

Syllabus For Apparel Stitching Technician (Zig Zag Machine)

Course Name	Apparel Stitching Technician (Zig Zag Machine)
Sector	APPAREL, MADE-UPS & HOME FURNISHING
Course Code	APL/2024/AZZM/391
Level	4
Occupation	Apparel Stitching Technician (Zig Zag Machine)
Job Description	The Apparel Stitching Technician (Zig Zag Machine) will be responsible for operating, maintaining and troubleshooting Zig Zag sewing machines. This includes setting up the machines, adjusting settings for different stitching techniques, handling various types of threads and fabrics and ensuring quality control throughout the stitching process. Additionally, the technician will be trained in advanced operations such as appliqué techniques, elastic and stretch fabric stitching, buttonhole stitching and utilizing automation features in computerized Zig Zag machines. They will also learn about safety precautions, machine maintenance and quality inspection procedures.
Course Duration	Total Duration 450 Hrs. (T-90, P-240, OJT-60 and ES-60)
Trainees' Entry Qualification	Grade 12 – Regular OR Vocational OR 10th grade pass plus 2-year NTC/NAC OR Completed 2nd year of 3-year diploma (after 10th) and pursuing regular diploma OR 10th grade pass and pursuing continuous schooling OR 10th grade pass with 2 years' relevant experience OR Previous relevant Qualification of NSQF Level 3.0 with minimum education as 8th Grade pass with 3-year relevant experience OR Previous relevant qualification of NSQF Level 3.5 with 1.5-year relevant experience
Trainers Qualification	Degree in Costume Design & Dress Making/ Fashion Technology/ Apparel Technology with 1 year experience in the relevant field OR 3 years Diploma in Costume Design & Dress Making/ Fashion Technology from recognized Institute with 2 years of Experience in the field OR NAC/NTC in relevant trade with 3 years' experience in relevant field

Structure of Course:

Module No.	Module name	Outcome	Compulsory/ Elective	Theory (Hrs.)	Practical (Hrs.)	OJT (Hrs.)	Total (Hrs.) [Multiple of 30]
1	Introduction to Zig Zag Machines	Identify and interpret different parts of Zig Zag Machines and demonstrate their Functionality.	Compulsory	10	20		30
2	Machine Setup and Preparation	Install and setup the zig zag machine for operation.	Compulsory	10	20		30
3	Zig Zag Stitching Techniques	Demonstrate effective Zig Zag Stitching Techniques.	Compulsory	20	70		90
4	Advanced Zig Zag Machine Operations	Perform Advanced Zig Zag Machine Operations	Compulsory	30	90		120
5	Quality Control and Inspection	Maintain Quality parameter by applying finishing techniques.	Compulsory	10	20		30
6	Health, Safety, and Environment at workplace	Maintain Health, Safety, and Environment at workplace	Compulsory	10	20		30
7	OJT	Work in real job situation with special emphasis on basic safety and hazards in this domain (OJT).	Compulsory	-	-	60	60
8	Employability Skill	As per guided curriculum	Compulsory	60	-		60
TOTAL				150	240	60	450

SYLLABUS:**Module No. 1: Introduction to Zig Zag Machine**

Outcome: Identify and interpret different parts of Zig Zag Machines and understand their Functionality.

Theory Content:

- Definition of Zig Zag Machines, historical background and evolution of Zig Zag machines.
- Purpose of Zig Zag Machines, specific functions, Zig Zag stitching in garment construction, repairs, and decorative stitching.

- Types of Zig Zag Machines, (e.g., mechanical, computerized, industrial, domestic), specialized Zig Zag machines for different industries and applications (e.g., apparel, upholstery, crafts).
- Machine Structure and Components, such as the needle, presser foot, feed dogs, bobbin case, and tension assembly and functionality of each component in the stitching process.
- Stitch Formation Mechanism, stitch formation for straight stitches, zig zag stitches, and other decorative patterns.
- Additional Features and Accessories (e.g., embroidery foot, quilting guide, seam guide).
- Overview of potential hazards associated with operating Zig Zag machines (e.g., needle injuries, entanglement, electrical hazards).
- Importance of following safety protocols to prevent accidents, injuries, and damage to the machine.
- Types of PPE required for safe operation (e.g., safety glasses, gloves, closed-toe shoes).
- Proper usage, maintenance, and storage of PPE to ensure personal safety while using Zig Zag machines.

Practical Content:

- Choose various types of Zig Zag Machines (e.g. mechanical, computerized, industrial, and domestic models) based on their design, features, and functionalities.
- Identify and select specific parts (e.g., needle, presser foot, feed dogs, tension assembly) based on their names and functions.
- Demonstrate the functionality of each component individually, using a functioning Zig Zag machine.
- Identify additional features and accessories of Zig Zag machines (e.g., embroidery foot, quilting guide, seam guide).
- Attach additional accessories for specialized stitching techniques or projects.
- Identify potential hazards associated with operating Zig Zag machines (e.g., needle injuries, entanglement, electrical hazards).
- Demonstrate proper usage of safety features on the machine (e.g., needle guards, emergency stop buttons).
- Demonstrate proper safety practices, such as keeping hands away from moving parts, using machine guards, and powering off the machine before maintenance.
- Wear appropriate PPE properly (e.g., safety glasses, gloves, closed-toe shoes) and maintain them.

Module No. 2: Machine Setup and Preparation

Outcome: Install and setup the zig zag machine for operation.

Theory Content:

- Cleaning and preparing the work area for machine installation.
- Ensuring proper electrical connections and voltage compatibility.
- Step-by-step instructions for assembling different components of the Zig Zag machine.
- Proper alignment and placement of machine parts for stability and functionality.
- Explanation of machine settings such as stitch length, stitch width, and tension.
- Adjusting settings based on the type of stitching task and fabric being used.
- Overview of different types of threads used in Zig Zag machines (e.g., cotton, polyester, nylon).
- Characteristics, strengths, and applications of each thread type.
- Matching thread type, weight, and color to the fabric and stitching requirements.
- Ensuring proper thread tension for smooth and consistent stitching.
- Step-by-step guide to threading the Zig Zag machine correctly.

- Thread path from the spool through the tension disks, guides, and needle.
- Overview of bobbin types (e.g., plastic, metal) and sizes compatible with Zig Zag machines.
- Advantages and disadvantages of different bobbin materials.
- Step-by-step instructions for winding bobbins accurately.
- Adjusting bobbin tension for balanced stitching and thread tension control.
- Understanding needle variations (e.g., ballpoint, universal, denim needles) and their applications.
- Choosing the right needle size based on fabric weight and stitching requirements.
- Proper handling and installation of needles into the machine.
- Aligning needles correctly and securing them in place for safe and efficient stitching

Practical Content:

- Perform installation and setup of the machine, including assembling the machine parts, adjusting the table height, and securing the machine in place.
- Connect the power supply, foot pedal, and thread the machine.
- Adjust various machine settings such as stitch length, stitch width, tension, and speed control.
- Adjust machine settings according to different stitching requirements (e.g., decorative stitches, buttonholes, straight stitches) as per provided samples.
- Select different types of threads commonly used in Zig Zag machines (e.g., polyester, cotton, nylon).
- Demonstrate thread types based on their characteristics (e.g., weight, fiber content, color).
- Guide participants in handling threads correctly, including threading the machine, winding bobbins, and thread tension adjustment.
- Handle threads correctly, including threading the machine, winding bobbins, and thread tension adjustment.
- Apply correct technique for winding bobbins accurately, ensuring even tension and proper winding.
- Practice winding bobbins until achieve consistent and smooth winding results.
- Adjust bobbin tension using the machine's tension adjustment mechanism.
- Adjust bobbin tension based on different fabric and thread combinations.
- Identify different types and sizes of needles suitable for various sewing tasks (e.g., universal needles, ballpoint needles, embroidery needles).
- Choose the right needle based on fabric type, thread weight, and stitching technique.
- Install needles properly, including needle insertion, alignment, and securing.

Module No. 3: Zig Zag Stitching Techniques

Outcome: Demonstrate effective Zig Zag Stitching Techniques.

Theory Content:

- Definition and characteristics of straight stitches and zig zag stitches.
- Applications and advantages of each stitch type in sewing and stitching projects.
- Understanding stitch length and width settings on Zig Zag machines.
- Effects of adjusting stitch length and width on stitch appearance and functionality.
- Techniques for creating decorative patterns using Zig Zag stitches (e.g., scallops, waves, satin stitches).
- Utilizing stitch manipulation and machine settings to achieve desired decorative effects.
- Exploring other decorative stitch options available on Zig Zag machines (e.g., appliqué

stitches, heirloom stitches).

- Combining multiple stitch options to create unique and intricate designs.
- Factors to consider when stitching on different fabrics (e.g., weight, stretch, weave).
- Tips for selecting appropriate needles, threads, and machine settings based on fabric type.
- Adjust Zig Zag machine settings for optimal stitching results on various fabrics.
- Techniques for preventing puckering, thread breakage, or skipped stitches on different fabric types.
- Common stitching issues such as thread tension problems, needle breakage, and fabric puckering.
- Methods for diagnosing and troubleshooting stitching problems effectively.
- Importance of regular maintenance and cleaning for Zig Zag machines.
- Step-by-step procedures for machine cleaning, oiling, and minor adjustments to ensure smooth operation.

Practical Content:

- Perform basic Zig Zag Stitches and develop samples of Running Stitch, Round Stitch, Running Shade.
- Adjust stitch length and width settings on the machines.
- Demonstrate Decorative Zig Zag Stitches e.g. Satin Stitch, Cording Stitch, Back Stitch, Chain stitches, Filling stitches.
- Experiment with different settings and observe the changes in stitch patterns.
- Create decorative patterns.
- Perform Stitching on Various Fabrics types (e.g., cotton, denim, stretch).
- Adjust machine settings (e.g., tension, stitch type) based on fabric compatibility.
- Discuss common stitching problems (e.g., thread tension issues, skipped stitches) and their causes.
- Demonstrate troubleshooting techniques and solutions for fixing these issues.
- Perform basic maintenance and cleaning procedures for Zig Zag machines.

Module No. 4: Advanced Zig Zag Machine Operations

Outcome: Perform Advanced Zig Zag Machine Operations.

Theory Content:

- Overview of different appliqué stitching methods (e.g., raw-edge, turned-edge, reverse appliqué).
- Techniques for securing and embellishing fabric appliqués using Zig Zag stitches.
- Creating and designing appliqué patterns for various projects (e.g., garments, quilts, home decor).
- Applications of appliqué in decorative stitching, patchwork, and fabric customization.
- Specialized techniques for stitching elastic fabrics (e.g., cotton, denim, stretch, jersey knit, spandex) using Zig Zag machines.
- Adjusting machine settings and stitch types for optimal results on stretchy materials.
- Methods for preventing puckering, stretching, or distortion when stitching elastic and stretch fabrics.
- Tips for maintaining fabric integrity and stitch quality on stretchy materials.

- Different Types of Buttonhole Stitches
- Overview of common buttonhole stitch types (e.g., keyhole, bound, rounded) and their applications.
- Techniques for creating durable and aesthetically pleasing buttonholes using Zig Zag machines.
- Step-by-step guide to accurately measuring, marking, and stitching buttonholes.
- Adjusting machine settings and using specialized attachments for precise buttonhole creation.
- Explain the features and capabilities of computerized Zig Zag machines.
- Benefits of automation, including programmable stitch patterns, thread trimming, and speed control.
- Basics of programming automated stitch patterns and sequences on computerized Zig Zag machines.
- Utilizing automated features for efficient and consistent stitching results.

Practical Content:

- Demonstrate appliqué stitching methods such as raw-edge, turned-edge, and reverse appliqué as per provided fabric pieces and appliqué designs (e.g., shapes, letters, motifs).
- Create various appliqué designs on fabric by applying appliqué stitching methods such as raw-edge, turned-edge, and reverse appliqué.
- Prepare different types of elastic and stretch fabrics for practice (e.g., cotton, denim, stretch, jersey knit, spandex).
- Demonstrate techniques for handling elastic fabrics, including proper stitching, tension adjustment, and preventing puckering.
- Practice stitching on stretch fabrics and apply techniques to prevent distortion.
- Select fabric samples and buttonhole attachments for Zig Zag machines.
- Demonstrate different types of buttonhole stitches (e.g., keyhole, rounded, bound) using the machine's buttonhole function.
- Create buttonholes accurately by adjusting machine settings and stitching techniques.
- Identify and select computerized Zig Zag machines and their automated features such as stitch patterns, thread trimming, and speed control.
- Practice programming and utilize automated features on the computerized Zig Zag machines.
- Demonstrate programming and utilizing automated features.

Module No. 5: Quality Control and Inspection

Outcome: Maintain Quality parameter by applying finishing techniques.

Theory Content:

- Definition and explanation of quality parameters in stitching and textile production (e.g., stitch quality, seam strength, fabric alignment, aesthetics).
- Importance of meeting quality standards for customer satisfaction, product durability, and brand reputation.
- Overview of the role of quality control in ensuring consistent and high-quality stitched products.
- Benefits of implementing quality control measures in terms of cost reduction, waste

minimization, and customer loyalty.

- Step-by-step guide to conducting thorough inspections of stitched products.
- Visual examination, seam strength testing, and functionality checks as part of inspection procedures.
- Common defects and issues to look for during quality inspections (e.g., thread irregularities, missed stitches, fabric puckering, misalignment).
- Methods for identifying defects, categorizing them, and documenting inspection findings.
- Importance of trimming excess threads for a clean and professional finish.
- Techniques for trimming threads neatly without damaging stitches or fabric.
- Overview of pressing techniques using irons or steamers to improve stitch appearance and fabric smoothness.
- Final finishing touches to enhance the overall look and durability of stitched products.

Practical Content:

- Identify and assess quality parameters such as stitch consistency, seam strength, fabric alignment, and overall aesthetics from provided samples of stitched products with varying quality levels.
- Discuss the importance of each quality parameter in ensuring the final product meets quality standards.
- Present case studies or examples highlighting the consequences of poor-quality control in stitched products (e.g., customer dissatisfaction, product returns, reputation damage).
- Discuss the benefits of effective quality control, including improved product quality, customer satisfaction, and business success.
- Prepare a variety of stitched products with intentional defects (e.g., skipped stitches, loose threads, uneven seams) and conduct thorough inspections of the products, identify and document defects and issues.
- Prepare inspection checklists or guidelines to follow during the inspection process.
- Categorize and prioritize defects based on severity and impact on product quality.
- Demonstrate proper techniques for trimming excess threads neatly without damaging stitches or fabric.
- Apply irons or steamers to press and finish the stitched products, enhancing their appearance and durability.

Module No. 6: Health, Safety, and Environment at workplace

Outcome: Maintain Health, Safety, and Environment at workplace.

Theory Content:

- Definition and importance of Health, Safety, and Environment in the workplace.
- Benefits of effective HSE management for employees, employers, and the community.
- Overview of relevant laws, regulations, and standards governing HSE practices.
- Types of workplace hazards (e.g., physical, chemical, biological, ergonomic).
- Conducting risk assessments and implementing control measures.
- Types of PPE and their uses (e.g., gloves, goggles, respirators, hearing protection).
- Proper selection, fitting, and maintenance of PPE.
- Developing emergency response plans (e.g., fire evacuation, medical emergencies).

- Training on emergency procedures, alarm systems, and evacuation routes.
- Understanding environmental aspects and impacts of work activities.
- Mitigation measures for reducing environmental pollution and waste generation.
- Proper handling, storage, and disposal of hazardous and non-hazardous waste.
- Promoting recycling, reuse, and sustainable practices in waste management.
- Ergonomic principles for reducing musculoskeletal disorders and injuries.
- Designing ergonomic workstations and equipment adjustments.
- Recognizing signs of stress, anxiety, and depression in the workplace.
- Providing support, resources, and mental health initiatives for employees.
- Establishing key performance indicators (KPIs) for HSE metrics.
- Conducting audits, inspections, and incident investigations for continuous improvement.
- Maintaining records, reports, and documentation related to HSE activities.
- Demonstrating compliance with regulatory requirements and industry standards.

Practical Content:

- Conduct hazard identification walkthroughs and risk assessments to recognize potential hazards in various work environments.
- Select and Use Personal Protective Equipment (PPE).
- Develop emergency response plans, including evacuation procedures, emergency contacts, and communication protocols.
- Implement Hazard Control Measures.
- Conduct Environmental Impact Assessments.
- Manage Hazardous and Non-Hazardous Waste.
- Promote Ergonomic Work Practices.
- Recognize Mental Health Concerns.
- Foster a Safety Culture.
- Conduct Safety Training and Competency Development.

Module 7: OJT

Outcome: Work in real job situation with special emphasis on basic safety and hazards in this domain

Practical Content:

Assessor will check report prepared for this component of Practical training of the course and assess whether competency has been developed to work in the real job situation with special emphasis on basic safety and hazards in this domain. (The trainee is expected to undertake work in actual workplace under any supervisor / contractor for **60 Hours.**)

Module 8: Employability Skills (60 Hrs)

Key Learning Outcomes

Introduction to Employability Skills

Duration: 1.5 Hours

After completing this programme, participants will be able to:

1. Discuss the Employability Skills required for jobs in various industries
2. List different learning and employability related GOI and private portals and their usage

Constitutional values - Citizenship

Duration: 1.5 Hours

3. Explain the constitutional values, including civic rights and duties, citizenship, responsibility towards society and personal values and ethics such as honesty, integrity, caring and respecting others that are required to become a responsible citizen
4. Show how to practice different environmentally sustainable practices.

Becoming a Professional in the 21st Century

Duration: 2.5 Hours

5. Discuss importance of relevant 21st century skills.
6. Exhibit 21st century skills like Self-Awareness, Behavior Skills, time management, critical and adaptive thinking, problem-solving, creative thinking, social and cultural awareness, emotional awareness, learning to learn etc. in personal or professional life.
7. Describe the benefits of continuous learning.

Basic English Skills

Duration: 10 Hours

8. Show how to use basic English sentences for everyday conversation in different contexts, in person and over the telephone
9. Read and interpret text written in basic English
10. Write a short note/paragraph / letter/e -mail using basic English

Career Development & Goal Setting

Duration: 2 Hours

11. Create a career development plan with well-defined short- and long-term goals

Communication Skills

Duration: 5 Hours

12. Demonstrate how to communicate effectively using verbal and nonverbal communication etiquette.
13. Explain the importance of active listening for effective communication
14. Discuss the significance of working collaboratively with others in a team

Diversity & Inclusion

Duration: 2.5 Hours

15. Demonstrate how to behave, communicate, and conduct oneself appropriately with all genders and PwD
16. Discuss the significance of escalating sexual harassment issues as per POSH act.

Financial and Legal Literacy

Duration: 5 Hours

17. Outline the importance of selecting the right financial institution, product, and service
18. Demonstrate how to carry out offline and online financial transactions, safely and securely
19. List the common components of salary and compute income, expenditure, taxes, investments etc.
20. Discuss the legal rights, laws, and aids

Essential Digital Skills

Duration: 10 Hours

21. Describe the role of digital technology in today's life

22. Demonstrate how to operate digital devices and use the associated applications and features, safely and securely
23. Discuss the significance of displaying responsible online behavior while browsing, using various social media platforms, e-mails, etc., safely and securely
24. Create sample word documents, excel sheets and presentations using basic features
25. utilize virtual collaboration tools to work effectively

Entrepreneurship

Duration: 7 Hours

26. Explain the types of entrepreneurship and enterprises
27. Discuss how to identify opportunities for potential business, sources of funding and associated financial and legal risks with its mitigation plan
28. Describe the 4Ps of Marketing-Product, Price, Place and Promotion and apply them as per requirement
29. Create a sample business plan, for the selected business opportunity

Customer Service

Duration: 5 Hours

30. Describe the significance of analyzing different types and needs of customers
31. Explain the significance of identifying customer needs and responding to them in a professional manner.
32. Discuss the significance of maintaining hygiene and dressing appropriately

Getting Ready for apprenticeship & Jobs

Duration: 8 Hours

33. Create a professional Curriculum Vitae (CV)
34. Use various offline and online job search sources such as employment exchanges, recruitment agencies, and job portals respectively
35. Discuss the significance of maintaining hygiene and confidence during an interview
36. Perform a mock interview
37. List the steps for searching and registering for apprenticeship opportunities

Learning Outcome – Assessment Criteria

Module No.	Outcome	Assessment Criteria
1	Identify and interpret different parts of Zig Zag Machines and understand their Functionality.	<p>After completion of this module students will be able to:</p> <ol style="list-style-type: none"> 1.1 Define what a Zig Zag machine is and articulate its purpose effectively. 1.2 Demonstrates various types of Zig Zag machines and their specific applications. 1.3 Identifies and explains the key parts and components of a Zig Zag machine accurately. 1.4 Describes the functionality of each part/component in detail, including their role in the stitching process. 1.5 Demonstrates specific safety precautions related to Zig Zag machine operation. 1.6 Shows awareness of the correct usage of personal protective equipment (PPE) and its significance in maintaining a safe working environment.

Module No.	Outcome	Assessment Criteria
2	Install and setup the zig zag machine for operation.	<p>After completion of this module students will be able to:</p> <ul style="list-style-type: none"> 2.1 Installs and sets up the Zig Zag machine according to manufacturer guidelines. 2.2 Adjust machine settings such as stitch length, width and tension accurately. 2.2 Identify different types of threads commonly used in Zig Zag machines and their suitable applications. 2.3 Demonstrate the correct threading procedure for the machine, including threading the needle, tension discs, and thread guides. 2.4 Winds bobbins accurately without tangling or uneven winding. 2.5 Adjust bobbin tension appropriately for smooth stitching and optimal thread usage. 2.6 Select appropriate needles based on fabric type, thread thickness, and stitching requirements. 2.7 Install needles correctly, ensuring they are securely positioned and aligned with the machine's specifications. 2.8 Identify and resolves common machine setup issues such as thread jams, bobbin tension problems, and needle misalignment.
3	Demonstrate effective Zig Zag Stitching Techniques.	<p>After completion of this module students will be able to:</p> <ul style="list-style-type: none"> 3.1 Differentiate between straight stitch and zig zag stitch, explaining their purposes and applications. 3.2 Adjust stitch length and width settings on the Zig Zag machine accurately for various stitching tasks. 3.3 Create decorative patterns using Zig Zag stitches, showcasing creativity and skill in stitch design. 3.4 Utilize different stitch options effectively to achieve desired decorative effects and textures. 3.5 Demonstrate fabric compatibility with Zig Zag stitching, considering factors such as fabric type, weight, and stretch. 3.6 Adjust machine settings appropriately to achieve optimal stitching results on different fabrics. 3.7 Identify common stitching issues such as thread breakage, skipped stitches, or puckering and implements solutions effectively. 3.8 Perform maintenance tasks on the Zig Zag machine, including cleaning, oiling, and minor adjustments to ensure smooth operation. 3.9 Execute basic and decorative Zig Zag stitches on various fabrics with consistent quality. 3.10 Produce stitched samples or projects that showcase mastery of Zig Zag stitching techniques and adherence to quality standards.
4	Perform Advanced Zig Zag Machine Operations.	<p>After completion of this module students will be able to:</p> <ul style="list-style-type: none"> 4.1 Demonstrate proficiency in various appliqué stitching

Module No.	Outcome	Assessment Criteria
		<p>methods, such as raw-edge, turned-edge, and reverse appliqué.</p> <p>4.2 Apply creative and precise appliqué designs and showcases understanding of their applications in garment embellishment or decorative projects.</p> <p>4.3 Utilize techniques for handling elastic and stretch fabrics effectively, including proper stitching tension and stitch types.</p> <p>4.4 Prevent puckering, distortion, or stretching of fabrics during stitching, showcasing mastery in maintaining fabric integrity.</p> <p>4.5 Execute different types of buttonhole stitches accurately, such as keyhole, bound, or rounded buttonholes.</p> <p>4.6 Create buttonholes of consistent size and shape, demonstrating precision and attention to detail.</p> <p>4.7 Explain the functionality of computerized Zig Zag machines and their automated features.</p> <p>4.8 Demonstrate the ability to program and utilize automated functions such as stitch patterns, stitch length and width adjustments, and thread trimming.</p> <p>4.9 Ensure consistency, accuracy, and aesthetic appeal in the final stitched outputs.</p> <p>4.10 Identify and resolve advanced stitching issues related to appliqué, elastic fabrics, buttonholes, or automated controls.</p> <p>4.11 Adapt machine settings and techniques to address challenges and achieve desired stitching results effectively.</p> <p>4.12 Identify safety protocols while operating advanced Zig Zag machines and handling specialized fabrics or features.</p> <p>4.13 Maintain cleanliness of the machine, work area, and finished products, adhering to hygiene and maintenance standards.</p>
5	Maintain Quality parameter by applying finishing techniques.	<p>After completion of this module students will be able to:</p> <p>5.1 Demonstrate quality parameters such as stitch quality, seam allowances, fabric alignment and overall appearance.</p> <p>5.2 Explain the importance of quality control in maintaining product integrity, customer satisfaction, and brand reputation.</p> <p>5.3 Conduct thorough inspections of stitched products, including visual examination, seam strength testing, and functionality checks.</p> <p>5.4 Identifies defects and issues such as thread irregularities, missed stitches, fabric puckering, or alignment problems accurately.</p> <p>5.5 Trims excess threads neatly and efficiently to achieve a</p>

Module No.	Outcome	Assessment Criteria
		<p>clean and professional finish.</p> <p>5.6 Utilize pressing techniques and finishing methods to enhance the appearance, durability, and functionality of stitched products.</p> <p>5.7 Implement quality assurance practices during stitching and finishing processes, ensuring adherence to specifications, standards, and customer requirements.</p> <p>5.8 Maintain accurate records of quality control inspections, findings, and corrective actions taken.</p> <p>5.9 Communicate inspection results, defect reports and quality improvement recommendations effectively to relevant stakeholders.</p>
6	Maintain Health, Safety, and Environment at workplace.	<p>After completion of this module students will be able to:</p> <p>6.1 Conduct hazard identification walkthroughs and risk assessments to recognize potential hazards in various work environments.</p> <p>6.2 Properly select, fit and use different types of PPE (e.g., gloves, goggles, respirators) for specific job tasks and hazards.</p> <p>6.3 Create comprehensive emergency response plans for various scenarios, including fire evacuations, medical emergencies, and hazardous spills.</p> <p>6.4 Apply appropriate control measures to mitigate workplace hazards and reduce risks to health and safety.</p> <p>6.5 Assess environmental aspects and impacts of work activities and develop strategies to minimize environmental pollution and waste generation.</p> <p>6.6 Demonstrate proper handling, storage, and disposal procedures for hazardous and non-hazardous waste materials in compliance with regulations.</p> <p>6.7 Identify ergonomic issues in workstations and equipment and make adjustments to reduce musculoskeletal disorders and injuries.</p> <p>6.8 Promote a positive safety culture through effective leadership, communication, employee engagement, and participation in safety initiatives.</p> <p>6.9 Develop and deliver HSE training programs to enhance employee awareness, competency, and skills in HSE practices and procedures.</p>
7	OJT	Work in real job situation with special emphasis on basic safety and hazards in this domain (OJT).
8	Employability Skill	As per guided curriculum

List of Tools, Equipment & materials needed for 30 Trainees (Practical)

S.No.	Tools and Equipment	Quantity
1.	Zig Zag Sewing Machines	30 Nos.
2.	Bobbin Winders	2 Nos.
3.	Scissors	30 pairs
4.	Seam Rippers	30 Nos.
5.	Tape Measures	30 Nos.
6.	Needles (Assorted sizes)	200 pieces
7.	Thread Clippers	10 Nos.
8.	Irons and Ironing Boards	5 sets
9.	Fabric Markers	20 Nos.
10.	Pins	200 pieces
11.	Pin Cushions	30 pieces
12.	Cutting Mats	5 Nos.
13.	Rulers	20 Nos.
14.	Sewing Machine Oil	2 bottles
15.	Maintenance Kits for Sewing Machines	2 kits
16.	Computerized Zig Zag Machine (for advanced training)	1 No.

S.No.	Description of Consumables	Quantity
1.	Threads (Assorted colors,)	100 spools
2.	Fabrics (Assorted types and colors for practice,)	200 Meter
3.	Bobbins	200 pieces
4.	Interfacing Material	5 Meter
5.	Buttons (Assorted sizes and styles,)	100 pieces
6.	Elastic (Assorted widths,)	20 Meter
7.	Appliqué Materials (Fabric scraps,)	10 Meter
8.	Trims and Embellishments (Ribbons, lace, etc.,)	20 meter each
9.	Stabilizers	5 Meter
10.	Fusible Web	5 Meter
11.	Sewing Machine Needles (Assorted sizes)	50 pieces

S.No.	Description of Safety Gear	Quantity
1.	Safety Glasses	30 pairs
2.	Gloves	30 pairs
3.	Aprons	30 Nos
4.	Ear Protection	30 pairs

S.No.	Description of Maintenance and Cleaning Supplies	Quantity
1.	Cleaning Brushes	10 Nos.
2.	Lint Rollers	10 Nos.
3.	Lubricating Oil for Machines	2 bottles
4.	Machine Cleaning Cloths	20 pieces

S.No.	Description of Classroom Furniture	Quantity
1.	Sewing Tables	30 Nos.
2.	Chairs	30 Nos.
3.	Whiteboards or Flipcharts for Demonstrations	1 No.

S.No.	Description of Technology and Audiovisual Equipment	Quantity
1.	Computers (1 per 5 students for computerized machine training)	6 Nos.
2.	Projectors and Screens for Presentations	1 No.
3.	Audio Systems (Microphones, speakers)	As required

S.No.	Description of Technology and Audiovisual Equipment	Quantity
1.	First Aid Kit	As required
2.	Trash Bins	2 Nos.
3.	Storage Cabinets for Supplies	As required

Outcome	Outcome Code	Total Th marks	Total Pr marks	Total OJT marks
Identify and interpret different parts of Zig Zag Machines and demonstrate their Functionality.	APL/0316/OC1	20	80	0
Install and setup the zig zag machine for operation.	APL/0316/OC2	20	80	0
Demonstrate effective Zig Zag Stitching Techniques.	APL/0316/OC3	30	150	0
Perform Advanced Zig Zag Machine Operations	APL/0316/OC4	40	180	0
Maintain Quality parameter by applying finishing techniques.	APL/0316/OC5	20	80	0
Maintain Health, Safety, and Environment at workplace	APL/0316/OC6	20	80	0
Work in real job situation with special emphasis on basic safety and hazards in this domain (OJT).	APL/0316/OC7	0	0	150
Employability Skills – 60 Hrs	DGT/VSQ/N0102	50	0	0