare data-driven quality reports and visual dashboards to support quality analysis, decision-making, and management review.
8. Discuss the integration of digital and AI-enabled quality assurance tools with conventional inspection processes to enhance overall manufacturing efficiency.

Unit 4.1: AI Quality Systems Fundamentals

Unit Objectives

By the end of this unit, the participants will be able to:

1. Explain the role and significance of digital and AI-enabled tools in apparel quality assurance and production monitoring.
2. Describe the various AI-based inspection systems, digital dashboards, and their use in identifying garment defects and tracking quality performance.
3. Compare AI-enabled inspection systems and digital quality dashboards for monitoring production performance and apparel quality in real time.
4. Discuss the integration of digital and AI-enabled quality assurance tools with traditional inspection methods to improve overall manufacturing efficiency.

Resources to be Used

Participant handbook, notepad, pen, whiteboard, markers, presentation slides, overhead projector or large screen, computer/laptop with internet connection, internet-enabled AI quality inspection software demonstration, digital quality dashboard screenshots, sample garment images with defects, AI inspection workflow charts, quality monitoring reports.

Do

- Greet participants and introduce yourself, creating a welcoming environment for learning and collaboration.
- State the unit's objectives clearly, highlighting what participants will learn about AI-enabled quality systems, digital inspection tools, and production monitoring.
- Review the agenda with participants to give them a clear understanding of the structure and what to expect during the session.
- Ensure all participants have the necessary materials, such as participant handbooks, notepads, and pens, ready for active note-taking.
- Verify the proper functioning of the presentation slides, overhead projector or large screen.
- Check that the computer or laptop with an internet connection is ready and working to demonstrate AI-enabled quality assurance tools and digital dashboards.
- Encourage participants to introduce themselves briefly and share any experience they have with digital technologies or AI applications in manufacturing.
- Inform participants about the session's interactive nature, emphasising opportunities for demonstrations, discussions, activities, and question-and-answer sessions.
- Arrange seating to ensure clear visibility of the screen and easy participation during software demonstrations and group discussions.
- Conclude the session by summarising the importance of AI-enabled quality systems in improving inspection accuracy, production monitoring, and manufacturing efficiency.

Say

- Welcome to today's session on AI Quality Systems Fundamentals. We will explore how digital technologies and artificial intelligence are transforming apparel quality assurance.
- By the end of this session, you will understand how AI-enabled tools support garment inspection, defect detection, and production monitoring.
- We will discuss AI-based inspection systems, digital quality dashboards, and their applications in monitoring garment quality in real time.
- You will also learn how AI systems complement traditional inspection methods to improve productivity, consistency, and decision-making.
- I encourage you to actively participate in the demonstrations and discussions to understand the practical benefits of AI in apparel quality management.

Ask

- How can artificial intelligence improve garment quality inspection compared to manual inspection?
- What advantages do digital dashboards provide to production and quality teams?
- Why is real-time quality monitoring important in apparel manufacturing?
- Can AI completely replace human quality inspectors? Why or why not?
- How can combining AI tools with traditional inspection methods improve production quality?

Elaborate

- Digital and AI-enabled quality systems automate defect detection, improve inspection speed, and support consistent quality monitoring throughout garment production.
- AI-based inspection systems use cameras, sensors, image processing, and machine learning algorithms to identify garment defects with greater accuracy and consistency.
- Digital quality dashboards collect, analyse, and display real-time production and quality data, helping managers monitor performance and make informed decisions.
- AI-enabled inspection systems provide faster defect identification, trend analysis, predictive insights, and improved process control compared with manual inspections alone.
- Integrating AI tools with traditional inspection methods enhances inspection efficiency, supports human decision-making, reduces production defects, and improves overall manufacturing performance.

Explain

- AI-enabled quality assurance systems use digital technologies to inspect garments, identify defects, classify quality issues, and generate automated inspection reports.
- Digital dashboards present key quality indicators such as defect rates, production efficiency, inspection results, and process trends through visual reports and real-time analytics.
- AI inspection systems can continuously monitor production lines, detect recurring defects, and alert quality teams when quality deviations occur.

- Traditional inspection methods rely on human expertise, while AI systems enhance accuracy, consistency, speed, and data analysis without replacing the role of quality professionals.
- Combining AI-enabled tools with conventional quality inspection practices creates a comprehensive quality assurance system that supports continuous improvement and operational excellence.

Demonstrate

Participants will observe a demonstration of an AI-based garment inspection system and a digital quality dashboard. They will review how the system captures garment images, detects defects automatically, classifies quality issues, generates inspection reports, displays production performance indicators, and supports quality monitoring in real time.

Activity

1. **Name of the Activity:** AI quality inspection and dashboard analysis
2. **Objective of the Activity:** To help participants understand the operation of AI-enabled inspection systems and digital quality dashboards used for garment quality monitoring.
3. **Resources:** Participant handbook, pen, notepad, whiteboard, markers, presentation slides, overhead projector or large screen, computer/laptop with internet connection, AI quality inspection software demonstration, digital dashboard screenshots, sample garment images with defects, quality monitoring reports.
4. **Time Duration:** 25 minutes
5. **Instructions:**
 - Display a demonstration of an AI-based garment inspection system and a digital quality dashboard.
 - Divide participants into small groups and provide each group with sample dashboard reports and garment defect images.
 - Ask participants to identify the defects detected by the AI system and interpret the quality information presented on the dashboard.
 - Instruct each group to compare AI-generated inspection results with traditional manual inspection methods and discuss the advantages and limitations of each.
 - Invite each group to present their observations and explain how AI-enabled tools improve garment quality monitoring and production performance.
6. **Outcome:** Participants will gain practical experience in understanding AI-enabled inspection systems, interpreting digital quality dashboards, comparing AI and manual inspection methods, and recognising the benefits of digital quality assurance systems.

Notes for Facilitation

- Encourage participants to relate AI quality systems to current practices in apparel manufacturing and discuss how technology is changing quality assurance.
- Use real examples of AI inspection software, digital dashboards, and automated defect detection systems to demonstrate practical applications.
- Explain AI concepts using simple language and visual demonstrations to ensure participants with limited technical backgrounds can understand the technology.
- Promote active participation through software demonstrations, dashboard interpretation exercises, and group discussions on AI applications.
- Conclude each activity by reinforcing the importance of integrating AI-enabled quality systems with traditional inspection methods to improve garment quality, production efficiency, and data-driven decision-making.

Unit 4.2: AI Quality Data Analysis

Unit Objectives

By the end of this unit, the participants will be able to:

1. Outline the production data, quality reports, and defect patterns generated through AI tools to identify trends and analyse root causes.
2. Elaborate on the benefits of AI-integrated quality assurance systems in minimising defects, enhancing operational efficiency, and maintaining compliance with quality standards.
3. Discuss the corrective and preventive measures derived from AI-driven insights to enhance product quality and production performance.
4. Prepare data-driven quality reports and interactive dashboards to facilitate quality analysis, informed decision-making, and management review.

Resources to be Used

Participant handbook, notepad, pen, whiteboard, markers, presentation slides, overhead projector or large screen, computer/laptop with internet connection, sample AI-generated quality reports, production data sheets, defect trend reports, interactive quality dashboards, root cause analysis templates, CAPA (Corrective and Preventive Action) reports.

Do

- Greet participants and introduce yourself, creating a welcoming environment for learning and collaboration.
- State the unit's objectives clearly, highlighting what participants will learn about AI-generated quality data, defect analysis, corrective actions, and quality reporting.
- Review the agenda with participants to give them a clear understanding of the structure and what to expect during the session.
- Ensure all participants have the necessary materials, such as participant handbooks, notepads, and pens, ready for active note-taking.
- Verify the proper functioning of the presentation slides, overhead projector, or large screen.
- Check that the computer or laptop with an internet connection is ready and working to demonstrate AI-generated reports, dashboards, and quality analytics.
- Encourage participants to introduce themselves briefly and share any experience they have with production data analysis, reporting, or digital quality tools.
- Inform participants about the session's interactive nature, emphasising opportunities for demonstrations, discussions, activities, and question-and-answer sessions.
- Arrange seating to ensure clear visibility of the screen and easy participation during dashboard demonstrations and data analysis activities.
- Conclude the session by summarising the importance of AI-driven quality data analysis in improving product quality, production efficiency, and informed decision-making.

Say

- Welcome to today's session on AI Quality Data Analysis. We will explore how AI-generated data supports quality monitoring, decision-making, and continuous improvement in apparel manufacturing.
- By the end of this session, you will understand how AI tools analyse production data, identify defect trends, and support quality improvement.
- We will discuss AI-generated quality reports, defect pattern analysis, corrective and preventive actions, and interactive quality dashboards.
- You will also learn how AI-driven insights help organisations minimise defects, improve operational efficiency, and maintain quality standards.
- I encourage you to actively participate in the demonstrations and activities to understand how data-driven quality management supports successful apparel manufacturing.

Ask

- Why is analysing production data important for improving garment quality?
- How can AI help identify recurring defect patterns that may not be easily detected manually?
- What are the benefits of using interactive dashboards instead of traditional quality reports?
- How can AI-generated insights support corrective and preventive actions in garment manufacturing?
- Why is data-driven decision-making important for continuous quality improvement?

Elaborate

- AI tools collect and analyse production data, inspection records, and defect information to identify quality trends and determine the root causes of recurring defects.
- AI-integrated quality assurance systems improve inspection accuracy, reduce manual effort, enhance operational efficiency, and support compliance with organisational quality standards.
- AI-driven insights enable quality teams to implement timely corrective and preventive actions that reduce defects and improve production performance.
- Interactive dashboards present real-time quality indicators, production performance, defect trends, and inspection results in a visual format for effective monitoring.
- Data-driven quality reports support informed decision-making, continuous improvement initiatives, management reviews, and long-term quality planning.

Explain

- AI quality data analysis combines production data, inspection records, and defect reports to identify patterns, monitor process performance, and support quality improvement.
- Root cause analysis uses AI-generated insights to identify the underlying reasons for recurring defects, enabling targeted corrective and preventive measures.
- AI-integrated quality assurance systems automatically generate quality reports, trend analyses, performance summaries, and alerts for timely decision-making.

- Interactive dashboards display key quality metrics such as defect rates, production efficiency, inspection outcomes, and corrective action status through real-time visual reports.
- Management teams use AI-generated reports and dashboards to evaluate production performance, monitor compliance, allocate resources, and implement continuous quality improvement strategies.

Demonstrate

Participants will review sample AI-generated production reports, defect trend analyses, interactive quality dashboards, and corrective action reports. They will observe how AI identifies recurring defect patterns, performs root cause analysis, generates management reports, and supports data-driven quality improvement decisions.

Activity

1. **Name of the Activity:** AI quality data analysis and dashboard interpretation
2. **Objective of the Activity:** To help participants analyse AI-generated quality data, identify defect trends, recommend corrective and preventive actions, and prepare data-driven quality reports.
3. **Resources:** Participant handbook, pen, notepad, whiteboard, markers, presentation slides, overhead projector or large screen, computer/laptop with internet connection, sample AI-generated quality reports, production data sheets, defect trend reports, interactive dashboards, root cause analysis templates, CAPA reports.
4. **Time Duration:** 25 minutes
5. **Instructions:**
 - Display sample AI-generated production reports, defect trend charts, and interactive quality dashboards.
 - Divide participants into small groups and provide each group with production data, inspection records, and dashboard reports.
 - Ask participants to identify recurring defect patterns, analyse the probable root causes, and recommend suitable corrective and preventive actions.
 - Instruct each group to prepare a brief quality summary report using the analysed data and dashboard information.
 - Invite each group to present their findings and discuss how AI-generated insights improve quality management and production performance.
6. **Outcome:** Participants will gain practical experience in analysing AI-generated production data, interpreting quality dashboards, identifying defect trends, preparing quality reports, and recommending corrective and preventive actions for continuous quality improvement.

Notes for Facilitation

- Encourage participants to interpret real production data and understand how AI supports faster and more accurate quality analysis.
- Use practical examples of AI-generated reports, dashboards, and defect trend analyses to demonstrate industry applications.
- Explain root cause analysis and corrective action planning using simple production scenarios to improve participant understanding.
- Promote active participation through dashboard interpretation exercises, group discussions, and quality data analysis activities.
- Conclude each activity by reinforcing the importance of AI-driven quality data analysis, evidence-based decision-making, continuous improvement, and effective management reporting in apparel manufacturing.

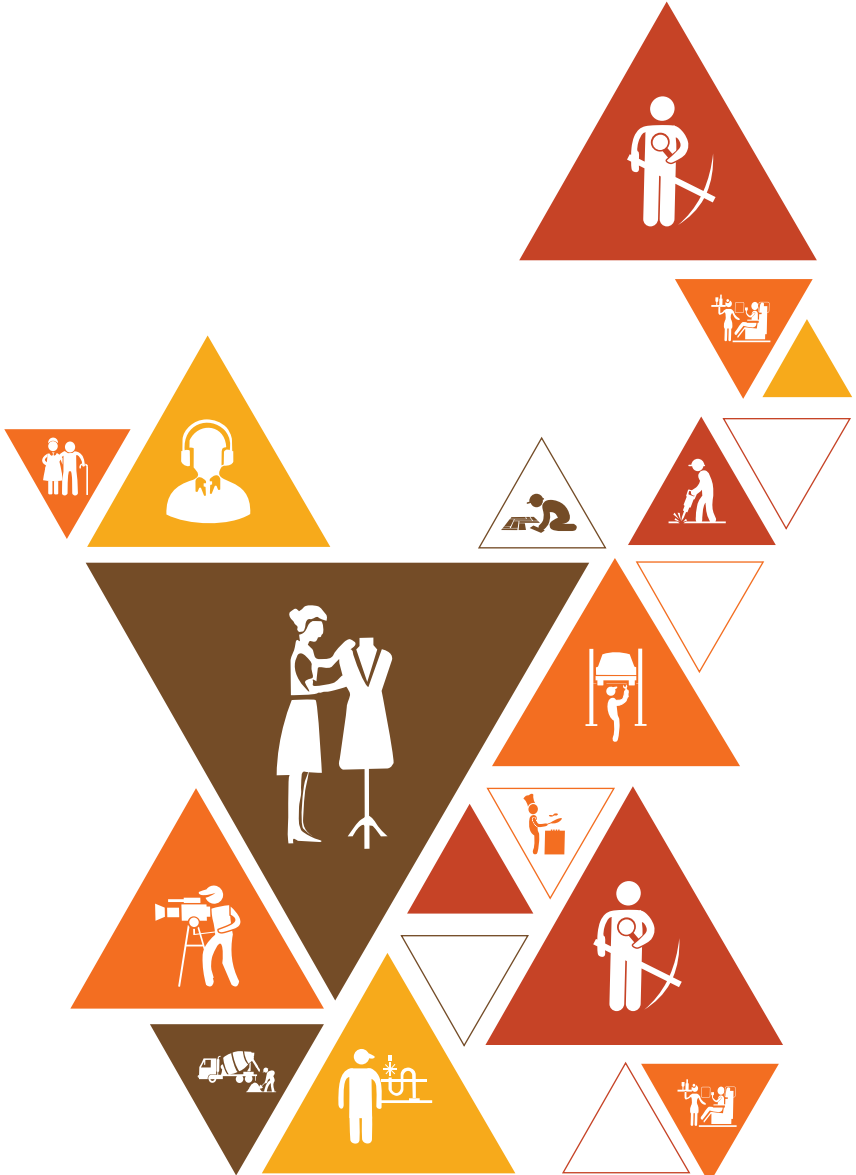
Answers to Exercises for PHB

Multiple Choice Questions:

1. b. To improve quality monitoring and defect detection
2. b. To display real-time production and quality information
3. b. To identify defect trends and analyse root causes
4. b. By reducing recurring defects and improving quality performance
5. b. To enhance manufacturing efficiency and quality assurance

Descriptive Questions:

1. Refer to Unit 4.1: AI Quality Systems Fundamentals
Topic 4.1.1 Digital AI Tools in Quality Assurance
2. Refer to Unit 4.1: AI Quality Systems Fundamentals
Topic 4.1.2 AI Inspection Systems and Dashboards
3. Refer to Unit 4.2: AI Quality Data Analysis
Topic 4.2.1 Generated Production Data Analysis
4. Refer to Unit 4.2: AI Quality Data Analysis
Topic 4.2.3 AI-Driven Corrective Preventive Measures
5. Refer to Unit 4.2: AI Quality Data Analysis
Topic 4.2.2 AI-Integrated Quality Assurance Benefits



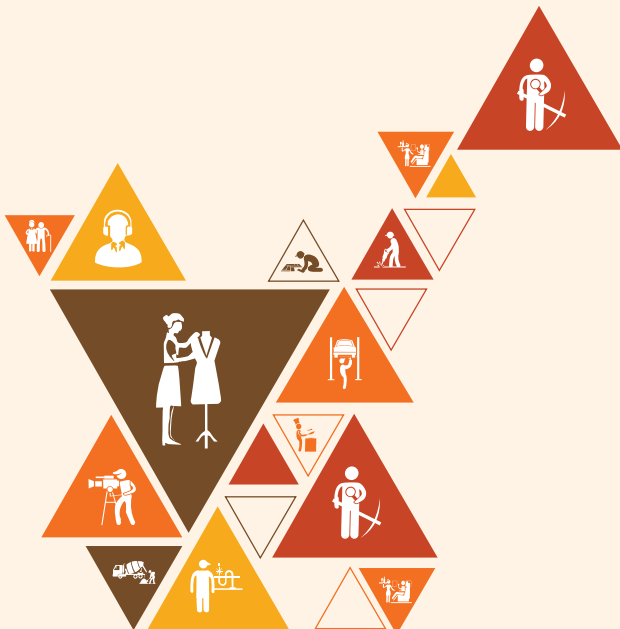


Skill India
कौशल भारत - कुशल भारत



5. Utilise AI-Based Analytics for Quality Monitoring

Unit 5.1 - AI-Powered Quality Analysis and Improvement



AMH/N0111

Key Learning Outcomes



By the end of this module, the participants will be able to:

1. Describe the principles of AI-based analytics, the AI tools used in apparel quality monitoring, and their applications in real-time production environments.
2. Explain the process of using AI-enabled systems to monitor production quality, track key performance indicators (KPIs), and generate quality reports and visual dashboards.
3. Discuss the interpretation of AI-generated quality data to identify defect trends, production bottlenecks, process deviations, and recurring quality issues.
4. Highlight the role of AI-based monitoring systems in improving product quality, reducing defects, enhancing operational efficiency, and ensuring compliance with quality standards.
5. Outline the procedures for implementing corrective and preventive actions based on AI-driven insights, coordinating with production and quality teams, and using predictive analytics to prevent future quality issues.

Unit 5.1: AI-Powered Quality Analysis and Improvement

Unit Objectives

By the end of this unit, the participants will be able to:

1. Describe AI-based analytics, quality monitoring tools, and their role in real-time production.
2. Explain how AI systems monitor quality, measure KPIs, and generate reports and dashboards.
3. Discuss how AI-generated data identifies defect trends, process variations, and quality issues.
4. Highlight how AI-based systems improve quality, reduce defects, and enhance efficiency.
5. Outline the use of AI-driven insights for corrective and preventive actions.

Resources to be Used

Participant handbook, notepad, pen, whiteboard, markers, presentation slides, overhead projector or large screen, computer or laptop with an internet connection, AI quality monitoring software demonstration, sample production data, AI-generated quality reports, digital quality dashboards, KPI reports, defect trend charts.

Do

- Greet the participants with a warm welcome and introduce yourself while establishing a positive learning environment.
- State the objectives of the unit clearly so that participants understand what they will learn by the end of the session.
- Ensure that all participants have their learning materials ready, including handbooks, notepads, and pens for active engagement.
- Verify that the projector, presentation slides, and internet-connected laptop or computer are in working condition for smooth facilitation.
- Encourage participants to introduce themselves briefly to create a comfortable and interactive learning environment.
- Explain the importance of AI-powered analytics and digital quality monitoring systems in improving apparel production quality and operational efficiency.
- Emphasise the role of AI systems in monitoring production quality, measuring key performance indicators (KPIs), and generating quality reports and dashboards.
- Facilitate a discussion on how AI-generated data helps identify defect trends, process variations, and recurring quality issues during apparel manufacturing.
- Organise participants into small groups to analyse AI-generated quality reports and discuss possible corrective and preventive actions.
- Summarise the session by recapping key concepts and encouraging participants to explore how AI-powered quality analysis supports continuous quality improvement.

Say

- Welcome to today's session on AI-Powered Quality Analysis and Improvement, where we will explore how artificial intelligence is transforming quality assurance in apparel manufacturing.
- By the end of this session, you will understand how AI-based analytics, digital monitoring systems, and quality dashboards support real-time production monitoring.
- We will discuss how AI systems measure production performance, monitor KPIs, identify defect trends, and generate actionable quality reports.
- You will also learn how AI-generated insights support corrective and preventive actions to improve product quality and manufacturing efficiency.
- AI-powered quality analysis enables organisations to make faster, more informed decisions while maintaining high quality standards throughout production.

Ask

- How can AI improve quality monitoring compared to conventional inspection methods?
- What types of production data can AI systems collect and analyse during garment manufacturing?
- Why is it important to monitor KPIs such as defect rates and production efficiency in real time?
- How can AI-generated reports help identify recurring quality issues and process variations?
- Why should organisations use AI-generated insights when planning corrective and preventive quality actions?

Elaborate

- AI-based analytics uses machine learning, image processing, and data analysis techniques to monitor garment quality and production performance in real time.
- AI-powered quality monitoring systems continuously collect production data, inspection results, and quality metrics to identify trends and detect quality deviations.
- Digital dashboards display KPIs such as defect rates, production efficiency, inspection outcomes, and compliance status, enabling timely decision-making.
- AI-generated data helps identify recurring defect patterns, production bottlenecks, and process variations, allowing organisations to address quality issues proactively.
- AI-driven insights support corrective and preventive actions by providing evidence-based recommendations that improve product quality, reduce defects, and enhance manufacturing efficiency.
- Integrating AI-powered quality analysis with conventional inspection practices creates a more reliable, efficient, and data-driven quality assurance system.

Explain

- AI-based analytics enables organisations to analyse production and inspection data automatically to monitor quality performance and identify improvement opportunities.
- AI quality monitoring systems measure key performance indicators such as defect rates, process efficiency, inspection accuracy, and compliance with quality standards.

- AI-generated reports and interactive dashboards provide real-time visibility into production quality, enabling managers to make informed operational decisions.
- AI systems identify quality trends, recurring defects, and process variations by analysing large volumes of production data more efficiently than manual methods.
- Corrective and preventive actions based on AI-generated insights help reduce recurring defects, improve process control, enhance compliance, and support continuous quality improvement.

Demonstrate



Participants will review an AI-powered quality monitoring system, digital quality dashboard, KPI reports, defect trend charts, and AI-generated quality reports. They will observe how AI captures production data, monitors key performance indicators, identifies quality trends and process variations, generates dashboards, and supports corrective and preventive quality actions through data-driven insights.

Activity



1. **Name of the Roleplay:** AI-based quality analysis for process improvement
2. **Objective of the Roleplay:** To help participants understand how AI-generated quality data can be analysed to identify defects, evaluate production performance, and recommend corrective and preventive actions.
3. **Resources:** Participant handbook, notepad, pen, whiteboard, markers, computer or laptop with internet connection, AI-generated quality reports, KPI dashboards, defect trend charts, production data sheets.
4. **Time Duration:** 25 minutes
5. **Instructions:**
 - Facilitate a discussion on how AI-generated production data supports quality monitoring and continuous improvement.
 - Divide participants into small groups and provide each group with sample AI-generated quality reports, dashboards, and production data.
 - Ask participants to identify quality trends, recurring defects, production bottlenecks, and key performance indicators from the provided reports.
 - Encourage each group to recommend suitable corrective and preventive actions based on the AI-generated insights and explain how these actions can improve production quality.
 - Summarise the activity by highlighting the importance of AI-powered analytics in supporting evidence-based quality management and operational excellence.
6. **Outcome:** Participants will understand how AI-generated quality data is analysed to monitor production performance, identify quality issues, and recommend corrective and preventive actions for continuous improvement.

Notes for Facilitation

- Ensure active participation by encouraging discussions and sharing examples of AI applications in apparel quality assurance and manufacturing.
- Use AI-generated reports, digital dashboards, KPI charts, and production analytics as visual aids to simplify technical concepts.
- Adjust the pace of the session based on participants' understanding, allowing sufficient time for demonstrations, analysis, and clarification.
- Monitor participant engagement throughout the demonstrations and roleplay, providing constructive feedback and linking discussions to real-world apparel manufacturing practices.
- Summarise key takeaways after the roleplay by reinforcing the importance of AI-powered quality analysis, real-time monitoring, data-driven decision-making, and continuous quality improvement in apparel manufacturing.

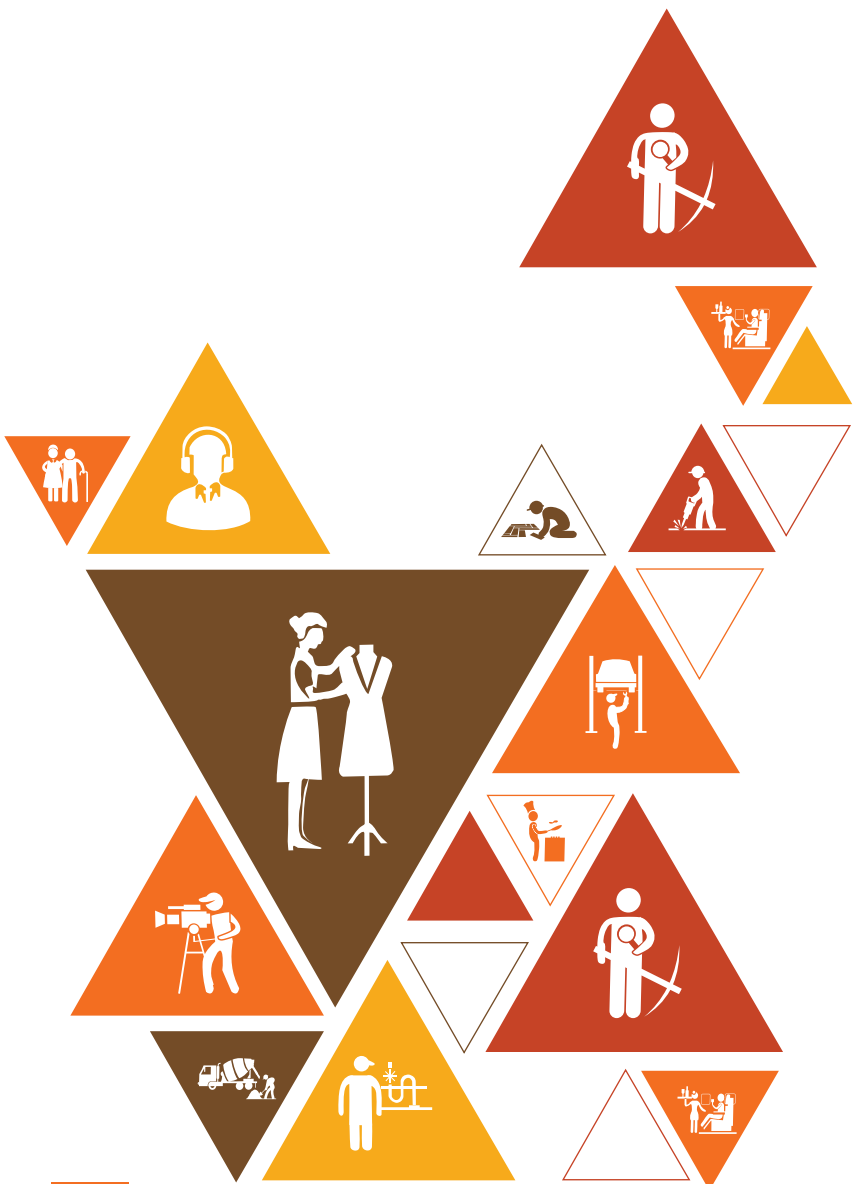
Answers to Exercises for PHB

Multiple Choice Questions:

1. a. To monitor apparel quality and identify production issues
2. a. Digital quality dashboard
3. a. To identify defect trends and quality deviations
4. a. They help reduce defects and improve compliance with quality standards.
5. a. To support data-driven quality decisions and corrective actions

Descriptive Questions:

1. Refer to Unit 5.1: AI-Powered Quality Analysis and Improvement
Topic 5.1.2 AI-Enabled Production Quality Monitoring
2. Refer to Unit 5.1: AI-Powered Quality Analysis and Improvement
Topic 5.1.2 AI-Enabled Production Quality Monitoring
3. Refer to Unit 5.1: AI-Powered Quality Analysis and Improvement
Topic 5.1.3 AI-Generated Quality Data Analysis
4. Refer to Unit 5.1: AI-Powered Quality Analysis and Improvement
Topic 5.1.4 AI-Based Quality Monitoring Benefits
5. Refer to Unit 5.1: AI-Powered Quality Analysis and Improvement
Topic 5.1.5 AI-Driven Corrective Preventive Actions





Skill India
कौशल भारत - कुशल भारत



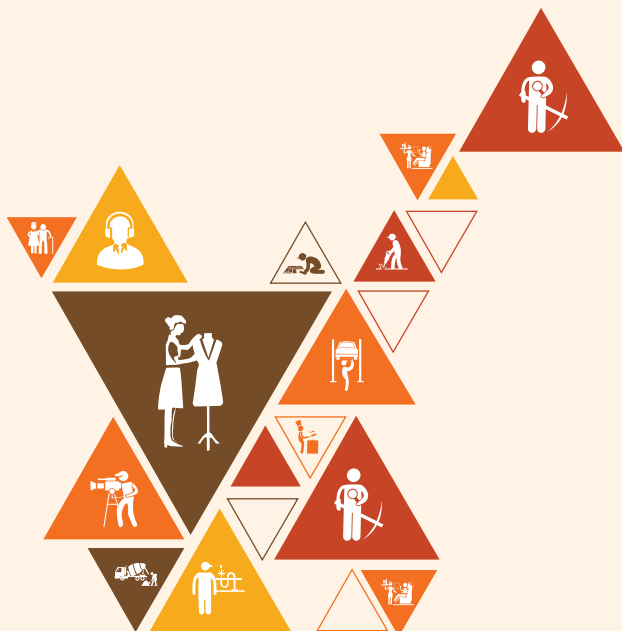
सत्यमेव जयते
GOVERNMENT OF INDIA
MINISTRY OF SKILL DEVELOPMENT
& ENTREPRENEURSHIP



6. Apply Quality Control Tools and Techniques

Unit 6.1 - Quality Control Analysis Techniques

Unit 6.2 - Quality Improvement Documentation Practices



AMH/N0112

Key Learning Outcomes



By the end of this module, the participants will be able to:

1. Explain the fundamental concepts, principles, and significance of quality control (QC) in apparel production.
2. Describe the purpose and applications of Root Cause Analysis (RCA) and quality control tools such as Ishikawa diagrams, Pareto charts, histograms, control charts, scatter diagrams, check sheets, and flow charts.
3. Discuss quality improvement methodologies, including DMAIC, SIPOC, FMEA, 5S, and Kaizen, for systematic process improvement and defect prevention.
4. Interpret production and inspection data to identify defects, trends, process variations, and deviations from quality standards.
5. Compare process capability metrics (Cp/Cpk) with quality specifications to evaluate process performance and compliance.
6. Prepare check sheets, flow charts, standardised inspection formats, and quality records to support effective quality monitoring and documentation.
7. Elaborate on corrective and preventive action (CAPA) plans using insights obtained from quality control tools and defect analysis.
8. Highlight quality control techniques to investigate root causes, prioritise defects, and improve process stability and production quality.
9. Highlight the importance of continuous quality improvement practices and quality control methodologies in enhancing product quality, operational efficiency, and customer satisfaction.

Unit 6.1: Quality Control Analysis Techniques

Unit Objectives

By the end of this unit, the participants will be able to:

1. Explain the basic concepts, principles, and importance of quality control (QC) in apparel manufacturing.
2. Describe the purpose and applications of Root Cause Analysis (RCA) and quality control tools, including Ishikawa diagrams, Pareto charts, histograms, control charts, scatter diagrams, check sheets, and flow charts.
3. Outline production and inspection data to identify defects, trends, process variations, and non-conformities with quality standards.
4. Compare process capability indices (Cp/Cpk) with quality specifications to assess process performance and compliance.

Resources to be Used

Participant handbook, notepad, pen, whiteboard, markers, presentation slides, overhead projector or large screen, computer/laptop with internet connection, sample quality inspection reports, Ishikawa diagram templates, Pareto charts, histograms, control charts, scatter diagrams, check sheets, flow charts, production and inspection data sheets.

Do

- Greet the participants warmly, introduce yourself, and create a positive learning environment by briefly discussing the importance of quality control in apparel manufacturing.
- Clearly explain the objectives of the unit so participants understand the knowledge and practical skills they will gain during the session.
- Provide a brief overview of the session agenda, highlighting topics such as quality control principles, root cause analysis, quality control tools, process capability, and production data analysis.
- Ensure that all participants have their participant handbook, notepad, and pen ready for taking notes and participating in discussions and activities.
- Check that the whiteboard, markers, presentation slides, and computer/laptop with internet connectivity are functioning properly before beginning the session.
- Display the presentation slides on the overhead projector or large screen and verify that all participants have a clear view.
- Invite participants to introduce themselves briefly and share whether they have any experience with garment quality inspection or quality control activities.
- Inform participants that the session will be highly interactive and will include discussions, practical activities, demonstrations, and question-and-answer sessions.
- Arrange the seating to encourage group interaction and ensure everyone can comfortably participate in collaborative exercises.
- Conclude the session by summarising the key concepts and encouraging participants to apply quality control tools for improving apparel manufacturing processes.

Say

- Welcome to today's session on Quality Control Analysis Techniques, where we will learn how quality control tools help improve garment quality and manufacturing performance.
- By the end of this session, you will understand the principles of quality control, root cause analysis, and the use of different quality control tools in apparel manufacturing.
- We will explore tools such as Ishikawa diagrams, Pareto charts, histograms, control charts, scatter diagrams, check sheets, and flow charts to analyse quality problems.
- You will also learn how production and inspection data help identify defects, process variations, and non-conformities with quality standards.
- Together, we will examine how process capability indices help evaluate production performance and support continuous quality improvement.

Ask

- Why is quality control important in apparel manufacturing?
- What do you think causes recurring garment defects during production?
- Have you ever used or seen quality control tools such as Pareto charts or Ishikawa diagrams? Where?
- Why is it important to analyse production and inspection data before taking corrective actions?
- How can process capability indices help improve manufacturing quality?

Elaborate

- Quality control is a systematic process used to monitor production activities, identify defects, and ensure garments comply with specified quality standards.
- Root Cause Analysis (RCA) helps identify the underlying causes of quality problems so that effective corrective and preventive actions can be implemented.
- Quality control tools such as Ishikawa diagrams, Pareto charts, histograms, control charts, scatter diagrams, check sheets, and flow charts help analyse defects, process performance, and production variations.
- Production and inspection data provide valuable information for identifying defect trends, process deviations, recurring quality issues, and opportunities for improvement.
- Process capability indices such as Cp and Cpk evaluate whether production processes consistently meet quality specifications and customer requirements.

Explain

- Quality control focuses on inspecting products and monitoring production processes to ensure garments meet defined quality requirements before reaching customers.
- Root Cause Analysis uses structured methods and quality control tools to identify, analyse, and eliminate the underlying causes of recurring quality problems.
- Quality control tools provide visual and statistical methods for analysing defects, identifying process trends, prioritising quality issues, and supporting informed decision-making.

- Production and inspection records are analysed to identify process variations, monitor quality performance, detect non-conformities, and support continuous improvement initiatives.
- Process capability indices (Cp and Cpk) measure the ability of a manufacturing process to produce garments consistently within specified quality limits and support process improvement.

Demonstrate

Participants will examine sample production data, inspection reports, Ishikawa diagrams, Pareto charts, histograms, control charts, scatter diagrams, check sheets, flow charts, and process capability reports. They will identify defect patterns, analyse root causes, interpret quality control charts, compare process capability with quality specifications, and recommend suitable quality improvement actions.

Activity

1. **Name of the Roleplay:** Root cause analysis using quality control tools
2. **Objective of the Roleplay:** To help participants apply quality control tools to identify root causes of garment defects, analyse production data, and recommend quality improvement measures.
3. **Resources:** Participant handbook, notepad, pen, whiteboard, markers, presentation slides, computer/laptop with internet connection, sample production data, inspection reports, Ishikawa diagram templates, Pareto charts, control charts, check sheets.
4. **Time Duration:** 25 minutes
5. **Instructions:**
 - Divide participants into small groups and assign each group a garment production quality problem supported by inspection data.
 - Ask each group to analyse the inspection records and identify the major quality issues affecting production.
 - Instruct participants to prepare an Ishikawa diagram and use other quality control tools such as Pareto charts or check sheets to determine the root causes of the defects.
 - Ask each group to interpret the available production data, compare process performance with quality specifications, and recommend suitable corrective actions.
 - Conclude the activity by discussing how quality control tools support systematic problem-solving and continuous quality improvement in apparel manufacturing.
6. **Outcome:** Participants will understand how to use quality control tools, analyse production and inspection data, identify root causes of defects, evaluate process capability, and recommend corrective actions to improve garment quality.

Notes for Facilitation

- Encourage active participation by relating quality control techniques to real garment manufacturing and inspection scenarios.
- Use visual examples of Ishikawa diagrams, Pareto charts, histograms, control charts, scatter diagrams, and check sheets to simplify statistical quality concepts.
- Adjust the pace of the session according to participant understanding, providing additional explanations and practical examples whenever required.
- Encourage participants to ask questions and share workplace experiences related to garment defects, quality inspections, and process improvement activities.
- Summarise the key learning points after each roleplay and reinforce how quality control analysis techniques support defect reduction, process improvement, and compliance with quality standards.
- Demonstrate how production data, process capability indices, and quality control tools work together to support continuous improvement and operational excellence in apparel manufacturing.

Unit 6.2: Quality Improvement Documentation Practices

Unit Objectives

By the end of this unit, the participants will be able to:

1. Discuss quality improvement approaches such as DMAIC, SIPOC, FMEA, 5S, and Kaizen for process improvement and defect prevention.
2. Prepare check sheets, flow charts, standardised inspection formats, and quality records for effective quality monitoring and documentation.
3. Elaborate on corrective and preventive action (CAPA) plans using findings from quality control tools and defect analysis.
4. Highlight quality control techniques for investigating root causes, prioritising defects, and improving process stability and product quality.
5. Highlight the importance of continuous quality improvement practices and quality control methodologies in improving product quality, operational efficiency, and customer satisfaction.

Resources to be Used

Participant handbook, notepad, pen, whiteboard, markers, presentation slides, overhead projector or large screen, computer/laptop with internet connection, sample CAPA forms, DMAIC and SIPOC templates, FMEA worksheet, 5S checklist, Kaizen improvement records, check sheets, flow charts, standard inspection formats, quality records, defect analysis reports.

Do

- Greet the participants warmly, introduce yourself, and create a positive learning environment by briefly discussing the importance of continuous quality improvement in apparel manufacturing.
- Clearly explain the objectives of the unit so participants understand the knowledge and practical skills they will gain during the session.
- Provide a brief overview of the session agenda, highlighting topics such as quality improvement methodologies, quality documentation, CAPA planning, and continuous improvement practices.
- Ensure that all participants have their participant handbook, notepad, and pen ready for taking notes and participating in discussions and activities.
- Check that the whiteboard, markers, presentation slides, and computer/laptop with internet connectivity are functioning properly before beginning the session.
- Display the presentation slides on the overhead projector or large screen and verify that all participants have a clear view.
- Invite participants to introduce themselves briefly and share whether they have any experience with quality improvement practices or quality documentation.
- Inform participants that the session will be highly interactive and will include discussions, practical activities, demonstrations, and question-and-answer sessions.

- Arrange the seating to encourage group interaction and ensure everyone can comfortably participate in collaborative exercises.
- Conclude the session by summarising the key concepts and encouraging participants to apply quality improvement methodologies and documentation practices to enhance apparel quality.

Say

- Welcome to today's session on Quality Improvement Documentation Practices, where we will learn how structured quality improvement methods and documentation support better apparel manufacturing.
- By the end of this session, you will understand quality improvement approaches such as DMAIC, SIPOC, FMEA, 5S, Kaizen, and Corrective and Preventive Action (CAPA) planning.
- We will explore how check sheets, flow charts, inspection formats, and quality records support effective quality monitoring and process improvement.
- You will also learn how quality control tools help investigate root causes, prioritise defects, and improve process stability.
- Together, we will examine how continuous quality improvement practices enhance product quality, operational efficiency, and customer satisfaction.

Ask

- Why is continuous quality improvement important in apparel manufacturing?
- How can quality improvement methodologies help reduce recurring defects?
- What information should be included in quality records and standard inspection formats?
- Why are corrective and preventive actions necessary after identifying the root causes of defects?
- How do documentation and quality control tools contribute to improving customer satisfaction?

Elaborate

- Quality improvement methodologies such as DMAIC, SIPOC, FMEA, 5S, and Kaizen provide systematic approaches for improving processes, preventing defects, and enhancing product quality.
- Check sheets, flow charts, standard inspection formats, and quality records provide structured documentation for monitoring production quality, recording inspection findings, and maintaining traceability.
- Corrective and Preventive Action (CAPA) plans are developed using findings from quality control tools and defect analysis to eliminate root causes and prevent recurrence of quality issues.
- Quality control techniques help investigate root causes, prioritise defects, analyse process performance, and support data-driven decision-making for process improvement.
- Continuous quality improvement promotes consistent product quality, improves operational efficiency, reduces waste, and increases customer satisfaction through systematic monitoring and ongoing process enhancement.

Explain

- DMAIC, SIPOC, FMEA, 5S, and Kaizen are structured quality improvement methodologies used to analyse processes, reduce variation, eliminate waste, and improve production performance.
- Standard quality documentation such as check sheets, flow charts, inspection formats, and quality records ensures consistency, traceability, and effective communication throughout the quality control process.
- CAPA planning involves identifying root causes, implementing corrective actions to resolve existing issues, and establishing preventive measures to avoid future defects.
- Quality control tools such as Pareto charts, Ishikawa diagrams, check sheets, and flow charts help investigate quality problems, prioritise improvement efforts, and enhance process stability.
- Continuous quality improvement combines quality methodologies, documentation practices, performance monitoring, and employee involvement to achieve sustained improvements in product quality and manufacturing efficiency.

Demonstrate

Participants will review sample DMAIC and SIPOC templates, FMEA worksheets, 5S checklists, Kaizen records, CAPA forms, check sheets, flow charts, and standard inspection formats. They will observe how quality documentation is prepared, how root causes are analysed, how CAPA plans are developed, and how continuous improvement activities are documented to support quality enhancement.

Activity

1. **Name of the Roleplay:** Developing a CAPA plan for continuous quality improvement
2. **Objective of the Roleplay:** To help participants apply quality improvement methodologies, prepare quality documentation, analyse defects, and develop corrective and preventive action plans for apparel manufacturing.
3. **Resources:** Participant handbook, notepad, pen, whiteboard, markers, presentation slides, computer/laptop with internet connection, sample CAPA forms, DMAIC templates, SIPOC diagrams, FMEA worksheets, check sheets, flow charts, inspection formats, defect analysis reports.
4. **Time Duration:** 25 minutes
5. **Instructions:**
 - Divide participants into small groups and assign each group a garment production quality issue supported by inspection reports and defect analysis data.
 - Ask each group to identify the root causes of the quality problem using appropriate quality improvement tools such as DMAIC, SIPOC, FMEA, or Ishikawa diagrams.
 - Instruct participants to prepare the required quality documentation, including check sheets, flow charts, inspection formats, and a CAPA plan.

- Ask each group to present their quality improvement strategy, explaining how their proposed corrective and preventive actions will improve process stability and product quality.
 - Conclude the activity by discussing how continuous quality improvement methodologies and proper documentation contribute to defect prevention and operational excellence.
6. **Outcome:** Participants will understand how to apply quality improvement methodologies, prepare quality documentation, develop CAPA plans, investigate root causes, and implement continuous quality improvement practices in apparel manufacturing.

Notes for Facilitation

- Encourage active participation by relating quality improvement concepts to real apparel manufacturing scenarios and workplace challenges.
- Use practical examples of DMAIC, SIPOC, FMEA, 5S, Kaizen, CAPA forms, check sheets, and flow charts to simplify quality improvement methodologies.
- Adjust the pace of the session according to participant understanding, providing additional explanations and practical demonstrations whenever required.
- Encourage participants to ask questions and share workplace experiences related to quality improvement initiatives, defect prevention, and documentation practices.
- Summarise the key learning points after each roleplay and reinforce how quality improvement methodologies, quality documentation, and CAPA planning support continuous improvement and customer satisfaction.
- Demonstrate how structured quality records, standard inspection formats, and continuous improvement practices contribute to improved product quality, process stability, operational efficiency, and regulatory compliance in apparel manufacturing.

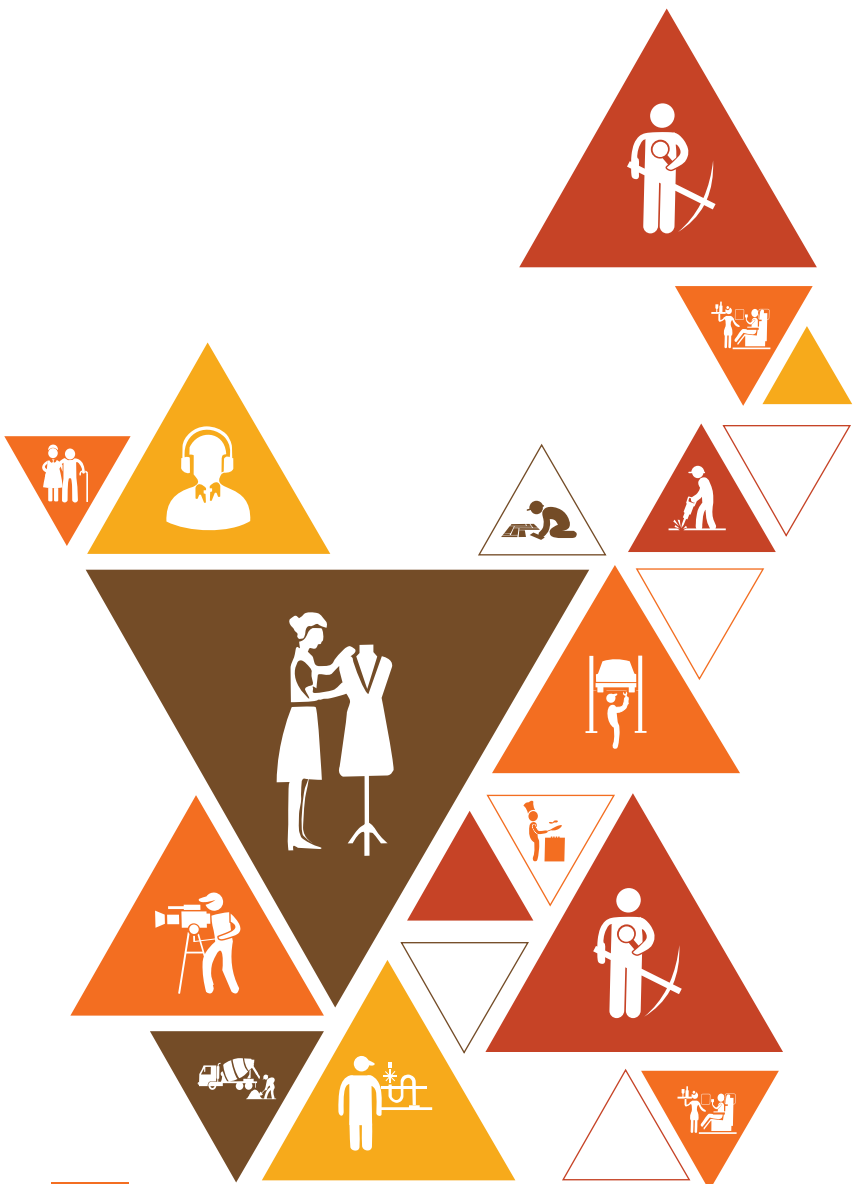
Answers to Exercises for PHB

Multiple Choice Questions:

1. b. To ensure products meet quality standards
2. a. Ishikawa diagram
3. c. Process performance against quality specifications
4. b. To eliminate the causes of defects and prevent recurrence
5. b. To support quality monitoring, documentation, and traceability

Descriptive Questions:

1. Refer to Unit 6.1: Quality Control Analysis Techniques
Topic 6.1.1 Quality Control Concepts and Principles
2. Refer to Unit 6.1: Quality Control Analysis Techniques
Topic 6.1.2 Root Cause Analysis Quality Tools
3. Refer to Unit 6.1: Quality Control Analysis Techniques
Topic 6.1.4 Process Capability Performance Assessment
4. Refer to Unit 6.2: Quality Improvement Documentation Practices
Topic 6.2.3 Corrective Preventive Action Planning
5. Refer to Unit 6.2: Quality Improvement Documentation Practices
Topic 6.2.5 Continuous Quality Improvement Practices





Skill India
कौशल भारत - कुशल भारत



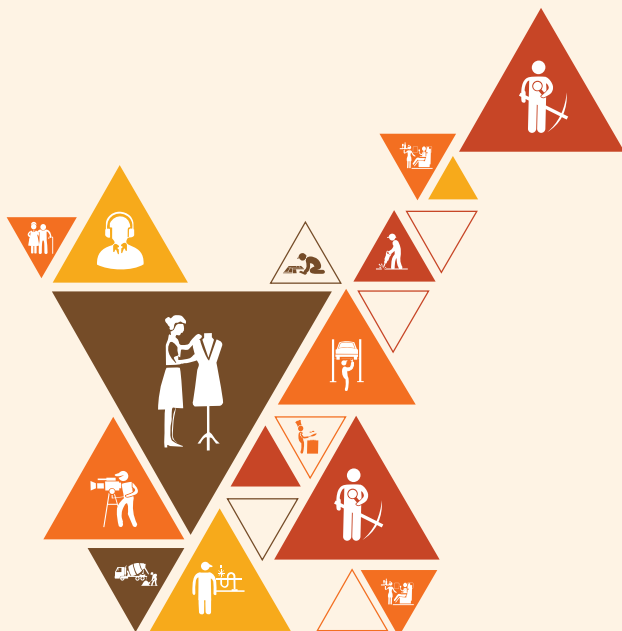
सत्यमेव जयते
GOVERNMENT OF INDIA
MINISTRY OF SKILL DEVELOPMENT
& ENTREPRENEURSHIP



7. Document, Report, and Visualise Quality Data

Unit 7.1 - Documentation Reporting

Unit 7.2 - Data Analysis



AMH/N0113

Key Learning Outcomes



By the end of this module, the participants will be able to:

1. Explain the importance of systematic documentation, reporting, and data visualisation in apparel quality management.
2. Describe the standard templates, check sheets, digital tools, and reporting systems used for recording and managing production and inspection data.
3. Discuss the methods for maintaining data integrity, traceability, and compliance with organisational and industry quality standards.
4. Interpret production and quality data to identify defect patterns, process deviations, production trends, and root causes.
5. Compare different reporting methods and visualisation tools for communicating quality performance and supporting decision-making.
6. Prepare quality records, inspection reports, charts, graphs, visual dashboards, and management summaries using production and inspection data.
7. Outline the procedures for presenting quality insights, corrective actions, and performance metrics to management and cross-functional teams to support continuous improvement.
8. Highlight the role of accurate documentation, effective reporting, and visual management techniques in improving quality monitoring, operational efficiency, and informed decision-making.

Unit 7.1: Documentation Reporting

Unit Objectives

By the end of this unit, the participants will be able to:

1. Explain the importance of systematic documentation, reporting, and data visualisation in apparel quality management.
2. Describe the standard templates, check sheets, digital tools, and reporting systems used to record and manage production and inspection data.
3. Prepare quality records, inspection reports, charts, graphs, visual dashboards, and management summaries using production and inspection data.
4. Outline the procedures for presenting quality insights, corrective actions, and performance metrics to management and cross-functional teams for continuous improvement.
5. Highlight the role of accurate documentation, effective reporting, and visual management in improving quality monitoring, operational efficiency, and decision-making.

Resources to be Used

Participant handbook, notepad, pen, whiteboard, markers, presentation slides, overhead projector or large screen, computer/laptop with internet connection, sample inspection reports, quality record formats, check sheets, production reports, digital reporting software, spreadsheets, charts, graphs, visual dashboards, management summary templates.

Do

- Greet the participants warmly, introduce yourself, and create a positive learning environment by briefly discussing the importance of documentation and reporting in apparel quality management.
- Clearly explain the objectives of the unit so participants understand the knowledge and practical skills they will gain during the session.
- Provide a brief overview of the session agenda, highlighting topics such as quality documentation, reporting systems, digital tools, data visualisation, and management reporting.
- Ensure that all participants have their participant handbook, notepad, and pen ready for taking notes and participating in discussions and activities.
- Check that the whiteboard, markers, presentation slides, and computer/laptop with internet connectivity are functioning properly before beginning the session.
- Display the presentation slides on the overhead projector or large screen and verify that all participants have a clear view.
- Invite participants to introduce themselves briefly and share whether they have any experience with production reporting, quality documentation, or digital reporting systems.
- Inform participants that the session will be highly interactive and will include discussions, practical activities, demonstrations, and question-and-answer sessions.

- Arrange the seating to encourage group interaction and ensure everyone can comfortably participate in collaborative exercises.
- Conclude the session by summarising the key concepts and encouraging participants to apply effective documentation and reporting practices to improve apparel quality management.

Say

- Welcome to today's session on Documentation Reporting, where we will learn how systematic documentation, reporting, and data visualisation support effective apparel quality management.
- By the end of this session, you will understand the importance of maintaining accurate quality records and preparing meaningful reports for production and quality control.
- We will explore standard templates, check sheets, digital reporting tools, and management reporting systems used in apparel manufacturing.
- You will also learn how charts, graphs, dashboards, and management summaries help communicate quality performance and support informed decision-making.
- Together, we will examine how effective documentation and reporting contribute to continuous quality improvement, operational efficiency, and better organisational performance.

Ask

- Why is accurate documentation important in apparel quality management?
- What types of production and inspection records are commonly maintained during garment manufacturing?
- How do charts, graphs, and dashboards help managers monitor production quality?
- Why should quality findings and corrective actions be communicated to cross-functional teams?
- How can digital reporting systems improve quality monitoring and decision-making?

Elaborate

- Systematic documentation ensures that production activities, inspection findings, quality records, and corrective actions are accurately recorded and easily retrieved for future reference and traceability.
- Standard templates, check sheets, and digital reporting systems help maintain consistency, accuracy, and efficiency in recording production and inspection data.
- Quality records, inspection reports, charts, graphs, and visual dashboards transform production data into meaningful information that supports quality analysis and management review.
- Effective reporting enables production, quality, and management teams to identify quality trends, monitor performance metrics, implement corrective actions, and support continuous improvement.
- Accurate documentation, visual management, and structured reporting improve operational efficiency, regulatory compliance, communication, and evidence-based decision-making throughout the apparel manufacturing process.

Explain

- Documentation reporting is the systematic process of recording, organising, analysing, and presenting production and quality information to support quality management and operational control.
- Standard quality documents such as inspection reports, production records, check sheets, and quality registers ensure consistency, traceability, and compliance with organisational procedures.
- Digital reporting tools, spreadsheets, charts, graphs, and interactive dashboards present production and inspection data in a visual format that supports timely monitoring and decision-making.
- Management summaries communicate quality insights, performance indicators, defect trends, corrective actions, and improvement opportunities to management and cross-functional teams.
- Effective documentation and visual reporting support continuous quality improvement by enabling timely decisions, improving communication, and strengthening quality monitoring systems.

Demonstrate

Participants will review sample production records, inspection reports, check sheets, digital reporting formats, charts, graphs, visual dashboards, and management summaries. They will observe how production and inspection data are recorded, analysed, visualised, and presented to communicate quality performance, monitor trends, and support corrective actions.

Activity

1. **Name of the Activity:** Preparing and presenting a quality performance report
2. **Objective of the Activity:** To help participants prepare quality documentation, analyse production and inspection data, create visual reports, and present quality performance findings to management.
3. **Resources:** Participant handbook, notepad, pen, whiteboard, markers, presentation slides, computer/laptop with internet connection, sample inspection reports, production records, check sheets, spreadsheets, charts, graphs, dashboard templates, management summary formats.
4. **Time Duration:** 25 minutes
5. **Instructions:**
 - Divide participants into small groups and provide each group with sample production records, inspection reports, and quality data.
 - Ask each group to prepare quality documentation, identify important quality trends, and summarise the inspection findings.
 - Instruct participants to create simple charts, graphs, or dashboard summaries using the available production and inspection data.
 - Ask each group to present their quality performance report, explain the identified issues, recommend corrective actions, and discuss the key performance indicators with the class.
 - Conclude the activity by discussing how effective documentation, reporting, and visual management support quality monitoring, communication, and continuous improvement.
6. **Outcome:** Participants will understand how to prepare quality documentation, analyse production and inspection data, develop visual reports, communicate quality performance, and support management decision-making through effective reporting practices.

Notes for Facilitation

- Encourage active participation by relating documentation and reporting practices to real apparel manufacturing and quality management scenarios.
- Use practical examples of inspection reports, quality records, dashboards, charts, graphs, and management summaries to simplify documentation and reporting concepts.
- Adjust the pace of the session according to participant understanding, providing additional explanations and demonstrations whenever required.
- Encourage participants to ask questions and share workplace experiences related to production reporting, inspection documentation, and quality data management.
- Summarise the key learning points after each roleplay and reinforce how accurate documentation, effective reporting, and visual management improve quality control, communication, and operational performance.
- Demonstrate how digital reporting tools, visual dashboards, and standard documentation formats support continuous quality improvement, informed decision-making, traceability, and regulatory compliance in apparel manufacturing.

Unit 7.2: Data Analysis

Unit Objectives

By the end of this unit, the participants will be able to:

1. Discuss the methods used to maintain data integrity, traceability, and compliance with organisational and industry quality standards.
2. Interpret production and quality data to identify defect patterns, process deviations, production trends, and their root causes.
3. Compare reporting methods and data visualisation tools for communicating quality performance and supporting decision-making.

Resources to be Used

Participant handbook, notepad, pen, whiteboard, markers, presentation slides, overhead projector or large screen, computer/laptop with internet connection, sample production data, quality reports, inspection records, traceability records, check sheets, spreadsheets, charts, graphs, dashboards, data analysis templates, root cause analysis reports.

Do

- Greet the participants warmly, introduce yourself, and create a positive learning environment by briefly discussing the importance of data analysis in apparel quality management.
- Clearly explain the objectives of the unit so participants understand the knowledge and practical skills they will gain during the session.
- Provide a brief overview of the session agenda, highlighting topics such as data integrity, traceability, quality data analysis, reporting methods, and data visualisation tools.
- Ensure that all participants have their participant handbook, notepad, and pen ready for taking notes and participating in discussions and activities.
- Check that the whiteboard, markers, presentation slides, and computer/laptop with internet connectivity are functioning properly before beginning the session.
- Display the presentation slides on the overhead projector or large screen and verify that all participants have a clear view.
- Invite participants to introduce themselves briefly and share whether they have any experience with analysing production data or preparing quality reports.
- Inform participants that the session will be highly interactive and will include discussions, practical activities, demonstrations, and question-and-answer sessions.
- Arrange the seating to encourage group interaction and ensure everyone can comfortably participate in collaborative exercises.
- Conclude the session by summarising the key concepts and encouraging participants to apply data analysis techniques to improve quality management and decision-making.

Say

- Welcome to today's session on Data Analysis, where we will learn how production and quality data support effective decision-making and continuous quality improvement in apparel manufacturing.
- By the end of this session, you will understand the importance of maintaining data integrity, traceability, and compliance with organisational and industry quality standards.
- We will explore methods for analysing production and quality data to identify defect patterns, process deviations, production trends, and root causes.
- You will also learn how reporting methods and data visualisation tools communicate quality performance effectively to management and production teams.
- Together, we will examine how accurate data analysis supports better quality monitoring, operational efficiency, and evidence-based decision-making.

Ask

- Why is data integrity important when maintaining production and quality records?
- How does traceability help organisations investigate quality problems?
- What information can production and quality data reveal about manufacturing performance?
- Which reporting methods or data visualisation tools are useful for presenting quality information?
- How does analysing production data help organisations improve product quality and operational efficiency?

Elaborate

- Data integrity ensures that production and quality information remain accurate, complete, consistent, and reliable throughout the manufacturing process.
- Traceability enables organisations to track materials, production activities, inspections, and finished garments, making it easier to investigate defects and maintain compliance with quality standards.
- Production and quality data help identify defect patterns, process deviations, recurring quality issues, production trends, and the root causes of manufacturing problems.
- Reporting methods and data visualisation tools such as charts, graphs, dashboards, and performance reports present quality information clearly and support informed decision-making.
- Effective data analysis improves quality monitoring, strengthens process control, enhances operational efficiency, and supports continuous quality improvement across apparel manufacturing operations.

Explain

- Data integrity refers to maintaining accurate, complete, and reliable production and quality records throughout their lifecycle to support effective quality management.
- Traceability systems record and monitor the movement of materials, components, production processes, inspections, and finished products to ensure accountability and regulatory compliance.
- Production and quality data are analysed to identify trends, measure process performance, detect quality deviations, investigate root causes, and recommend corrective actions.

- Reporting methods and visualisation tools transform complex production data into charts, graphs, dashboards, and reports that improve communication and management review.
- Accurate data analysis enables organisations to make informed decisions, improve product quality, reduce defects, strengthen compliance, and support continuous process improvement.

Demonstrate

Participants will review sample production records, inspection reports, traceability documents, quality reports, charts, graphs, dashboards, and root cause analysis reports. They will observe how production and quality data are analysed to identify defect patterns, process deviations, production trends, and quality issues, and how reporting tools communicate findings for effective decision-making.

Activity

- 1. Name of the Activity:** Analysing production data for quality improvement
- 2. Objective of the Activity:** To help participants analyse production and quality data, identify defect trends and root causes, maintain traceability, and present findings using appropriate reporting methods and data visualisation tools.
- 3. Resources:** Participant handbook, notepad, pen, whiteboard, markers, presentation slides, computer/laptop with internet connection, sample production data, inspection records, quality reports, traceability records, charts, graphs, dashboards, root cause analysis templates.
- 4. Time Duration:** 25 minutes
- 5. Instructions:**
 - Divide participants into small groups and provide each group with sample production records, inspection reports, and quality data.
 - Ask each group to analyse the available data to identify defect patterns, production trends, process deviations, and possible root causes.
 - Instruct participants to verify traceability records and assess whether the available data complies with organisational quality requirements.
 - Ask each group to prepare charts, graphs, or dashboard summaries and present their findings, highlighting quality issues and recommended corrective actions.
 - Conclude the activity by discussing how data integrity, traceability, and effective reporting improve quality management and support continuous improvement.
- 6. Outcome:** Participants will understand how to maintain data integrity and traceability, analyse production and quality data, identify defect patterns and root causes, prepare visual reports, and communicate quality performance for informed decision-making.

Notes for Facilitation

- Encourage active participation by relating data analysis concepts to real apparel manufacturing and quality management scenarios.
- Use practical examples of production records, traceability documents, quality reports, dashboards, charts, and graphs to simplify data analysis and reporting concepts.
- Adjust the pace of the session according to participant understanding, providing additional explanations and demonstrations whenever required.
- Encourage participants to ask questions and share workplace experiences related to quality data analysis, traceability, reporting, and process improvement.
- Summarise the key learning points after each roleplay and reinforce how data integrity, traceability, quality analysis, and visual reporting improve quality control, operational efficiency, compliance, and decision-making.
- Demonstrate how production data, quality reports, dashboards, and traceability systems support continuous improvement, evidence-based management, and regulatory compliance in apparel manufacturing.

Answers to Exercises for PHB

Multiple Choice Questions:

1. b. To maintain accurate quality records
2. a. Check sheet
3. b. To present quality information for better decision-making
4. a. To ensure accurate, reliable, and traceable records
5. b. To support quality decisions and continuous improvement

Descriptive Questions:

1. Refer to Unit 7.1: Documentation Reporting
Topic 7.1.1 Quality Documentation, Reporting, and Visualisation
2. Refer to Unit 7.2: Data Analysis
Topic 7.2.3 Quality Reporting Visualisation Tools
3. Refer to Unit 7.1: Documentation Reporting
Topic 7.1.1 Quality Documentation, Reporting, and Visualisation
4. Refer to Unit 7.2: Data Analysis
Topic 7.2.3 Quality Reporting Visualisation Tools
5. Refer to Unit 7.2: Data Analysis
Topic 7.2.2 Production Quality Data Analysis



Key Learning Outcomes



By the end of this module, the participants will be able to:

1. Describe safe working practices for the operation, cleaning, maintenance, and storage of tools, equipment, and machinery in the apparel workplace.
2. Explain workplace health, safety, environmental, and organisational procedures related to quality operations and equipment handling.
3. Discuss the effects of contamination, such as machine oil, dirt, and improper handling, on garment quality and production.
4. Identify workplace hazards, risks, accidents, and emergency situations, and explain the appropriate response, evacuation, and reporting procedures.
5. Outline the procedures for obtaining work instructions, interpreting job cards, clarifying task requirements, and meeting assigned work targets.
6. Describe the methods for inspecting tools, equipment, work areas, and finished products to ensure safety, operational readiness, and compliance with quality standards.
7. Prepare workplace records, forms, and reports related to equipment status, safety observations, defects, and production activities.
8. Compare different methods of waste reduction, material reuse, and safe disposal of waste and by-products to promote sustainable manufacturing practices.
9. Highlight the importance of maintaining good health, personal hygiene, and safe work habits while avoiding alcohol, tobacco, and other intoxicants in the workplace.
10. Explain the procedures for reporting defective tools, machine malfunctions, workplace hazards, and quality issues to the appropriate personnel.
11. Discuss the importance of following organisational quality standards, legal requirements, and standard operating procedures to ensure safe and efficient production.
12. Elaborate on the role of workplace safety, environmental responsibility, proper documentation, and continuous housekeeping in improving productivity, product quality, and employee well-being.

Unit 8.1: Workplace Safety and Compliance

Unit Objectives

By the end of this unit, the participants will be able to:

1. Describe safe work practices for operating, cleaning, maintaining, and storing tools, equipment, and machinery in the apparel workplace.
2. Explain workplace health, safety, environmental, and organisational procedures for quality operations and equipment handling.
3. Elaborate on workplace hazards, risks, accidents, and emergencies, and explain the appropriate response, evacuation, and reporting procedures.
4. Highlight the importance of good health, personal hygiene, and safe work habits while avoiding alcohol, tobacco, and other intoxicants at work.
5. Discuss the importance of following organisational quality standards, legal requirements, and standard operating procedures for safe and efficient production.

Resources to be Used

Participant handbook, notepad, pen, whiteboard, markers, presentation slides, overhead projector or large screen, computer/laptop with internet connection, personal protective equipment (PPE), sample safety signs, first-aid kit, fire extinguisher, emergency evacuation plan, standard operating procedures (SOPs), machine safety checklist, workplace safety inspection checklist.

Do

- Greet the participants warmly, introduce yourself, and create a positive learning environment by briefly discussing the importance of workplace safety and compliance in apparel manufacturing.
- Clearly explain the objectives of the unit so participants understand the knowledge and practical skills they will gain during the session.
- Provide a brief overview of the session agenda, highlighting topics such as safe work practices, workplace health and safety, hazard identification, emergency response, personal hygiene, and organisational compliance.
- Ensure that all participants have their participant handbook, notepad, and pen ready for taking notes and participating in discussions and activities.
- Check that the whiteboard, markers, presentation slides, and computer/laptop with internet connectivity are functioning properly before beginning the session.
- Display the presentation slides on the overhead projector or large screen and verify that all participants have a clear view.
- Invite participants to introduce themselves briefly and share whether they have any experience with workplace safety practices or emergency procedures.
- Inform participants that the session will be highly interactive and will include discussions, demonstrations, practical activities, and question-and-answer sessions.

- Arrange the seating to encourage group interaction and ensure everyone can comfortably participate in collaborative exercises.
- Conclude the session by summarising the key concepts and encouraging participants to consistently follow workplace safety procedures, organisational standards, and legal requirements.

Say

- Welcome to today's session on Workplace Safety and Compliance, where we will learn how safe work practices protect employees, equipment, and production quality in apparel manufacturing.
- By the end of this session, you will understand how to operate, clean, maintain, and store workplace tools, equipment, and machinery safely.
- We will discuss workplace health, safety, environmental requirements, hazard identification, emergency response procedures, and organisational safety practices.
- You will also learn the importance of maintaining good health, personal hygiene, and safe work habits while complying with workplace policies and legal requirements.
- Together, we will examine how workplace safety and compliance contribute to accident prevention, efficient production, and a safe working environment.

Ask

- Why is workplace safety important in apparel manufacturing?
- What types of workplace hazards can occur while operating garment production machinery?
- Why should employees follow standard operating procedures when using equipment and machinery?
- How should workers respond during workplace emergencies such as fire, electrical accidents, or chemical spills?
- Why are personal hygiene and avoiding alcohol, tobacco, and other intoxicants important for workplace safety and production quality?

Elaborate

- Safe work practices include the correct operation, cleaning, maintenance, inspection, and storage of tools, equipment, and machinery to prevent accidents and ensure efficient production.
- Workplace health, safety, environmental, and organisational procedures help protect employees, maintain equipment, prevent environmental hazards, and ensure compliance with organisational policies and legal requirements.
- Identifying workplace hazards, assessing risks, reporting unsafe conditions, and following emergency response and evacuation procedures help minimise accidents and injuries.
- Good health, personal hygiene, and safe work habits improve employee well-being, reduce contamination risks, and support consistent product quality, while avoiding alcohol, tobacco, and other intoxicants promotes workplace safety.
- Compliance with organisational quality standards, legal requirements, and standard operating procedures ensures safe operations, product quality, regulatory compliance, and continuous improvement.

Explain

- Safe work practices involve following approved procedures for operating, cleaning, maintaining, and storing workplace tools, equipment, and machinery to prevent injuries and equipment damage.
- Workplace health and safety procedures establish guidelines for hazard prevention, personal protection, environmental management, safe equipment handling, and emergency preparedness.
- Hazard identification and risk assessment help organisations recognise potential dangers, implement preventive measures, and respond effectively to workplace emergencies.
- Personal hygiene, healthy work habits, and avoiding alcohol, tobacco, and other intoxicants contribute to employee safety, workplace discipline, and product quality.
- Organisational quality standards, legal requirements, and standard operating procedures provide a structured framework for maintaining safe, compliant, and efficient apparel manufacturing operations.

Demonstrate

Participants will observe the correct use of personal protective equipment (PPE), safe machine operation, equipment cleaning and maintenance procedures, workplace hazard identification, emergency evacuation practices, fire extinguisher operation, first-aid arrangements, safety signage, and standard operating procedures. They will also review workplace safety checklists and compliance records to understand how safety and quality requirements are implemented in apparel manufacturing.

Activity

- 1. Name of the Activity:** Responding to workplace hazards and safety emergencies
- 2. Objective of the Activity:** To help participants identify workplace hazards, follow safe work practices, respond appropriately to emergencies, and comply with organisational safety procedures and legal requirements.
- 3. Resources:** Participant handbook, notepad, pen, whiteboard, markers, presentation slides, computer/laptop with internet connection, PPE, first-aid kit, fire extinguisher, emergency evacuation plan, workplace safety checklist, machine safety checklist, SOPs.
- 4. Time Duration:** 25 minutes
- 5. Instructions:**
 - Divide participants into small groups and assign each group a workplace safety scenario involving hazards such as machine accidents, fire, electrical faults, unsafe housekeeping, or chemical spills.
 - Ask each group to identify the hazards, assess the associated risks, and recommend appropriate preventive measures.
 - Instruct participants to demonstrate the correct response by following emergency procedures, using appropriate PPE, and applying relevant standard operating procedures.

- Ask each group to explain the reporting process, evacuation procedure, and the organisational requirements for maintaining workplace safety and compliance.
 - Conclude the activity by discussing how safe work practices, hazard reporting, personal responsibility, and compliance with safety procedures reduce workplace accidents and improve operational efficiency.
6. **Outcome:** Participants will understand how to identify workplace hazards, follow safe operating procedures, respond effectively to emergencies, maintain personal safety and hygiene, and comply with organisational safety standards and legal requirements.

Notes for Facilitation

- Encourage active participation by relating workplace safety concepts to real apparel manufacturing environments and practical workplace situations.
- Use demonstrations of PPE, machine safety practices, emergency equipment, safety signage, evacuation plans, and workplace safety checklists to simplify safety concepts.
- Adjust the pace of the session according to participant understanding, providing additional explanations and practical demonstrations whenever required.
- Encourage participants to ask questions and share workplace experiences related to safety practices, hazard reporting, emergency response, and compliance requirements.
- Summarise the key learning points after each roleplay and reinforce how workplace safety, personal responsibility, organisational compliance, and standard operating procedures contribute to accident prevention, employee well-being, product quality, and operational efficiency.
- Demonstrate how regular safety inspections, hazard reporting, emergency preparedness, and adherence to legal and organisational requirements create a safe, healthy, and productive apparel manufacturing workplace.

Unit 8.2: Equipment Operations and Documentation

Unit Objectives

By the end of this unit, the participants will be able to:

1. Outline the procedures for obtaining work instructions, interpreting job cards, clarifying task requirements, and achieving assigned work targets.
2. Describe the methods for inspecting tools, equipment, work areas, and finished products to ensure safety, operational readiness, and quality compliance.
3. Prepare workplace records, forms, and reports on equipment status, safety observations, defects, and production activities.
4. Explain the procedures for reporting defective tools, machine malfunctions, workplace hazards, and quality issues to the appropriate personnel.

Resources to be Used

Participant handbook, notepad, pen, whiteboard, markers, presentation slides, overhead projector or large screen, computer/laptop with internet connection, sample job cards, work instructions, production schedules, equipment inspection checklist, machine maintenance log, workplace inspection checklist, defect reporting forms, safety observation forms, production records, sample tools and equipment.

Do

- Greet the participants warmly, introduce yourself, and create a positive learning environment by briefly discussing the importance of equipment operations and workplace documentation in apparel manufacturing.
- Clearly explain the objectives of the unit so participants understand the knowledge and practical skills they will gain during the session.
- Provide a brief overview of the session agenda, highlighting topics such as work instructions, job cards, equipment inspection, workplace documentation, defect reporting, and safety compliance.
- Ensure that all participants have their participant handbook, notepad, and pen ready for taking notes and participating in discussions and activities.
- Check that the whiteboard, markers, presentation slides, and computer/laptop with internet connectivity are functioning properly before beginning the session.
- Display the presentation slides on the overhead projector or large screen and verify that all participants have a clear view.
- Invite participants to introduce themselves briefly and share whether they have any experience with production documentation, equipment inspections, or workplace reporting.
- Inform participants that the session will be highly interactive and will include discussions, demonstrations, practical activities, and question-and-answer sessions.

- Arrange the seating to encourage group interaction and ensure everyone can comfortably participate in collaborative exercises.
- Conclude the session by summarising the key concepts and encouraging participants to follow correct operating procedures, maintain accurate records, and report workplace issues promptly.

Say

- Welcome to today's session on Equipment Operations and Documentation, where we will learn how proper work instructions, equipment inspections, and workplace documentation contribute to safe and efficient apparel manufacturing.
- By the end of this session, you will understand how to interpret job cards, follow work instructions, inspect equipment, and maintain workplace records accurately.
- We will discuss methods for inspecting tools, equipment, work areas, and finished products to ensure operational readiness, safety, and quality compliance.
- You will also learn how to prepare workplace records, report equipment defects, machine malfunctions, workplace hazards, and quality issues to the appropriate personnel.
- Together, we will examine how effective documentation and timely reporting improve workplace safety, operational efficiency, and product quality.

Ask

- Why is it important to read and understand job cards and work instructions before starting a task?
- What should you inspect before operating tools and equipment in the workplace?
- Why should workplace records and production reports be completed accurately and on time?
- What actions should be taken if a defective tool or machine malfunction is identified?
- How does timely reporting of workplace hazards and quality issues contribute to safe and efficient production?

Elaborate

- Work instructions and job cards provide detailed information about production requirements, quality specifications, work targets, and operating procedures, helping employees perform tasks accurately and efficiently.
- Regular inspection of tools, equipment, work areas, and finished products ensures operational readiness, prevents accidents, maintains equipment performance, and supports compliance with quality standards.
- Workplace records, inspection forms, equipment logs, safety observations, and production reports provide accurate documentation that supports traceability, quality monitoring, maintenance planning, and regulatory compliance.

- Defective tools, machine malfunctions, workplace hazards, and quality issues should be reported immediately to the appropriate personnel to prevent accidents, minimise production disruptions, and maintain product quality.
- Accurate documentation and timely reporting improve communication, support corrective actions, enhance operational efficiency, and contribute to continuous improvement in apparel manufacturing.

Explain



- Work instructions and job cards communicate production requirements, task priorities, quality expectations, and performance targets to ensure work is completed correctly and efficiently.
- Equipment and workplace inspections verify that tools, machines, workstations, and finished products are safe, functional, and compliant with organisational quality and safety requirements.
- Workplace documentation includes production records, equipment inspection reports, maintenance logs, defect reports, safety observations, and quality records that support effective production management and traceability.
- Reporting procedures ensure that defective tools, machine breakdowns, workplace hazards, and quality problems are communicated promptly to supervisors or authorised personnel for immediate action.
- Proper equipment operations, accurate documentation, and timely reporting contribute to workplace safety, regulatory compliance, product quality, and efficient production processes.

Demonstrate



Participants will review sample job cards, work instructions, equipment inspection checklists, workplace inspection forms, production records, machine maintenance logs, safety observation reports, and defect reporting formats. They will observe how work instructions are interpreted, equipment and work areas are inspected, workplace records are completed, and defects, hazards, and machine malfunctions are reported according to organisational procedures.

Activity



1. **Name of the Activity:** Equipment inspection and workplace reporting
2. **Objective of the Activity:** To help participants interpret work instructions, inspect equipment and work areas, prepare workplace documentation, and report defects, hazards, and equipment malfunctions according to organisational procedures.
3. **Resources:** Participant handbook, notepad, pen, whiteboard, markers, presentation slides, computer/laptop with internet connection, sample job cards, work instructions, equipment inspection checklists, workplace inspection forms, machine maintenance logs, defect reporting forms, production records, sample tools and equipment.
4. **Time Duration:** 25 minutes

5. Instructions:

- Divide participants into small groups and provide each group with sample job cards, work instructions, and equipment inspection checklists.
- Ask each group to interpret the assigned work instructions, identify the required tasks, clarify work targets, and inspect the assigned tools, equipment, and work area.
- Instruct participants to complete workplace documentation, including equipment inspection records, production reports, safety observation forms, and defect reporting formats.
- Ask each group to identify any equipment defects, machine malfunctions, workplace hazards, or quality issues and demonstrate the correct reporting procedure to the appropriate personnel.
- Conclude the activity by discussing how proper equipment inspection, accurate documentation, and timely reporting support workplace safety, production efficiency, and quality compliance.

- 6. Outcome:** Participants will understand how to interpret work instructions, inspect equipment and work areas, prepare workplace documentation, report equipment defects and workplace hazards, and support safe, efficient, and compliant apparel manufacturing operations.

Notes for Facilitation

- Encourage active participation by relating equipment operations and documentation practices to real apparel manufacturing workplaces and production environments.
- Use practical demonstrations of job cards, work instructions, inspection checklists, maintenance logs, defect reports, and workplace documentation to simplify operational procedures.
- Adjust the pace of the session according to participant understanding, providing additional explanations and demonstrations whenever required.
- Encourage participants to ask questions and share workplace experiences related to equipment inspections, documentation, reporting procedures, and production operations.
- Summarise the key learning points after each roleplay and reinforce how proper equipment operations, accurate documentation, and timely reporting improve workplace safety, operational efficiency, quality compliance, and effective communication.
- Demonstrate how systematic inspections, complete workplace records, prompt reporting of defects and hazards, and adherence to organisational procedures support continuous improvement and reliable apparel manufacturing operations.

Unit 8.3: Quality Environment and Sustainability

Unit Objectives

By the end of this unit, the participants will be able to:

1. Discuss the impact of contamination, including machine oil, dirt, and improper handling, on garment quality and production.
2. Compare methods of waste reduction, material reuse, and safe waste disposal to support sustainable manufacturing practices.
3. Elaborate on the role of workplace safety, environmental responsibility, proper documentation, and housekeeping in improving productivity, product quality, and employee well-being.

Resources to be Used

Participant handbook, notepad, pen, whiteboard, markers, presentation slides, overhead projector or large screen, computer/laptop with internet connection, sample contaminated and defect-free garments, waste segregation bins, housekeeping checklist, environmental compliance checklist, PPE, sample quality records, waste disposal guidelines, sustainability posters.

Do

- Greet the participants warmly, introduce yourself, and create a positive learning environment by briefly discussing the importance of workplace cleanliness, environmental responsibility, and sustainable manufacturing in the apparel industry.
- Clearly explain the objectives of the unit so participants understand the knowledge and practical skills they will gain during the session.
- Provide a brief overview of the session agenda, highlighting topics such as contamination prevention, waste management, sustainable practices, workplace housekeeping, and environmental responsibility.
- Ensure that all participants have their participant handbook, notepad, and pen ready for taking notes and participating in discussions and activities.
- Check that the whiteboard, markers, presentation slides, and computer/laptop with internet connectivity are functioning properly before beginning the session.
- Display the presentation slides on the overhead projector or large screen and verify that all participants have a clear view.
- Invite participants to introduce themselves briefly and share whether they have any experience with workplace housekeeping, waste management, or environmental practices.
- Inform participants that the session will be highly interactive and will include discussions, demonstrations, practical activities, and question-and-answer sessions.
- Arrange the seating to encourage group interaction and ensure everyone can comfortably participate in collaborative exercises.
- Conclude the session by summarising the key concepts and encouraging participants to maintain clean workplaces, prevent contamination, reduce waste, and follow sustainable manufacturing practices.

Say

- Welcome to today's session on Quality Environment and Sustainability, where we will learn how workplace cleanliness, environmental responsibility, and sustainable practices contribute to better garment quality and efficient production.
- By the end of this session, you will understand how contamination affects garment quality and how proper handling and housekeeping help prevent quality defects.
- We will discuss methods of waste reduction, material reuse, safe waste disposal, and sustainable manufacturing practices used in the apparel industry.
- You will also learn how workplace safety, environmental responsibility, proper documentation, and good housekeeping improve productivity, product quality, and employee well-being.
- Together, we will examine how every employee contributes to maintaining a safe, clean, environmentally responsible, and quality-focused workplace.

Ask

- How can machine oil, dirt, or improper handling affect garment quality?
- Why is waste reduction important in apparel manufacturing?
- What are some methods of reusing materials and disposing of waste safely?
- How does good housekeeping improve workplace safety and production efficiency?
- Why should organisations maintain proper environmental records and documentation?

Elaborate

- Contamination caused by machine oil, dust, dirt, stains, improper handling, and poor housekeeping can damage garments, increase defects, create customer dissatisfaction, and lead to production losses.
- Waste reduction, material reuse, recycling, and safe waste disposal minimise environmental impact, reduce production costs, conserve resources, and support sustainable manufacturing practices.
- Workplace housekeeping includes maintaining clean workstations, organising tools and materials, disposing of waste properly, and preventing contamination to improve workplace safety and operational efficiency.
- Environmental responsibility requires employees to follow organisational procedures for waste management, pollution prevention, resource conservation, and compliance with environmental regulations.
- Proper documentation of environmental practices, waste disposal activities, housekeeping inspections, and sustainability initiatives supports traceability, compliance, continuous improvement, and responsible manufacturing.

Explain

- Contamination prevention involves maintaining clean equipment, work areas, tools, materials, and garments while following proper handling procedures throughout the production process.
- Sustainable manufacturing focuses on reducing waste, reusing materials wherever possible, conserving natural resources, and disposing of waste safely to minimise environmental impact.
- Workplace housekeeping ensures that production areas remain clean, organised, safe, and free from unnecessary materials that could affect quality or create workplace hazards.
- Environmental responsibility includes complying with organisational policies, environmental regulations, waste management procedures, and sustainability practices during manufacturing operations.
- Proper documentation records housekeeping activities, environmental inspections, waste disposal, contamination incidents, and sustainability practices, supporting compliance, quality management, and continuous improvement.

Demonstrate

Participants will observe examples of contaminated and defect-free garments, housekeeping practices, waste segregation methods, recycling procedures, waste disposal systems, environmental compliance records, and workplace documentation. They will identify sources of contamination, inspect housekeeping standards, classify different types of waste, and review how proper documentation supports environmental compliance and sustainable manufacturing.

Activity

- 1. Name of the Activity:** Maintaining a clean and sustainable workplace
- 2. Objective of the Activity:** To help participants identify contamination sources, implement workplace housekeeping practices, manage waste responsibly, and maintain environmental documentation to support sustainable apparel manufacturing.
- 3. Resources:** Participant handbook, notepad, pen, whiteboard, markers, presentation slides, computer/laptop with internet connection, sample garments, waste segregation bins, housekeeping checklist, environmental compliance checklist, PPE, waste disposal guidelines, quality records.
- 4. Time Duration:** 25 minutes
- 5. Instructions:**
 - Divide participants into small groups and assign each group a workplace scenario involving contamination, poor housekeeping, waste management, or environmental compliance issues.
 - Ask each group to identify sources of contamination, workplace hazards, waste generation points, and opportunities for material reuse and recycling.
 - Instruct participants to recommend suitable housekeeping practices, waste reduction measures, safe waste disposal methods, and environmental protection activities.

- Ask each group to complete the relevant housekeeping checklist, environmental records, or waste management documentation and present their recommendations.
 - Conclude the activity by discussing how contamination prevention, sustainable practices, proper documentation, and good housekeeping improve product quality, workplace safety, and environmental performance.
6. **Outcome:** Participants will understand how contamination prevention, waste reduction, material reuse, safe waste disposal, workplace housekeeping, environmental responsibility, and proper documentation contribute to sustainable apparel manufacturing and continuous quality improvement.

Notes for Facilitation

- Encourage active participation by relating workplace cleanliness, environmental responsibility, and sustainability practices to real apparel manufacturing environments.
- Use practical demonstrations of contaminated garments, housekeeping checklists, waste segregation systems, recycling methods, environmental records, and sustainability practices to simplify concepts.
- Adjust the pace of the session according to participant understanding, providing additional explanations and demonstrations whenever required.
- Encourage participants to ask questions and share workplace experiences related to contamination prevention, waste management, housekeeping, and environmental compliance.
- Summarise the key learning points after each roleplay and reinforce how workplace cleanliness, contamination prevention, waste reduction, environmental responsibility, and documentation improve product quality, operational efficiency, employee well-being, and sustainability.
- Demonstrate how effective housekeeping, responsible waste management, proper documentation, and sustainable manufacturing practices support regulatory compliance, resource conservation, continuous improvement, and long-term organisational success.

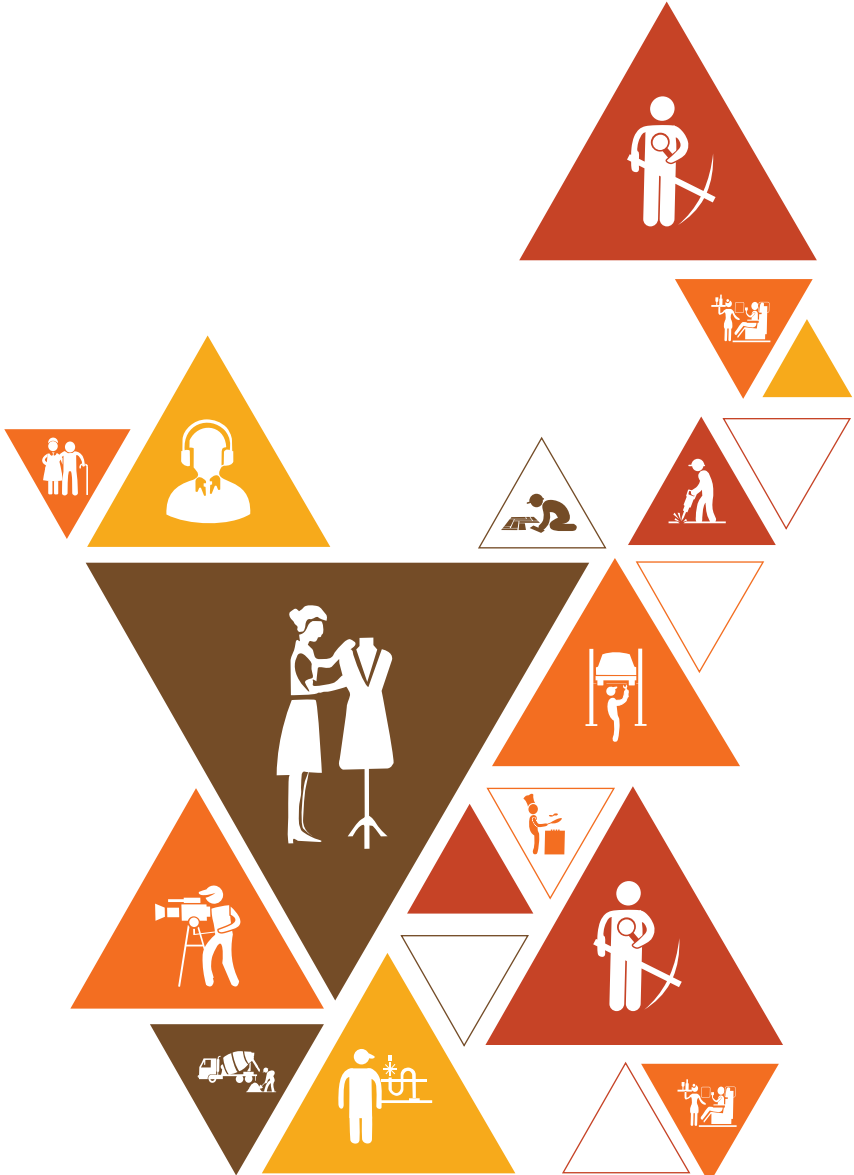
Answers to Exercises for PHB

Multiple Choice Questions:

1. b. To ensure safe operation of tools and equipment
2. a. Machine oil and dirt
3. b. To ensure safety and quality compliance
4. a. To monitor safety, defects, and production activities
5. b. To ensure safe and efficient production

Descriptive Questions:

1. Refer to Unit 8.1: Workplace Safety and Compliance
Topic 8.1.2 Workplace Health Safety Procedures
2. Refer to Unit 8.3: Quality Environment and Sustainability
Topic 8.3.1 Contamination Effects on Garment Quality
3. Refer to Unit 8.2: Equipment Operations and Documentation
Topic 8.2.1 Work Instructions Sheets
4. Refer to Unit 8.3: Quality Environment and Sustainability
Topic 8.3.2 Waste Reduction and Material Reuse
5. Refer to Unit 8.1: Workplace Safety and Compliance
Topic 8.1.5 Quality Standards Legal Compliance Procedures





Skill India
कौशल भारत - कुशल भारत

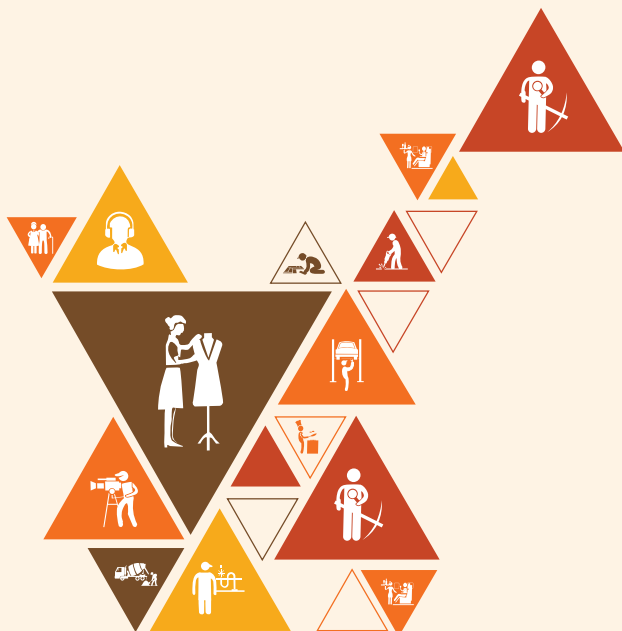


9. Adhere to Industry, Regulatory, and Organisational Standards and Embrace Environmentally Sustainable Practices

Unit 9.1 - Professional Conduct and Workplace Compliance

Unit 9.2 - Legal Compliance and Sustainable Practices

Unit 9.3 - Sustainable Resource and Waste Management



AMH/N0621

Key Learning Outcomes



By the end of this module, the participants will be able to:

1. Explain the importance of punctuality, attendance, discipline, and ethical conduct in maintaining professional standards in the apparel industry.
2. Outline the importance of workplace punctuality, attendance, and discipline for maintaining productivity and organisational efficiency.
3. Describe organisational policies, customer-specific requirements, legal regulations, and reporting procedures applicable to apparel manufacturing.
4. Elaborate on customer-specific requirements, buyer expectations, and the procedures for communicating with supervisors and authorised personnel to clarify work instructions.
5. Discuss the importance of values, ethics, accountability, and working within the limits of personal responsibility.
6. Highlight the limits of personal responsibility, self-authority, teamwork, supervisor coordination, and organisational escalation procedures.
7. Outline legal, regulatory, environmental, and customer compliance requirements relevant to apparel production and quality management.
8. Outline the procedures for reporting deviations, seeking clarifications, and complying with organisational policies and regulatory requirements.
9. Highlight the importance of green jobs, sustainable workplace practices, and environmental responsibility in the apparel sector.
10. Explain methods for optimising the use of materials, conserving energy, and reducing resource wastage during production.
11. Highlight energy conservation practices, efficient equipment operation, and machine shutdown procedures for promoting a sustainable workplace.
12. Prepare and implement appropriate procedures for the segregation, handling, storage, and disposal of waste materials in accordance with organisational and environmental guidelines.
13. Elaborate on safe and sustainable workplace practices, including switching off equipment when not in use and supporting organisational green initiatives.
14. Elaborate on the role of ethical behaviour, regulatory compliance, and sustainable resource management in improving organisational performance, environmental protection, and customer satisfaction.

Unit 9.1: Professional Conduct and Workplace Compliance

Unit Objectives

By the end of this unit, the participants will be able to:

1. Explain the importance of punctuality, attendance, discipline, and ethical conduct in maintaining professionalism in the apparel industry.
2. Describe organisational policies, customer requirements, legal regulations, and reporting procedures followed in apparel manufacturing.
3. Discuss the importance of values, ethics, accountability, and working within assigned responsibilities.
4. Outline the procedures for reporting deviations, seeking clarification, and complying with organisational policies and regulatory requirements.
5. Outline the importance of workplace punctuality, attendance, and discipline in maintaining productivity and organisational performance.
6. Elaborate on customer-specific requirements, buyer expectations, and communication with supervisors and authorised personnel to clarify work instructions.
7. Highlight the limits of personal responsibility, self-authority, teamwork, supervisor support, and organisational escalation procedures.

Resources to be Used

Participant handbook, notepad, pen, whiteboard, markers, presentation slides, overhead projector or large screen, computer/laptop with internet connection, employee code of conduct, organisational policies and procedures manual, attendance register, workplace discipline guidelines, reporting formats, sample job cards, customer specifications, organisational hierarchy chart.

Do

- Greet the participants warmly, introduce yourself, and create a positive learning environment by briefly discussing the importance of professionalism and workplace compliance in the apparel industry.
- Clearly explain the objectives of the unit so participants understand the knowledge and practical skills they will gain during the session.
- Provide a brief overview of the session agenda, highlighting topics such as professional conduct, workplace discipline, organisational policies, ethical behaviour, reporting procedures, teamwork, and customer requirements.
- Ensure that all participants have their participant handbook, notepad, and pen ready for taking notes and participating in discussions and activities.
- Check that the whiteboard, markers, presentation slides, and computer/laptop with internet connectivity are functioning properly before beginning the session.
- Display the presentation slides on the overhead projector or large screen and verify that all participants have a clear view.
- Invite participants to introduce themselves briefly and share whether they have any experience with workplace discipline, organisational policies, or customer quality requirements.

- Inform participants that the session will be highly interactive and will include discussions, demonstrations, practical activities, and question-and-answer sessions.
- Arrange the seating to encourage group interaction and ensure everyone can comfortably participate in collaborative exercises.
- Conclude the session by summarising the key concepts and encouraging participants to consistently demonstrate professionalism, ethical conduct, teamwork, and compliance with organisational policies and legal requirements.

Say

- Welcome to today's session on Professional Conduct and Workplace Compliance, where we will learn how professionalism, ethical behaviour, and organisational compliance contribute to successful apparel manufacturing.
- By the end of this session, you will understand the importance of punctuality, attendance, discipline, accountability, and ethical conduct in the workplace.
- We will discuss organisational policies, customer requirements, legal regulations, reporting procedures, and the importance of working within assigned responsibilities.
- You will also learn how to report deviations, seek clarification when required, communicate effectively with supervisors, and follow organisational escalation procedures.
- Together, we will examine how professional conduct and workplace compliance improve productivity, teamwork, product quality, and customer satisfaction.

Ask

- Why are punctuality, attendance, and discipline important in the apparel workplace?
- Why should employees follow organisational policies, customer requirements, and legal regulations during production?
- How do values, ethics, and accountability contribute to professional behaviour?
- What should you do if you are unsure about a work instruction or notice a deviation from quality or safety requirements?
- Why is it important to understand the limits of your responsibilities and seek support from supervisors when necessary?

Elaborate

- Professional conduct includes punctuality, regular attendance, discipline, honesty, ethical behaviour, and respect for workplace rules, helping maintain productivity and a positive work environment.
- Organisational policies, customer requirements, legal regulations, and standard operating procedures provide clear guidelines for maintaining quality, safety, compliance, and customer satisfaction.
- Values, ethics, accountability, and responsibility encourage employees to perform their duties honestly, report issues promptly, protect organisational resources, and maintain professional integrity.

- Employees should report deviations, quality issues, safety concerns, or unclear work instructions to authorised personnel and seek clarification before proceeding with work.
- Understanding personal responsibilities, respecting organisational authority, working collaboratively with team members, and following escalation procedures support effective communication, problem-solving, and workplace efficiency.

Explain

- Professional conduct refers to behaving responsibly, ethically, and respectfully while following workplace rules, maintaining discipline, and completing assigned duties efficiently.
- Organisational policies, legal regulations, customer specifications, and reporting procedures ensure employees perform their work consistently while meeting quality, safety, and compliance requirements.
- Accountability means accepting responsibility for assigned work, reporting problems honestly, following instructions, and maintaining ethical standards in all workplace activities.
- Employees should immediately report deviations, workplace concerns, quality defects, or unclear instructions to supervisors or authorised personnel using established reporting procedures.
- Organisational hierarchies and escalation procedures define reporting relationships, decision-making authority, and communication channels to ensure issues are resolved efficiently and responsibly.

Demonstrate

Participants will review sample employee codes of conduct, organisational policies, attendance records, reporting forms, customer specifications, organisational hierarchy charts, and workplace communication procedures. They will identify examples of professional behaviour, ethical decision-making, reporting processes, escalation procedures, and customer compliance requirements in apparel manufacturing.

Activity

1. **Name of the Activity:** Professional conduct and workplace compliance
2. **Objective of the Activity:** To help participants practise professional behaviour, follow organisational policies, communicate effectively, report deviations appropriately, and comply with workplace and customer requirements.
3. **Resources:** Participant handbook, notepad, pen, whiteboard, markers, presentation slides, computer/laptop with internet connection, employee code of conduct, organisational policies, attendance register, reporting forms, customer specifications, organisational hierarchy chart..
4. **Time Duration:** 25 minutes
5. **Instructions:**
 - Divide participants into small groups and assign each group a workplace scenario involving issues such as late attendance, unclear work instructions, quality deviations, customer-specific requirements, or ethical dilemmas.

- Ask each group to identify the professional responsibilities, organisational policies, customer expectations, and reporting procedures applicable to the assigned scenario.
 - Instruct participants to demonstrate the appropriate communication with supervisors or authorised personnel, including seeking clarification, reporting deviations, and following escalation procedures.
 - Ask each group to explain how values, ethics, accountability, teamwork, and discipline influence the decisions made during the activity.
 - Conclude the activity by discussing how professional conduct, effective communication, organisational compliance, and ethical behaviour contribute to workplace productivity, product quality, and customer satisfaction.
- 6. Outcome:** Participants will understand how to demonstrate professionalism, follow organisational policies and legal requirements, communicate effectively, report workplace issues appropriately, respect organisational authority, and contribute to a disciplined, ethical, and productive apparel manufacturing environment.

Notes for Facilitation

- Encourage active participation by relating professional conduct and workplace compliance concepts to real apparel manufacturing situations and organisational practices.
- Use practical examples of employee codes of conduct, organisational policies, customer specifications, reporting forms, attendance records, and organisational hierarchy charts to simplify concepts.
- Adjust the pace of the session according to participant understanding, providing additional explanations and workplace examples whenever required.
- Encourage participants to ask questions and share workplace experiences related to professionalism, ethical behaviour, reporting procedures, teamwork, and customer requirements.
- Summarise the key learning points after each roleplay and reinforce how punctuality, discipline, ethical conduct, accountability, teamwork, and organisational compliance improve productivity, product quality, workplace relationships, and customer confidence.
- Demonstrate how following organisational policies, seeking clarification, reporting deviations promptly, respecting reporting hierarchies, and working within assigned responsibilities support safe, compliant, and efficient apparel manufacturing operations.

Unit 9.2: Legal Compliance and Sustainable Practices

Unit Objectives

By the end of this unit, the participants will be able to:

1. Outline the legal, regulatory, environmental, and customer compliance requirements for apparel production and quality management.
2. Elaborate on how ethical behaviour, regulatory compliance, and sustainable resource management drive organisational performance, environmental protection, and customer satisfaction.

Resources to be Used

Participant handbook, notepad, pen, whiteboard, markers, presentation slides, overhead projector or large screen, computer/laptop with internet connection, organisational compliance manual, legal and regulatory compliance checklist, environmental compliance guidelines, customer quality requirements, code of ethics, sustainability policy, waste management records, resource utilisation reports.

Do

- Greet the participants warmly, introduce yourself, and create a positive learning environment by briefly discussing the importance of legal compliance, ethical behaviour, and sustainability in the apparel industry.
- Clearly explain the objectives of the unit so participants understand the knowledge and practical skills they will gain during the session.
- Provide a brief overview of the session agenda, highlighting topics such as legal compliance, regulatory requirements, environmental protection, customer expectations, ethical behaviour, and sustainable resource management.
- Ensure that all participants have their participant handbook, notepad, and pen ready for taking notes and participating in discussions and activities.
- Check that the whiteboard, markers, presentation slides, and computer/laptop with internet connectivity are functioning properly before beginning the session.
- Display the presentation slides on the overhead projector or large screen and verify that all participants have a clear view.
- Invite participants to introduce themselves briefly and share whether they have any experience with workplace compliance, environmental practices, or customer quality requirements.
- Inform participants that the session will be highly interactive and will include discussions, demonstrations, practical activities, and question-and-answer sessions.
- Arrange the seating to encourage group interaction and ensure everyone can comfortably participate in collaborative exercises.
- Conclude the session by summarising the key concepts and encouraging participants to comply with legal requirements, practise ethical behaviour, and support sustainable manufacturing in their workplace.

Say

- Welcome to today's session on Legal Compliance and Sustainable Practices, where we will learn how legal requirements, ethical behaviour, and sustainability contribute to responsible apparel manufacturing.
- By the end of this session, you will understand the legal, regulatory, environmental, and customer compliance requirements applicable to apparel production and quality management.
- We will discuss how ethical conduct, regulatory compliance, and sustainable resource management improve product quality, environmental performance, and customer satisfaction.
- You will also learn how organisations protect natural resources, meet customer expectations, and comply with environmental and quality regulations.
- Together, we will examine how legal compliance and sustainable practices support responsible manufacturing, organisational success, and long-term business growth.

Ask

- Why is legal and regulatory compliance important in apparel manufacturing?
- How do customer requirements influence production quality and organisational performance?
- Why should organisations promote ethical behaviour in the workplace?
- How can sustainable resource management reduce environmental impact and improve operational efficiency?
- How do legal compliance and sustainable practices contribute to customer satisfaction and organisational reputation?

Elaborate

- Legal, regulatory, environmental, and customer compliance requirements establish the standards that organisations must follow to ensure safe, ethical, and high-quality apparel manufacturing.
- Compliance with applicable laws, organisational policies, customer specifications, and environmental regulations helps organisations minimise risks, maintain product quality, and build customer confidence.
- Ethical behaviour promotes honesty, fairness, accountability, transparency, and responsible decision-making, strengthening workplace culture and organisational credibility.
- Sustainable resource management encourages the efficient use of raw materials, energy, water, and other resources while reducing waste, preventing pollution, and protecting the environment.
- Organisations that integrate legal compliance, ethical practices, and sustainability into their operations improve productivity, environmental performance, customer satisfaction, and long-term business sustainability.

Explain

- Legal and regulatory compliance requires organisations to follow applicable laws, environmental regulations, quality standards, labour requirements, and customer specifications throughout apparel production.
- Customer compliance involves consistently meeting agreed quality standards, product specifications, delivery requirements, and contractual obligations to ensure customer satisfaction.
- Ethical behaviour guides employees to act responsibly, maintain integrity, follow organisational policies, and comply with legal and professional standards.
- Sustainable resource management focuses on conserving natural resources, reducing waste, improving resource efficiency, and minimising environmental impact during manufacturing operations.
- Integrating legal compliance, ethical conduct, and sustainable practices strengthens organisational performance, supports environmental protection, enhances regulatory compliance, and improves customer trust.

Demonstrate

Participants will review sample legal compliance checklists, environmental guidelines, customer quality specifications, organisational codes of ethics, sustainability policies, resource utilisation reports, waste management records, and compliance documentation. They will identify legal requirements, ethical responsibilities, sustainability practices, customer expectations, and compliance procedures used in apparel manufacturing.

Activity

- 1. Name of the Activity:** Applying legal compliance and sustainable practices
- 2. Objective of the Activity:** To help participants identify legal and customer compliance requirements, demonstrate ethical behaviour, apply sustainable resource management practices, and recommend actions that improve organisational performance and environmental responsibility.
- 3. Resources:** Participant handbook, notepad, pen, whiteboard, markers, presentation slides, computer/laptop with internet connection, legal compliance checklist, environmental guidelines, customer specifications, organisational code of ethics, sustainability policy, waste management records, resource utilisation reports.
- 4. Time Duration:** 25 minutes
- 5. Instructions:**
 - Divide participants into small groups and assign each group a workplace scenario involving legal compliance, customer requirements, environmental management, ethical behaviour, or sustainable resource utilisation.
 - Ask each group to identify the applicable legal, regulatory, environmental, organisational, and customer compliance requirements for the assigned scenario.
 - Instruct participants to recommend appropriate ethical actions, sustainable resource management practices, and compliance measures that should be implemented.

- Ask each group to present their findings, explaining how their recommendations improve quality, environmental protection, customer satisfaction, and organisational performance.
 - Conclude the activity by discussing how legal compliance, ethical behaviour, and sustainable practices contribute to responsible apparel manufacturing and continuous improvement.
6. **Outcome:** Participants will understand how to comply with legal, regulatory, environmental, and customer requirements, practise ethical behaviour, implement sustainable resource management practices, and contribute to safe, compliant, environmentally responsible, and high-quality apparel manufacturing.

Notes for Facilitation

- Encourage active participation by relating legal compliance and sustainability concepts to real apparel manufacturing workplaces and industry practices.
- Use practical examples of compliance checklists, environmental guidelines, customer specifications, sustainability policies, and ethical codes to simplify complex concepts.
- Adjust the pace of the session according to participant understanding, providing additional explanations and workplace examples whenever required.
- Encourage participants to ask questions and share workplace experiences related to legal compliance, ethical conduct, environmental management, and sustainable manufacturing.
- Summarise the key learning points after each roleplay and reinforce how legal compliance, ethical behaviour, customer requirements, and sustainable resource management improve product quality, environmental performance, operational efficiency, and organisational reputation.
- Demonstrate how compliance with laws, environmental regulations, organisational policies, customer specifications, and sustainability practices supports responsible manufacturing, regulatory adherence, continuous improvement, and long-term business success.

Unit 9.3: Sustainable Resource and Waste Management

Unit Objectives

By the end of this unit, the participants will be able to:

1. Highlight the importance of green jobs, sustainable work practices, and environmental responsibility in the apparel industry.
2. Explain methods for optimising material usage, conserving energy, and minimising resource wastage during production.
3. Prepare procedures for the segregation, handling, storage, and disposal of waste in accordance with organisational and environmental guidelines.
4. Elaborate on safe and sustainable workplace practices, including switching off equipment when not in use and supporting organisational green initiatives.
5. Highlight energy conservation practices, efficient equipment operation, and the importance of switching off machines when not in use to promote a sustainable workplace.

Resources to be Used

Participant handbook, notepad, pen, whiteboard, markers, presentation slides, overhead projector or large screen, computer/laptop with internet connection, waste segregation bins, colour-coded waste containers, waste management guidelines, environmental compliance checklist, energy conservation checklist, housekeeping checklist, sample recyclable and non-recyclable materials, organisational sustainability policy.

Do

- Greet the participants warmly, introduce yourself, and create a positive learning environment by briefly discussing the importance of sustainable resource management and waste reduction in the apparel industry.
- Clearly explain the objectives of the unit so participants understand the knowledge and practical skills they will gain during the session.
- Provide a brief overview of the session agenda, highlighting topics such as green jobs, sustainable work practices, resource conservation, waste management, energy efficiency, and environmental responsibility.
- Ensure that all participants have their participant handbook, notepad, and pen ready for taking notes and participating in discussions and activities.
- Check that the whiteboard, markers, presentation slides, and computer/laptop with internet connectivity are functioning properly before beginning the session.
- Display the presentation slides on the overhead projector or large screen and verify that all participants have a clear view.
- Invite participants to introduce themselves briefly and share whether they have any experience with waste management, resource conservation, or workplace sustainability practices.

- Inform participants that the session will be highly interactive and will include discussions, demonstrations, practical activities, and question-and-answer sessions.
- Arrange the seating to encourage group interaction and ensure everyone can comfortably participate in collaborative exercises.
- Conclude the session by summarising the key concepts and encouraging participants to adopt sustainable work practices, conserve resources, minimise waste, and actively support organisational green initiatives.

Say

- Welcome to today's session on Sustainable Resource and Waste Management, where we will learn how responsible use of resources and effective waste management contribute to sustainable apparel manufacturing.
- By the end of this session, you will understand the importance of green jobs, sustainable work practices, and environmental responsibility in the apparel industry.
- We will discuss methods for optimising material usage, conserving energy, reducing resource wastage, and managing waste according to organisational and environmental requirements.
- You will also learn how safe workplace practices, efficient equipment operation, and participation in organisational green initiatives support environmental sustainability and operational efficiency.
- Together, we will examine how every employee can contribute to conserving resources, reducing environmental impact, and creating a safer and more sustainable workplace.

Ask

- Why are sustainable work practices important in the apparel industry?
- How can employees reduce material wastage during garment production?
- Why should waste be segregated and disposed of according to organisational and environmental guidelines?
- How does switching off equipment when it is not in use contribute to sustainability?
- How do energy conservation and efficient equipment operation benefit organisations and the environment?

Elaborate

- Green jobs and sustainable work practices promote responsible use of natural resources, environmental protection, efficient production, and long-term organisational sustainability.
- Optimising material usage through careful planning, efficient cutting, proper handling, reuse of materials, and waste minimisation reduces production costs and conserves valuable resources.
- Waste segregation, safe handling, proper storage, recycling, and environmentally responsible disposal help minimise pollution, improve workplace safety, and ensure compliance with environmental regulations.

- Sustainable workplace practices such as switching off machines, lights, and equipment when not in use, preventing resource wastage, and supporting green initiatives improve energy efficiency and reduce environmental impact.
- Energy conservation, efficient equipment operation, responsible resource management, and employee participation strengthen organisational sustainability, improve operational performance, and contribute to environmental protection.

Explain



- Sustainable resource management involves using materials, energy, water, and workplace resources efficiently while reducing waste and protecting the environment.
- Material optimisation includes careful planning, efficient production methods, reuse of suitable materials, and minimising unnecessary consumption throughout the manufacturing process.
- Waste management procedures require waste to be segregated, handled, stored, transported, recycled, and disposed of according to organisational policies and environmental regulations.
- Safe and sustainable workplace practices include maintaining clean work areas, operating equipment efficiently, switching off machinery when not in use, and participating in organisational environmental initiatives.
- Energy conservation and efficient equipment operation reduce operating costs, improve equipment life, minimise environmental impact, and support sustainable manufacturing practices.

Demonstrate



Participants will observe waste segregation practices using colour-coded bins, material reuse techniques, energy conservation methods, efficient equipment operation, housekeeping practices, environmental compliance checklists, and organisational sustainability procedures. They will identify recyclable and non-recyclable waste, review waste disposal processes, and observe how sustainable workplace practices improve resource efficiency and environmental performance.

Activity



1. **Name of the Activity:** Implementing sustainable resource and waste management practices
2. **Objective of the Activity:** To help participants apply sustainable resource management practices, optimise material usage, segregate waste correctly, conserve energy, and support organisational environmental initiatives.
3. **Resources:** Participant handbook, notepad, pen, whiteboard, markers, presentation slides, computer/laptop with internet connection, waste segregation bins, colour-coded waste containers, environmental compliance checklist, housekeeping checklist, sample recyclable and non-recyclable materials, organisational sustainability policy, energy conservation checklist.
4. **Time Duration:** 25 minutes

5. Instructions:

- Divide participants into small groups and assign each group a workplace scenario involving material wastage, poor waste segregation, unnecessary energy consumption, or inadequate environmental practices.
- Ask each group to identify opportunities for reducing waste, conserving resources, improving housekeeping, and increasing energy efficiency within the assigned scenario.
- Instruct participants to demonstrate the correct segregation, handling, storage, and disposal of different categories of waste according to organisational and environmental guidelines.
- Ask each group to recommend sustainable workplace practices, including efficient equipment operation, switching off machines when not in use, and participation in organisational green initiatives.
- Conclude the activity by discussing how sustainable resource management, proper waste handling, and energy conservation improve operational efficiency, environmental protection, and organisational sustainability.

- 6. Outcome:** Participants will understand how to optimise material usage, conserve resources, manage waste responsibly, follow sustainable workplace practices, support environmental compliance, and contribute to a cleaner, safer, and more sustainable apparel manufacturing environment.

Notes for Facilitation

- Encourage active participation by relating sustainable resource management and waste management concepts to real apparel manufacturing workplaces and environmental practices.
- Use practical demonstrations of waste segregation, recycling, material reuse, energy conservation techniques, housekeeping practices, and environmental compliance checklists to simplify sustainability concepts.
- Adjust the pace of the session according to participant understanding, providing additional explanations and workplace examples whenever required.
- Encourage participants to ask questions and share workplace experiences related to waste management, energy conservation, resource optimisation, and sustainable manufacturing.
- Summarise the key learning points after each roleplay and reinforce how efficient resource utilisation, waste reduction, energy conservation, housekeeping, and environmental responsibility improve product quality, operational efficiency, regulatory compliance, and organisational sustainability.
- Demonstrate how proper waste segregation, responsible disposal practices, efficient equipment operation, switching off unused machines, and active participation in organisational green initiatives support continuous improvement, environmental protection, and long-term sustainable apparel manufacturing.

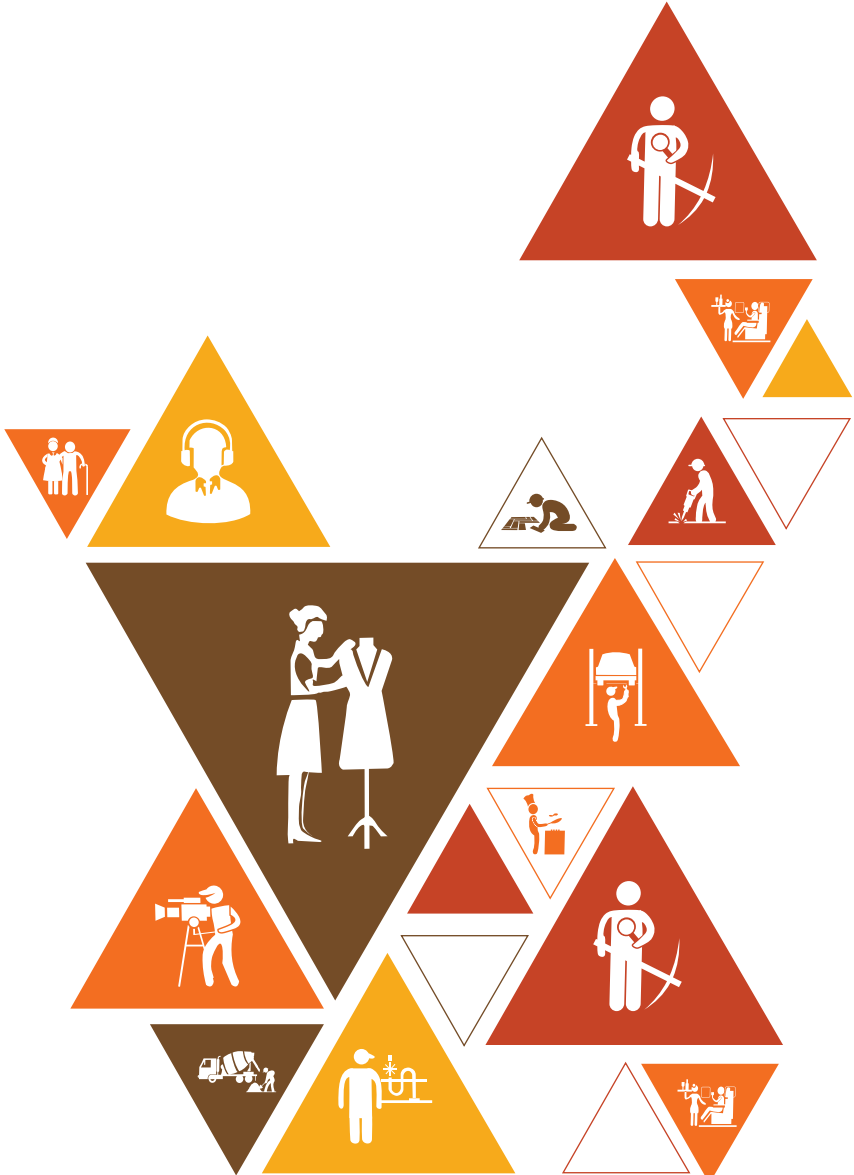
Answers to Exercises for PHB

Multiple Choice Questions:

1. b. To maintain professional standards
2. a. To ensure compliance and quality production
3. b. To support safe disposal and environmental protection
4. b. Energy conservation and material optimisation
5. b. By improving organisational performance and customer satisfaction

Descriptive Questions:

1. Refer to Unit 9.1: Professional Conduct and Workplace Compliance
Topic 9.1.3 Values, Ethics, and Accountability
2. Refer to Unit 9.2: Legal Compliance and Sustainable Practices
Topic 9.2.1 Legal Regulatory Compliance Requirements
3. Refer to Unit 9.3: Sustainable Resource and Waste Management
Topic 9.3.3 Material Energy Resource Optimisation
4. Refer to Unit 9.3: Sustainable Resource and Waste Management
Topic 9.3.3 Waste Segregation Handling Disposal Procedures
5. Refer to Unit 9.2: Legal Compliance and Sustainable Practices
Topic 9.2.2 Ethical Compliance Sustainable Resource Management





Employability Skills is available at the following location



<https://www.skillindiadigital.gov.in/content/list>

Employability Skills



Skill India
कौशल भारत - कुशल भारत



सत्यमेव जयते
GOVERNMENT OF INDIA
MINISTRY OF SKILL DEVELOPMENT
& ENTREPRENEURSHIP

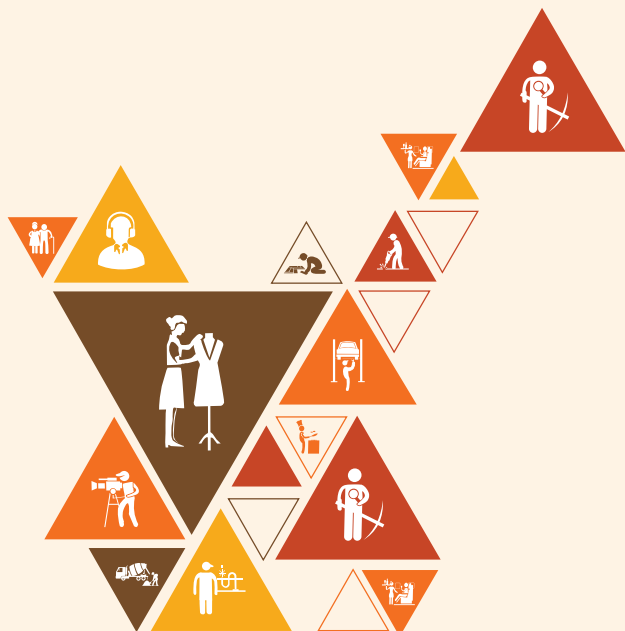


11. Annexures

Annexure I: Training Delivery Plan

Annexure II: Assessment Criteria

Annexure III: List of QR Codes Used in PHB



Annexure I

Training Delivery Plan

Training Delivery Plan			
Program Name:	Apparel Quality Analyst		
Qualification Pack Name & Ref. ID	Apparel Quality Analyst & AMH/Q0104		
Version No.	1.0	Version Update Date	13-02-2029
Pre-requisites to Training (if any)	Not Applicable		
Training Outcomes	By the end of this program, the participants will be able to: 1. Describe the role, responsibilities, and career opportunities of an Apparel Quality Analyst. 2. Explain the methods for analysing, classifying, and documenting garment defects. 3. Discuss conventional and modern quality assurance methodologies in apparel manufacturing. 4. Elaborate on the application of AI-based inspection and data analysis tools for defect detection and quality monitoring. 5. Explain the integration of digital and AI tools into apparel quality assurance systems. 6. Prepare corrective and preventive action (CAPA) plans using digital tools and lean quality systems. 7. Highlight the importance of maintaining health, safety, and security in the workplace. 8. Outline industry, regulatory, and organisational requirements applicable to apparel manufacturing. 9. Develop professional communication, teamwork, problem-solving, and workplace ethics for effective performance in the apparel industry.		

SL	Module Name	Session name	Session Objectives	NOS	Methodology	Training Tools/Aids	Duration (hours)
1.	Introduction and Orientation to Apparel Quality Analyst	Introduction and Orientation to Apparel Quality Analyst	- Describe the size and scope of the apparel industry, - Explain the roles and responsibilities of an Apparel Quality Analyst - Discuss various employment opportunities for an Apparel Quality Analyst in the apparel industry.	Bridge Module	Classroom lecture/ PowerPoint Presentation/ Question & Answer and Group Discussion	White-board and markers, Chart paper and sketch pens, LCD Projector and Laptop for presentations, PCs/ Laptops, and Internet with Wi-Fi (Min 2 Mbps Dedicated)	3 Theory (03:00) Practical (00:00)

SL	Module Name	Session name	Session Objectives	NOS	Methodology	Training Tools/Aids	Duration (hours)
2	Analyse and Classify Garment Defects in Apparel Production	Introduction to Garment Defects in Apparel Production	- Describe common garment defects occurring across cutting, sewing, and finishing operations, including puckering, open seams, and misalignment. - Explain the different types of garment defects found during quality audits and their causes. - Discuss the quality checkpoints used for identifying defects in different garment categories.	AMH/N0108	Classroom lecture/ PowerPoint Presentation/ Question & Answer and Group Discussion	Whiteboard and markers, Chart paper and sketch pens, an LCD Projector and Laptop for presentations, PCs/ Laptops, and Internet with Wi-Fi (at Least 2 Mbps Dedicated).	7 Theory (03:00) Practical (04:00)
		Defect Classification and Grading Standards	- Explain the classification of garment defects as major or minor based on severity and buyer or industry grading standards. - Describe inspection procedures, AQL guidelines, and defect recording methods used for defect grading. - Discuss the importance of defect classification in maintaining apparel quality standards.	AMH/N0108			7 Theory (03:00) Practical (04:00)
		Garment Defect Categorisation	- Describe the categorisation of garment defects based on type, frequency, and garment section. - Explain the methods used to organise defects for effective quality analysis. - Discuss the significance of systematic defect categorisation in apparel production.	AMH/N0108			7 Theory (03:00) Practical (04:00)

SL	Module Name	Session name	Session Objectives	NOS	Methodology	Training Tools/Aids	Duration (hours)
		Defect Trend Analysis and Reporting	- Interpret inspection reports to identify garment defect patterns and trends. - Explain trend analysis methods using frequency charts and Pareto basics. - Discuss the role of defect trend analysis in continuous quality improvement.	AMH/N0108			6 Theory (03:00) Practical (03:00)
		Fabric Fault Correlation with Garment Defects	- Explain how fabric faults translate into garment defects during production. - Describe the correlation between fabric issues and garment quality problems. - Discuss the impact of fabric defects on finished garment quality.	AMH/N0108			6 Theory (03:00) Practical (03:00)
		Process Correlation and Defect Impact Assessment	- Explain how machine, operator, and method-related process issues contribute to garment defects. - Elaborate on the impact of defects on garment aesthetics, functionality, and customer satisfaction. - Discuss the relationship between production processes and garment quality performance.	AMH/N0108			6 Theory (03:00) Practical (03:00)

SL	Module Name	Session name	Session Objectives	NOS	Methodology	Training Tools/Aids	Duration (hours)
		Garment Defect Documentation and Traceability	- Describe the tools used for garment defect documentation, including checklists, applications, photographs, and timestamps. - Explain the methods for recording defects to ensure traceability. - Discuss the importance of accurate defect documentation in quality management.	AMH/N0108			6 Theory (03:00) Practical (03:00)
		Visual Defect Standards and Garment Validation	- Develop visual defect classification boards and standard operating procedures for garment inspection. - Explain the SOPs followed for defect rectification and validation. - Enlist repaired garments against defined defect resolution criteria.	AMH/N0108			6 Theory (03:00) Practical (03:00)
		Defect Benchmarking and Quality Performance	- Explain the benchmark garment defect rates used in the apparel industry. - Compare internal garment defect rates with industry quality standards. - Discuss the importance of benchmarking in improving apparel quality performance.	AMH/N0108			6 Theory (03:00) Practical (03:00)

SL	Module Name	Session name	Session Objectives	NOS	Methodology	Training Tools/Aids	Duration (hours)
3	Analyse Data and Prepare Quality Insights Reports	Collection and Validation of Quality Inspection Data	- Describe the garment production stages, quality inspection data generated, and the use of digital check sheets, mobile inspection applications, hand-held tablets, and manual formats for data collection. - Explain the principles of data validation, error correction, and methods for identifying and correcting missing or incorrect inspection entries. - Discuss the methods for standardising and structuring inspection data across different product categories.	AMH/N0109	Classroom lecture/ PowerPoint Presentation/ Question & Answer and Group Discussion	Whiteboard and markers, Chart paper and sketch pens, an LCD Projector and Laptop for presentations, PCs/ Laptops, and Internet with Wi-Fi (at Least 2 Mbps Dedicated).	6 Theory (03:00) Practical (03:00)
		Quality Data Analysis and Process Monitoring	- Explain the use of Pareto charts, control charts, trend lines, and process capability and stability indicators for quality analysis. - Describe the methods for identifying high-frequency defects, root causes, and monitoring process stability using average values and control charts. - Discuss the importance of data analysis in identifying quality trends and improving production performance.	AMH/N0109			6 Theory (03:00) Practical (03:00)

SL	Module Name	Session name	Session Objectives	NOS	Methodology	Training Tools/Aids	Duration (hours)
		Preparation of Quality Reports and Dashboards	- Describe the techniques for preparing visual quality reports, dashboards, graphs, and other reporting formats. - Explain the reporting frequency, stakeholder expectations, and common garment quality KPIs followed in the apparel industry. - Discuss the preparation of clear weekly and monthly quality reports for effective decision-making.	AMH/N0109			6 Theory (03:00) Practical (03:00)
		Quality Improvement and Communication of Findings	- Explain the methods for recommending defect reduction and quality improvement actions based on analytical findings. - Describe the structured formats used for presenting quality insights to QA, production, and vendor teams. - Discuss the role of analytical reporting in supporting quality improvement initiatives and stakeholder communication.	AMH/N0109			6 Theory (03:00) Practical (03:00)
		Report Automation and Continuous Improvement	- Describe the methods for automating report generation using simple digital tools and scheduled reporting techniques. - Explain the process of evaluating report formats based on feedback from managers and auditors. - Discuss the importance of continuous improvement in quality reporting through automation, standardisation, and regular review.	AMH/N0109			6 Theory (03:00) Practical (03:00)

SL	Module Name	Session name	Session Objectives	NOS	Methodology	Training Tools/Aids	Duration (hours)
4	Integrate Digital and AI Tools in Quality Assurance Systems	Introduction to AI and Digital Quality Assurance Tools	- Describe the AI-based and digital tools commonly used in garment quality assurance. - Explain the functions and applications of AI quality tools in apparel manufacturing. - Discuss the benefits and limitations of AI tools, including accuracy parameters and human-in-the-loop verification requirements.	AMH/N0110	Classroom lecture/ PowerPoint Presentation/ Question & Answer and Group Discussion	Whiteboard and markers, Chart paper and sketch pens, an LCD Projector and Laptop for presentations, PCs/ Laptops, and Internet with Wi-Fi (at Least 2 Mbps Dedicated).	8 Theory (03:00) Practical (05:00)
		Digital Inspection Checklist Customisation	- Describe the methods for configuring and customising digital inspection checklists based on garment and product requirements. - Explain the procedures for developing customised digital quality checklists for different garment categories. - Discuss the importance of standardised digital inspection checklists in quality assurance.	AMH/N0110			8 Theory (03:00) Practical (05:00)
		AI Integration with ERP and Factory Systems	- Explain the methods for integrating AI tools with ERP platforms and factory or production management systems. - Describe the key features of ERP systems that support garment quality assurance. - Discuss the role of AI integration in tracking inspection results through connected production systems.	AMH/N0110			8 Theory (03:00) Practical (05:00)

SL	Module Name	Session name	Session Objectives	NOS	Methodology	Training Tools/Aids	Duration (hours)
		Real-Time Monitoring and Digital Reporting	- Explain the principles of real-time data synchronisation, dashboards, and digital reporting workflows. - Describe the configuration of AI tools for monitoring quality checkpoints and vendor-wise performance. - Discuss the use of real-time monitoring systems for improving quality control.	AMH/N0110			8 Theory (03:00) Practical (05:00)
		Vendor Performance Review and System Optimisation	- Describe the vendor performance metrics and analytics used for quality monitoring. - Explain the methods for reviewing system performance using team feedback and optimising AI tool settings. - Discuss the importance of continuous system improvement for quality assurance.	AMH/N0110			8 Theory (03:00) Practical (05:00)
		Digital Inspection Protocols and Documentation	- Describe the procedures for updating, modifying, and validating digital inspection standards and protocols. - Explain the methods for documenting inspection records, visual evidence, system insights, and version-controlled records. - Discuss the importance of maintaining audit-ready digital documentation for quality assurance.	AMH/N0110			8 Theory (03:00) Practical (05:00)

SL	Module Name	Session name	Session Objectives	NOS	Methodology	Training Tools/Aids	Duration (hours)
		Version Control and Audit Compliance	- Explain the principles of digital documentation protocols and version control in garment quality systems. - Describe the practices for maintaining accurate, traceable, and audit-ready inspection records. - Discuss the role of version control in ensuring consistency and compliance with quality requirements.	AMH/N0110			7 Theory (02:00) Practical (05:00)
		Data Privacy and Secure Digital Quality Systems	- Describe the data privacy norms, cybersecurity practices, and safe digital system usage guidelines applicable to quality assurance. - Explain the importance of protecting digital quality data and system access. - Discuss the role of secure digital practices in maintaining reliable AI-enabled quality assurance systems.	AMH/N0110			5 Theory (01:00) Practical (04:00)
5	Utilise AI- Based Analytics for Quality Monitoring	Introduction to AI-Based Quality Monitoring	- Describe the basics of AI, machine learning, and predictive analytics used in garment quality monitoring. - Explain the role of AI systems in improving garment quality assurance processes. - Discuss the applications of AI technologies in apparel quality monitoring.	AMH/N0111	Classroom lecture/ PowerPoint Presentation/ Question & Answer and Group Discussion	Whiteboard and markers, Chart paper and sketch pens, an LCD Projector and Laptop for presentations, PCs/ Laptops, and Internet with Wi-Fi (at Least 2 Mbps Dedicated).	6 Theory (03:00) Practical (03:00)

SL	Module Name	Session name	Session Objectives	NOS	Methodology	Training Tools/Aids	Duration (hours)
		AI-Based Defect Pattern Detection	- Explain the application of AI systems for detecting recurring defect patterns based on garment style, machine, operator, and production shift. - Describe the relationship between production parameters and defect occurrence patterns. - Discuss the importance of AI-driven defect pattern analysis for quality improvement.	AMH/N0111			6 Theory (03:00) Practical (03:00)
		Predictive Analytics for Defect Prevention	- Explain the principles of AI-driven prediction, defect hotspot analysis, and trend mapping. - Describe the use of predictive analytics for identifying potential defect hotspots and recommending quality improvement actions. - Discuss the benefits of predictive analytics in proactive quality management.	AMH/N0111			6 Theory (03:00) Practical (03:00)
		Image Recognition and Computer Vision	- Describe the core concepts of image-recognition and computer-vision technologies used in garment inspection. - Explain the application of image-recognition systems for automatically detecting visible fabric and garment defects. - Discuss the types of garment defects commonly identified through AI-based inspection systems.	AMH/N0111			6 Theory (03:00) Practical (03:00)

SL	Module Name	Session name	Session Objectives	NOS	Methodology	Training Tools/Aids	Duration (hours)
		AI Alerts and Corrective Action Management	- Explain the procedures for responding to AI-generated quality alerts through coordination with QA and production teams. - Describe the methods for implementing immediate corrective actions based on AI recommendations - Discuss the importance of timely response to AI alerts for maintaining product quality.	AMH/N0111			6 Theory (03:00) Practical (03:00)
		AI-Based Quality Documentation and Reporting	- Describe the standard methods for documenting AI-generated quality data, reports, and inspection records. - Explain the procedures for maintaining comprehensive quality documentation based on AI-generated information. - Discuss the importance of structured AI-based reporting for quality monitoring and traceability.	AMH/N0111			6 Theory (03:00) Practical (03:00)
		AI Report Interpretation and Root Cause Analysis	- Explain the methods for interpreting AI-generated quality reports to identify root causes of defects. - Describe the fundamentals of root-cause analysis using AI-supported data. - Discuss the use of AI insights for recommending preventive quality improvement actions.	AMH/N0111			6 Theory (03:00) Practical (03:00)

SL	Module Name	Session name	Session Objectives	NOS	Methodology	Training Tools/Aids	Duration (hours)
		Validation of AI Inspection Results	- Explain the criteria and procedures for validating AI-predicted defects through physical sample verification and manual inspection. - Describe the methods for comparing AI outputs with manual inspection results. - Discuss the importance of validation in ensuring the reliability of AI-based inspection systems.	AMH/N0111			6 Theory (03:00) Practical (03:00)
		Evaluation of AI-Based Quality Monitoring	- Describe the approaches for evaluating the long-term effectiveness of AI-based quality monitoring systems. - Explain the use of performance data to assess AI-recommended quality improvement actions. - Discuss the role of continuous evaluation in enhancing AI-driven quality assurance systems.	AMH/N0111			6 Theory (03:00) Practical (03:00)
		Data Privacy and Safe Use of AI Systems	- Describe the safety, confidentiality, and data privacy guidelines for handling AI-related quality information. - Explain the importance of secure management of AI-generated quality data. - Discuss the role of data protection practices in ensuring responsible AI-based quality monitoring.	AMH/N0111			6 Theory (03:00) Practical (03:00)

SL	Module Name	Session name	Session Objectives	NOS	Methodology	Training Tools/Aids	Duration (hours)
6	Apply Quality Control Tools and Techniques	Root Cause Analysis and Ishikawa Diagrams	- Explain the fundamentals of Root Cause Analysis (RCA) for resolving garment quality issues. - Describe the purpose and structure of Cause-and-Effect (Ishikawa) diagrams for identifying defect sources. - Discuss the application of RCA and Ishikawa diagrams using defect data, process flow, and operator feedback to isolate systemic issues.	AMH/N0112	Classroom lecture/ PowerPoint Presentation/ Question & Answer and Group Discussion	Whiteboard and markers, Chart paper and sketch pens, an LCD Projector and Laptop for presentations, PCs/ Laptops, and Internet with Wi-Fi (at Least 2 Mbps Dedicated).	6 Theory (03:00) Practical (03:00)
		Pareto Analysis for Defect Prioritisation	- Explain the use of Pareto analysis for prioritising garment defects based on frequency and impact. - Describe the evaluation of Pareto charts to identify critical quality issues. - Discuss the importance of Pareto analysis in focusing quality improvement efforts.	AMH/N0112			6 Theory (03:00) Practical (03:00)
		Histograms, Control Charts, and Process Stability	- Explain the principles of Histograms and Control Charts for monitoring process variation and stability. - Describe the methods for analysing process performance using statistical quality control tools. - Discuss the role of control charts in maintaining consistent garment quality.	AMH/N0112			6 Theory (03:00) Practical (03:00)

SL	Module Name	Session name	Session Objectives	NOS	Methodology	Training Tools/Aids	Duration (hours)
		Scatter Diagrams and Process Mapping	- Describe the development of Scatter Diagrams for analysing relationships between production variables and defect rates. - Explain the basics of process mapping using SIPOC models and flowcharts. - Discuss the use of Check Sheets and Flow Charts for quality data recording and SOP visualisation.	AMH/N0112			6 Theory (03:00) Practical (03:00)
		DMAIC Methodology for Quality Improvement	- Explain the key concepts of the DMAIC problem-solving methodology. - Describe the application of the DMAIC framework for resolving high-defect production issues. - Discuss the benefits of structured problem-solving in improving garment quality.	AMH/N0112			6 Theory (03:00) Practical (03:00)
		FMEA and Risk Assessment	- Explain the principles of Failure Mode and Effects Analysis (FMEA) for identifying potential failure points. - Describe the interpretation of Risk Priority Number (RPN), severity, occurrence, and detection scores. - Discuss the application of FMEA in prioritising quality risks and preventive actions.	AMH/N0112			6 Theory (03:00) Practical (03:00)

SL	Module Name	Session name	Session Objectives	NOS	Methodology	Training Tools/Aids	Duration (hours)
		Measurement System and Process Capability Analysis	- Describe the procedures for conducting Gage R&R studies to verify the accuracy of inspection methods and personnel. - Explain the concepts of process capability and the interpretation of Cp and Cpk values. - Discuss the importance of measurement accuracy and process capability in meeting quality specifications.	AMH/N0112			6 Theory (03:00) Practical (03:00)
		Control Plans and Continuous Improvement	- Explain the development and implementation of Control Plans for sustaining quality improvements after interventions. - Describe the role of Control Plans in maintaining stable production processes. - Discuss the importance of continuous monitoring for long-term quality performance.	AMH/N0112			6 Theory (03:00) Practical (03:00)
		5S and Kaizen for Workplace Quality	- Explain the role of 5S and Kaizen in maintaining workplace discipline and continuous improvement. - Describe the procedures for conducting 5S audits and organising Kaizen events. - Discuss the contribution of workplace organisation and continuous improvement to garment quality.	AMH/N0112			6 Theory (03:00) Practical (03:00)

SL	Module Name	Session name	Session Objectives	NOS	Methodology	Training Tools/Aids	Duration (hours)
		Visual Control Systems and Inspection Standardisation	- Describe the use of visual control systems for proactive quality tracking and anomaly detection. - Explain the methods for creating visual quality controls and standardising inspection scoring formats using visual protocols. - Discuss the importance of visual management in improving inspection consistency and quality assurance.	AMH/N0112			6 Theory (03:00) Practical (03:00)
7	Document, Report, and Visualise Quality Data	Quality Inspection Documentation	- Describe the standard documentation formats and templates used for quality inspection. - Explain the methods for documenting inspection findings using structured records. - Discuss the importance of accurate quality documentation for traceability and compliance.	AMH/N0113	Classroom lecture/ PowerPoint Presentation/ Question & Answer and Group Discussion	Whiteboard and markers, Chart paper and sketch pens, an LCD Projector and Laptop for presentations, PCs/ Laptops, and Internet with Wi-Fi (at Least 2 Mbps Dedicated).	6 Theory (03:00) Practical (03:00)
		Quality Report Preparation and Validation	- Explain the principles for compiling, analysing, and validating quality reports. - Describe the methods for evaluating quality data to prepare performance reports. - Discuss the importance of validated quality reports for effective decision-making.	AMH/N0113			6 Theory (03:00) Practical (03:00)

SL	Module Name	Session name	Session Objectives	NOS	Methodology	Training Tools/Aids	Duration (hours)
		Data Visualisation and Quality Reporting Tools	- Describe the digital tools and software used for charts, dashboards, and data visualisation. - Explain the methods for creating visual reports using quality analysis tools. - Discuss the role of visual reporting in improving quality monitoring and communication.	AMH/N0113			6 Theory (03:00) Practical (03:00)
		Report Customisation for Stakeholder Requirements	- Explain the techniques for customising quality reports based on stakeholder requirements. - Describe the methods for presenting quality information in user-specific formats. - Discuss the importance of tailored reporting for effective stakeholder communication.	AMH/N0113			6 Theory (03:00) Practical (03:00)
		Real-Time Dashboards and Quality Monitoring	- Explain the basics of real-time quality data alerts and monitoring systems. - Describe the methods for analysing real-time data and configuring dashboard alerts. - Discuss the role of dashboards in proactive quality monitoring and control.	AMH/N0113			6 Theory (03:00) Practical (03:00)

SL	Module Name	Session name	Session Objectives	NOS	Methodology	Training Tools/Aids	Duration (hours)
		Audit-Ready Quality Records	- Describe the methods for maintaining audit-ready, structured, and retrievable quality records. - Explain the procedures for organising quality records for audit readiness. - Discuss the importance of systematic record management for quality compliance.	AMH/N0113			6 Theory (03:00) Practical (03:00)
		Defect Classification and Quality Improvement	- Explain the defect classification criteria and coding logic used in quality analysis. - Describe the methods for analysing and classifying defect types from quality data. - Discuss the use of quality insights and feedback for improving quality control processes.	AMH/N0113			6 Theory (03:00) Practical (03:00)
		Quality Audits and Standard Operating Procedures	- Explain the procedures for evaluating quality compliance through structured audits. - Describe the methods for creating standard operating procedures and managing documentation workflows. - Discuss the importance of SOPs and audits in maintaining quality standards.	AMH/N0113			6 Theory (03:00) Practical (03:00)

SL	Module Name	Session name	Session Objectives	NOS	Methodology	Training Tools/Aids	Duration (hours)
		Communication of Quality Findings	- Describe the effective communication practices used for presenting and sharing quality findings. - Explain the methods for creating and presenting data-driven quality improvement insights. - Discuss the importance of effective communication in supporting quality management decisions.	AMH/N0113			6 Theory (03:00) Practical (03:00)
		AI-Based Quality Analytics and Reporting	- Explain the fundamentals of AI-enabled visual analytics and automated reporting tools. - Describe the application of AI-based tools for quality data analysis and insight generation. - Discuss the role of AI in enhancing quality reporting, visualisation, and decision-making.	AMH/N0113			6 Theory (03:00) Practical (03:00)
8	Promote and sustain safety, health, and security in workplace, while fostering Gender and Persons with Disabilities (PwD) Sensitisation	Workplace Safety, Health, and Inclusive Practices	- Describe the workplace health, safety, gender equality, and PwD guidelines applicable to the organisation. - Explain the code of conduct, social accountability standards, and the importance of promoting a safe, accessible, and healthy workplace for all employees. - Discuss the practices for accommodating persons with disabilities, maintaining appropriate etiquette, respectful communication, and reporting harassment or inappropriate behaviour.	AMH/N0620	Classroom lecture/ PowerPoint Presentation/ Question & Answer and Group Discussion	Whiteboard and markers, Chart paper and sketch pens, an LCD Projector and Laptop for presentations, PCs/ Laptops, and Internet with Wi-Fi (at Least 2 Mbps Dedicated).	6 Theory (03:00) Practical (03:00)

SL	Module Name	Session name	Session Objectives	NOS	Methodology	Training Tools/Aids	Duration (hours)
		Hazard Identification and Risk Management	- Explain the workplace health and safety practices, occupational risks, and methods for identifying and minimising hazards and threats. - Describe the importance and correct use of personal protective equipment, safe handling and storage of hazardous substances, waste disposal systems, and health and safety signage. - Discuss the procedures for monitoring workplace conditions, reporting risks, and ensuring a safe working environment for all employees.	AMH/N0620			6 Theory (03:00) Practical (03:00)
		Emergency Response and Safe Equipment Handling	- Describe the plant layout, emergency exits, escape routes, emergency equipment, assembly points, and reporting protocols. - Explain the procedures for participating in mock drills, evacuation exercises, first aid, firefighting, emergency response, organisational shutdown, and evacuation processes. - Discuss the methods for safe handling and maintenance of materials and equipment according to organisational standards.	AMH/N0620			6 Theory (03:00) Practical (03:00)

SL	Module Name	Session name	Session Objectives	NOS	Methodology	Training Tools/Aids	Duration (hours)
		Gender Equality and PwD Sensitisation	- Explain the importance of gender equality and workplace policies for preventing and reporting harassment or inappropriate behaviour. - Describe the principles of gender sensitisation, PwD awareness, accessibility, and inclusive workplace practices. - Discuss the role of sensitisation programmes in fostering equal opportunities, dignity, and respect for all employees.	AMH/N0620			6 Theory (03:00) Practical (03:00)
		Personal Health, Hygiene, and Workplace Compliance	- Describe the importance of personal health, hygiene, and maintaining a safe workplace environment. - Explain the harmful effects of intoxicants such as alcohol, tobacco, and drugs on workplace safety and performance. - Discuss the significance of complying with workplace safety procedures, documentation requirements, and continuous participation in health and safety initiatives.	AMH/N0620			6 Theory (03:00) Practical (03:00)

SL	Module Name	Session name	Session Objectives	NOS	Methodology	Training Tools/Aids	Duration (hours)
9	Adhere to industry, regulatory, and organisational standards and embrace environmentally sustainable practices	Industry Standards, Compliance, and Sustainable Practices	- Describe the organisational standards, legal regulations, policies, and procedures applicable to the workplace. - Explain the importance of safe working practices, the code of conduct, social accountability standards, and environmentally sustainable decision-making. - Discuss the implementation of sustainable consumption practices while performing job responsibilities in compliance with organisational and industry requirements.	AMH/N0621	Classroom lecture/ PowerPoint Presentation/ Question & Answer and Group Discussion	Whiteboard and markers, Chart paper and sketch pens, an LCD Projector and Laptop for presentations, PCs/ Laptops, and Internet with Wi-Fi (at Least 2 Mbps Dedicated).	6 Theory (03:00) Practical (03:00)
		Organisational Procedures and Workplace Performance	- Explain the production procedures, work activities, organisational rules, quality standards, reporting procedures, and work specifications. - Describe the methods for accurately interpreting work instructions and using specification information during operations. - Discuss the role of environmentally friendly practices in improving organisational performance and operational efficiency.	AMH/N0621			6 Theory (03:00) Practical (03:00)

SL	Module Name	Session name	Session Objectives	NOS	Methodology	Training Tools/Aids	Duration (hours)
		Safe Handling, Maintenance, and Hazard Reporting	- Describe the procedures for safely handling materials, equipment, computers, and software to maintain a clean and hazard-free workplace. - Explain the importance of routine maintenance, regular cleaning, contamination control, and waste minimisation practices. - Discuss the procedures for identifying and reporting unsafe equipment, workplace hazards, and operational problems for timely corrective action.	AMH/N0621			6 Theory (03:00) Practical (03:00)
		Digital Records and System Management	- Explain the procedures for requesting system or software upgrades to improve work efficiency. - Describe the methods for maintaining backup files and organised digital records to ensure data integrity, security, accessibility, and future reference. - Discuss the importance of effective digital record management in supporting workplace productivity and compliance.	AMH/N0621			6 Theory (03:00) Practical (03:00)

SL	Module Name	Session name	Session Objectives	NOS	Methodology	Training Tools/Aids	Duration (hours)
		Cleaning Practices and Equipment Maintenance	- Describe the appropriate cleaning equipment, techniques, and maintenance procedures used for workplace upkeep. - Explain the effects of contamination, common equipment faults, and methods for rectifying equipment-related issues. - Discuss the importance of preventive maintenance, cleanliness, and sustainable workplace practices in maintaining product quality and operational efficiency.	AMH/N0621			6 Theory (03:00) Practical (03:00)
Total Duration							Theory: 186:00 Practical: 204:00
Employability Skills (DGT/VSQ/N0102) https://www.skillindiadigital.gov.in/content/list							60:00
On-the-Job Training (Mandatory) -OJT							60:00
Total							Theory + Practical + ES + OJT = 510:00

Annexure II

Assessment Criteria

CRITERIA FOR ASSESSMENT OF TRAINEES

Assessment Criteria for Apparel Quality Analyst	
Job Role	Apparel Quality Analyst
Qualification Pack	AMH/Q0104, V1.0
Sector Skill Council	Apparel

S. No.	Guidelines for Assessment
1	Criteria for assessment for each Qualification Pack will be created by the Sector Skill Council. Each Performance Criteria (PC) will be assigned marks proportional to its importance in NOS. SSC will also lay down proportion of marks for Theory and Skills Practical for each PC.
2	The assessment for the theory part will be based on knowledge bank of questions created by the SSC.
3	Individual assessment agencies will create unique question papers for theory part for each candidate at each examination/training center (as per assessment criteria below.)
4	Individual assessment agencies will create unique evaluations for skill practical for every student at each examination/ training center based on these criteria.
5	To pass the Qualification Pack, every trainee should score a minimum of 70% in every NOS.
6	In case of successfully passing only certain number of NOSs, the trainee is eligible to take subsequent assessment on the balance NOS's to pass the Qualification Pack.
7	In case of unsuccessful completion, the trainee may seek reassessment on the Qualification Pack.

Assessment Outcomes	Assessment Criteria for Outcomes	Marks Allocation		
		Theory	Practical	Viva
AMH/N0108: Analyze and Classify Garment Defects in Apparel Production	Analyze and Classify Garment Defects in Apparel Production	22	30	8
	PC1. Identify common garment defects (e.g., puckering, open seam, misalignment) during audits.	3	3	1
	PC2. Differentiate between major and minor defects based on severity and standards.	3	2	1
	PC3. Categorize defects by type, frequency, and garment section.	2	3	1
	PC4. Interpret reports to detect defect patterns and trends.	2	3	1
	PC5. Correlate fabric issues with garment defects.	2	3	1
	PC6. Evaluate defect impact on aesthetics, functionality, and customer satisfaction.	2	2	-
	PC7. Document garment defects with photos and timestamps for traceability.	2	4	1
	PC8. Develop visual defect classification boards and SOPs.	2	3	-
	PC9. Validate repaired garments against defect resolution criteria.	2	4	1
	PC10. Benchmark internal garment defect rates with industry standards.	2	3	1
	NOS Total	22	30	8

AMH/N0109: Analyze Data and Prepare Quality Insights Reports	Analyze Data and Prepare Quality Insights Reports	25	30	10
	PC1. Collect inspection data from cutting, sewing, and finishing stages using digital Check Sheets, mobile inspection apps, or hand-held tablets.	3	3	1
	PC2. Evaluate for and fix any missing or wrong entries in the quality data.	2	3	1
	PC3. Standardize and structure inspection data across product categories.	3	2	1
	PC4. Analyze simple charts like Pareto to find common quality problems and their main causes.	3	5	2
	PC5. Monitor average values and control charts to see if the quality process is stable.	3	3	1
	PC6. Prepare easy-to-read reports every week or month using graphs and visuals.	2	2	-
	PC7. Suggest ways to reduce defects and improve quality by using the report findings.	3	3	1
	PC8. Present analytical findings to QA, production, and vendor teams using structured formats.	2	2	1
	PC9. Apply simple tools to auto-generate reports on a fixed schedule to save time.	2	3	1
	PC10. Evaluate the report formats regularly based on feedback from managers and auditors.	2	3	1
	NOS Total	25	30	10
AMH/N0110: Integrate Digital and AI Tools in Quality Assurance Systems	Integrate Digital and AI Tools in Quality Assurance Systems	20	17	8
	PC1. Describe commonly used AI quality tools in the garment industry.	4	3	2
	PC2. Demonstrate how to customize digital quality checklists for different types of garments.	3	2	1
	PC3. Integrate AI tools with ERP or factory systems to track inspection results in real-time.	3	3	1
	PC4. Configure AI tools to watch quality checkpoints and vendor-wise performance.	2	2	1
	PC5. Review performance using team feedback and adjust settings to improve results.	3	2	1
	PC6. Revise and update digital inspection protocols in collaboration with stakeholders.	2	3	1
	PC7. Document inspection records, visual evidence, and system insights with version control.	3	2	1
	NOS Total	20	17	8
AMH/N0111: Utilize AI-Based Analytics for Quality Monitoring	Utilize AI-Based Analytics for Quality Monitoring	36	25	9
	PC1. Apply AI systems to detect recurring defect patterns by garment style, machine, operator, or production shift.	6	4	2
	PC2. Predict potential defect hotspots using AI predictive analytics and recommend quality improvement actions.	4	3	1
	PC3. Apply image-recognition systems to automatically detect visible defects in fabric or garments.	5	4	2
	PC4. Take immediate corrective actions based on AI alerts by coordinating with QA and production teams.	5	4	1
	PC5. Develop and maintain comprehensive quality documentation and reports based on data collected from AI systems.	3	3	-

	PC6. Interpret AI-generated quality reports to identify root causes and propose preventive actions.	4	2	2
	PC7. Validate AI-predicted defects by cross-checking against physical samples or manual inspection results.	5	3	-
	PC8. Evaluate the effectiveness of AI-recommended quality actions over time using performance data.	4	2	1
	NOS Total	36	25	9
AMH/N0112: Apply Quality Control Tools and Techniques	Apply Quality Control Tools and Techniques	35	34	11
	PC1. Perform structured Root Cause Analysis (RCA) using combined defect data, process flow, and operator feedback to isolate systemic issues.	2	4	1
	PC2. Apply Cause-and-Effect (Ishikawa) diagrams to investigate root causes of critical garment defects.	3	3	1
	PC3. Evaluate Pareto Charts to prioritize high-frequency defects.	2	3	1
	PC4. Analyze Histograms and Control Charts to assess process stability and variation.	2	2	-
	PC5. Develop Scatter Diagrams to analyze relationships (e.g., machine type vs. defect rate).	2	2	1
	PC6. Maintain Check Sheets and Flow Charts for quality data and SOP visualization.	2	2	1
	PC7. Apply DMAIC framework to solve high-defect production issues.	2	2	1
	PC8. Create SIPOC diagrams to map quality-related processes end-to-end.	1	2	1
	PC9. Apply FMEA to identify and rank potential failure points.	2	2	-
	PC10. Conduct Gage R&R studies to ensure accuracy of inspection methods and staff.	2	2	-
	PC11. Evaluate Cp/Cpk (Process Capability and Process Capability Index) to assess if production meets quality specifications.	2	1	1
	PC12. Implement Control Plans to sustain quality improvements post-intervention.	2	2	1
	PC13. Conduct 5S audits to maintain organized and hygienic production spaces.	2	2	1
	PC14. Organize Kaizen events to drive small, continuous quality improvements.	3	2	1
	PC15. Create visual control systems for proactive quality monitoring by operators.	2	2	-
	PC16. Standardize inspection scoring formats using visual protocols.	4	1	-
	NOS Total	35	34	11
AMH/N0113: Document, Report, and Visualize Quality Data	Document, Report, and Visualize Quality Data	20	20	10
	PC1. Apply Methods to Document Inspection Findings.	2	2	1
	PC2. Evaluate Quality Data to Compile Performance Reports.	1	2	1
	PC3. Create Visual Reports Using Quality Analysis Tools.	2	2	1
	PC4. Apply Report Customization Techniques for Stakeholder Needs.	1	2	-
	PC5. Analyze Real-Time Data to Configure Dashboard Alerts.	2	1	1
	PC6. Evaluate and Organize Quality Records for Audit Readiness.	2	2	1
	PC7. Create and Present Data-Driven Quality Improvement Insights.	1	2	1

	PC8. Analyze and Classify Defect Types from Quality Data.	1	1	-
	PC9. Apply Feedback to Improve Quality Control Processes.	1	2	1
	PC10. Evaluate Quality Compliance Through Structured Audits.	3	1	1
	PC11. Create Standard Operating Procedures for Quality Inspections.	1	1	1
	PC12. Apply Effective Communication to Share Quality Findings	1	1	-
	PC13. Apply AI-Based Tools for Quality Data Analysis and Insights.	2	1	1
	NOS Total	20	20	10
AMH/N0620: Promote and sustain safety, health, and security in workplace, while fostering Gender and Persons with Disabilities (PwD) Sensitization	Identify process hazards, follow medical emergency and evacuation guidelines, and promote gender and PwD sensitivity.	22	12	6
	PC1. Demonstrate strict adherence to health, safety, gender, and PwD (People with Disability) guidelines governing the workplace environment.	4	2	1
	PC2. Engage actively in mock drills, evacuation exercises, and group discussions pertaining to workplace safety and security protocols.	4	2	1
	PC3. Participate in advanced training and sensitization programs focused on gender equality and PwD awareness, facilitating a more inclusive workplace environment.	4	2	1
	PC4. Execute proper handling and maintenance of materials and equipment in accordance with established protocols and standards.	3	2	1
	PC5. Exhibit proficiency in performing first-aid, firefighting, and other emergency response procedures, promptly adhering to organizational shutdown and evacuation protocols when necessary.	4	2	1
	PC6. Monitor workplace conditions, identify risks, report promptly, ensure safety, including for individuals with disabilities, and uphold gender equality principles.	3	2	1
	NOS Total	22	12	6
AMH/N0621: Adhere to industry, regulatory, and organizational standards and embrace environmentally sustainable practices	Adhere to industry, regulatory, and organizational standards and embrace environmentally sustainable practices	20	10	10
	PC1. Execute job responsibilities according to organizational standards, with a strong emphasis on eco-friendly solutions, while strictly adhering to established procedures, policies, and legal regulations.	2	1	1
	PC2. Implement and uphold organizational policies and procedures, integrating sustainable consumption practices into daily operations.	2	1	1
	PC3. Actively engage in enhancing organizational performance by driving the transition towards environmentally friendly processes and practices.	2	1	1
	PC4. Safely handle materials, equipment, computers, and software to maintain a clean and hazard-free work environment, actively supporting the adoption of eco-friendly practices throughout the workplace.	3	2	2
	PC5. Perform routine maintenance and cleaning tasks within assigned duties and agreed-upon schedules, effectively managing any interruptions to workflow.	3	1	1
	PC6. Immediately report any instances of unsafe equipment or hazardous incidents to the appropriate personnel to ensure swift resolution and mitigate risks.	2	1	1
	PC7. Utilize appropriate cleaning equipment and techniques tailored to specific tasks, promoting efficiency and sustainability in workplace maintenance.	2	1	1
	PC8. Proactively request system or software upgrades as necessary to optimize work efficiency, while also maintaining backup files to ensure data integrity and security when using various design software.	2	1	1

	PC9. Maintain digital copies of design work in organized files for future reference, ensuring accessibility and preservation of valuable project assets.	2	1	1
	NOS Total	20	10	10
DGT/VSQ/N0102: Employability Skills (60 Hours)	Introduction to Employability Skills	1	1	-
	PC1. identify employability skills required for jobs in various industries	-	-	-
	PC2. identify and explore learning and employability portals	-	-	-
	Constitutional values – Citizenship	1	1	-
	PC3. recognize the significance of constitutional values, including civic rights and duties, citizenship, responsibility towards society etc. and personal values and ethics such as honesty, integrity, caring and respecting others, etc.	-	-	-
	PC4. follow environmentally sustainable practices	-	-	-
	Becoming a Professional in the 21st Century	2	4	-
	PC5. recognize the significance of 21st Century Skills for employment	-	-	-
	PC6. practice the 21st Century Skills such as Self-Awareness, Behaviour Skills, time management, critical and adaptive thinking, problem-solving, creative thinking, social and cultural awareness, emotional awareness, learning to learn for continuous learning etc. in personal and professional life	-	-	-
	Basic English Skills	2	3	-
	PC7. use basic English for everyday conversation in different contexts, in person and over the telephone	-	-	-
	PC8. read and understand routine information, notes, instructions, mails, letters etc. written in English	-	-	-
	PC9. write short messages, notes, letters, e-mails etc. in English	-	-	-
	Career Development & Goal Setting	1	2	-
	PC10. understand the difference between job and career	-	-	-
	PC11. prepare a career development plan with short- and long-term goals, based on aptitude	-	-	-
	Communication Skills	2	2	-
	PC12. follow verbal and non-verbal communication etiquette and active listening techniques in various settings	-	-	-
	PC13. work collaboratively with others in a team	-	-	-
	Diversity & Inclusion	1	2	-
	PC14. communicate and behave appropriately with all genders and PwD	-	-	-
	PC15. escalate any issues related to sexual harassment at workplace according to POSH Act	-	-	-
	Financial and Legal Literacy	2	3	-
	PC16. select financial institutions, products and services as per requirement	-	-	-
	PC17. carry out offline and online financial transactions, safely and securely	-	-	-
	PC18. identify common components of salary and compute income, expenses, taxes, investments etc	-	-	-
	PC19. identify relevant rights and laws and use legal aids to fight against legal exploitation	-	-	-

Essential Digital Skills	3	4	-
PC20. operate digital devices and carry out basic internet operations securely and safely	-	-	-
PC21. use e- mail and social media platforms and virtual collaboration tools to work effectively	-	-	-
PC22. use basic features of word processor, spreadsheets, and presentations	-	-	-
Entrepreneurship	2	3	-
PC23. identify different types of Entrepreneurship and Enterprises and assess opportunities for potential business through research	-	-	-
PC24. develop a business plan and a work model, considering the 4Ps of Marketing Product, Price, Place and Promotion	-	-	-
PC25. identify sources of funding, anticipate, and mitigate any financial/ legal hurdles for the potential business opportunity	-	-	-
Customer Service	1	2	-
PC26. identify different types of customers	-	-	-
PC27. identify and respond to customer requests and needs in a professional manner.	-	-	-
PC28. follow appropriate hygiene and grooming standards	-	-	-
Getting ready for apprenticeship & Jobs	2	3	-
PC29. create a professional Curriculum vitae (Résumé)	-	-	-
PC30. search for suitable jobs using reliable offline and online sources such as Employment exchange, recruitment agencies, newspapers etc. and job portals, respectively	-	-	-
PC31. apply to identified job openings using offline/online methods as per requirement	-	-	-
PC32. answer questions politely, with clarity and confidence, during recruitment and selection	-	-	-
PC33. identify apprenticeship opportunities and register for it as per guidelines and requirements	-	-	-
NOS Total	20	30	-

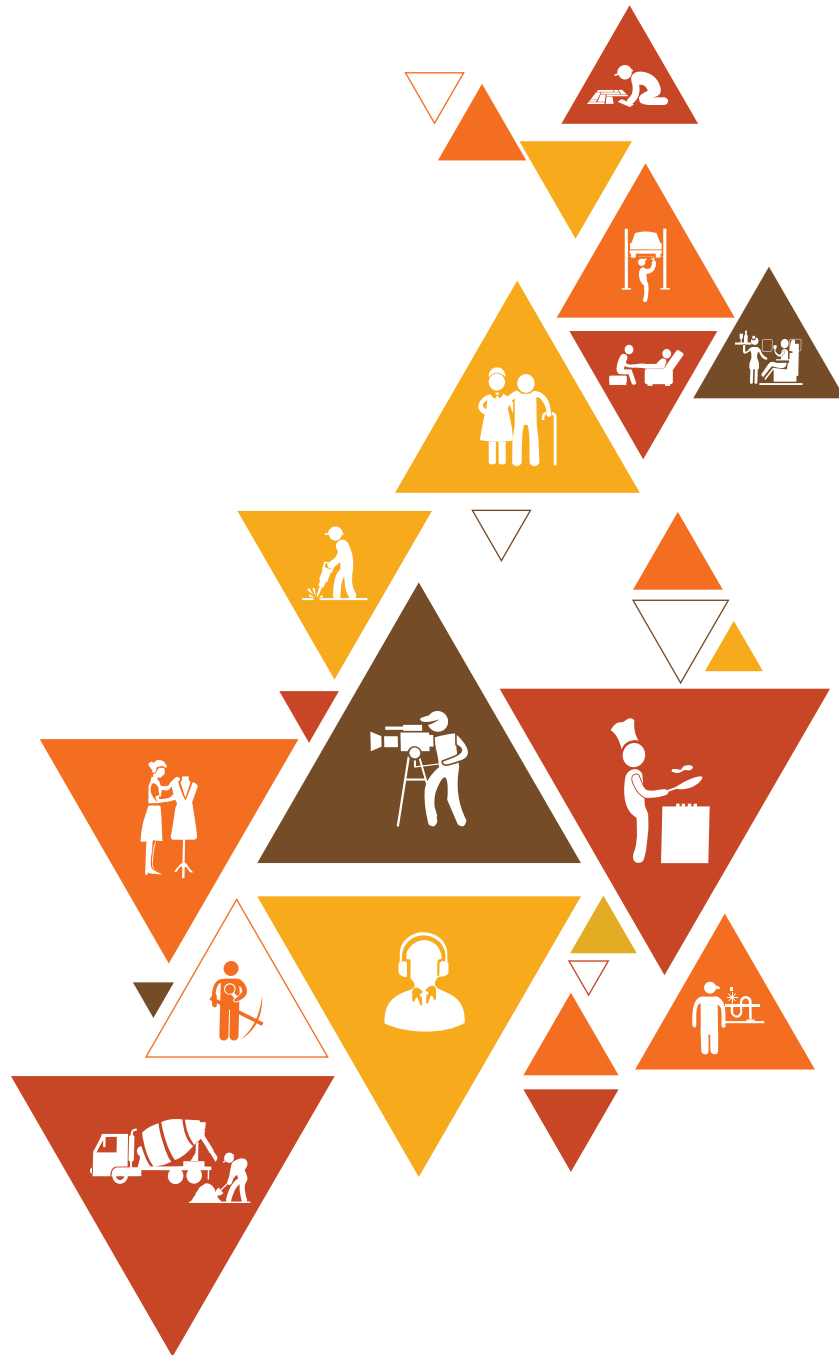
Annexure III

List of QR Codes Used in PHB

Module No.	Unit No.	Topic Name	Page No. in PHB	Link for QR Code (s)	QR code (s)
Module 1: Introduction and Orientation to Apparel Quality Analyst	Unit 1.1 Apparel Quality Analyst Profession Insights	1.1.1 Apparel Industry Size and Scope	19	https://youtu.be/5dLX8m-RAE88	 Apparel industry in India
Module 2: Analyse and Classify Garment Defects in Apparel Production	Unit 2.1 Garment Defects and Quality Evaluation	2.1.1 Garment Defect Management	54	https://youtu.be/WTIFD-2MQdbM	 Garment and fabric defects
Module 3: Analyse Data and Prepare Quality Insights Reports	Unit 3.1 Production Quality Control Processes	3.1.1 Production Quality Monitoring	87	https://youtu.be/MR0qAxYeq-fy	 QA in garment production for production quality
	Unit 3.2 Quality Documentation and Records	3.2.3 Control Chart Analysis	87	https://youtu.be/_675toMA4gA	 Understanding control chart analysis
Module 4: Integrate Digital and AI Tools in Quality Assurance Systems	Unit 4.1: AI Quality Systems Fundamentals	4.1.1 Digital AI Tools in Quality Assurance	107	https://youtu.be/0ZuHnJkAZiQ	 AI usage in apparel industry

Module No.	Unit No.	Topic Name	Page No. in PHB	Link for QR Code (s)	QR code (s)
Module 5: Utilise AI-Based Analytics for Quality Monitoring	Unit 5.1: AI-Powered Quality Analysis and Improvement	5.1.3 AI-Generated Quality Data Analysis	123	https://youtu.be/-O5a-qZ55QR8	 AI-generated quality data analysis
Module 6: Apply Quality Control Tools and Techniques	Unit 6.2: Quality Improvement Documentation Practices	6.2.3 Corrective Preventive Action Planning	147	https://youtu.be/RfCkccVuBfg	 Corrective preventive action planning (CAPA)
Module 7: Document, Report, and Visualise Quality Data	Unit 7.1: Documentation Reporting	7.1.2 Production Data Recording Systems	168	https://youtu.be/Fp22WTke_iE	 Production data recording systems (Excel)
Module 8: Promote and Sustain Safety, Health, and Security in Workplace, while Fostering Gender and Persons with Disabilities (PwD) Sensitisation	Unit 8.1: Workplace Safety and Compliance	8.1.3 Workplace Hazard Emergency Management	229	https://youtu.be/wn57gucIK5o	 Workplace hazard emergency management

Module No.	Unit No.	Topic Name	Page No. in PHB	Link for QR Code (s)	QR code (s)
Module 9: Adhere to Industry, Regulatory, and Organisational Standards And Embrace Environmentally Sustainable Practices	Unit 9.3: Sustainable Resource and Waste Management	9.3.3 Waste Segregation Handling Disposal Procedures	254	https://youtu.be/O1qTFFF0zd8	 Waste segregation, handling, and disposal procedures





Skill India
कौशल भारत - कुशल भारत



सत्यमेव जयते
GOVERNMENT OF INDIA
MINISTRY OF SKILL DEVELOPMENT
& ENTREPRENEURSHIP



**APPAREL MADE-UPS HOME FURNISHING
SECTOR SKILL COUNCIL**

Address: Apparel Made-ups & Home Furnishing Sector Skill Council

Flat No. A-312 to A-323, 3rd Floor, Somdatt Chamber-1,
Bhikaji Cama Place, Africa Avenue, New Delhi-110066

Email: info@sscamh.com

Web: www.sscamh.com