



# BANNARI AMMAN INSTITUTE OF TECHNOLOGY

An Autonomous Institution Affiliated to Anna University - Chennai • Approved by AICTE • Accredited by NAAC with 'A+' Grade

SATHYAMANGALAM - 638401 ERODE DISTRICT TAMILNADU INDIA

Ph: 04295-226000/221289 Fax: 04295-226666 Email: stayahead@bitsathy.ac.in Web: www.bitsathy.ac.in

## TECHNICAL APPROVAL COMMITTEE

### GUIDE APPROVAL FORM

Date: \_\_ / \_\_ / 2023

<b>Starting Date of Work</b>				
<b>Sl. No.</b>	<b>Student Name</b>	<b>Reg. No.</b>	<b>Role</b>	<b>Signature</b>
1	RITHICK M K	7376222AD185	Team Leader	
<b>Applying for the work:</b>		PAPER		
<b>Title of Work</b>		ECO FRIENDLY - COIR - COTTON BAGS		

(To be Filled by Faculty In charge)

**No. of students: 1**

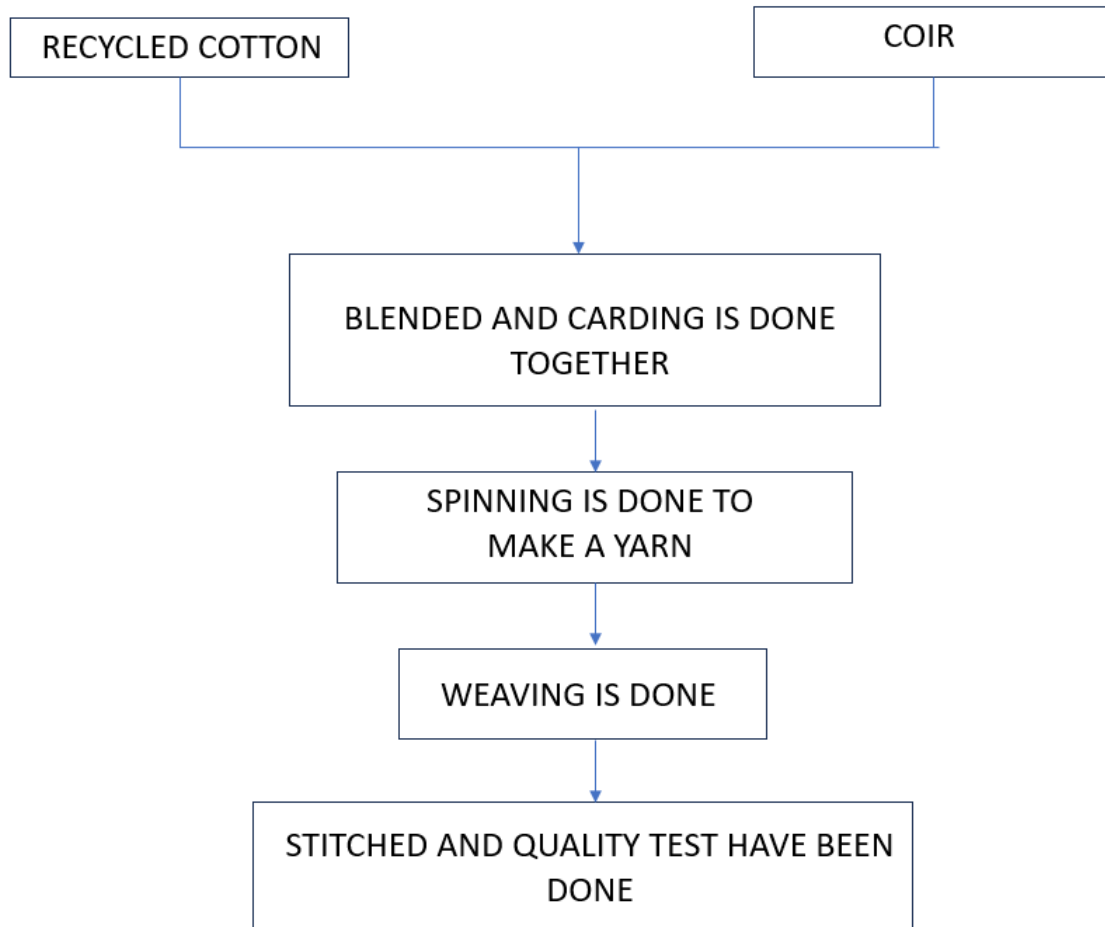
I acknowledge that I will act as a faculty in charge for the aforementioned students and guide them to complete the work by adopting the guidelines provided.

**Lab Name:**

*(In case of Faculty belonging to any special lab)*

**Name & Signature of the Faculty In charge  
with the date**

## Idea/Approach Details



**IDEA :** This study details the production of environmentally friendly and cost-effective bags through a meticulous blend of coir and cotton fibers, employing the plain weave woven methodology. The deliberate integration of coir, renowned for its robustness and inherent resistance to moisture, with cotton, celebrated for its soft and breathable qualities, results in a fabric that harmoniously merges durability and comfort. The chosen production methodology adheres to the simplicity and efficiency of the plain weave pattern, meticulously weaving the fibers into a uniform, tightly woven structure. This strategic combination not only enhances the bag's strength and longevity but also addresses cost considerations by utilizing recycled cotton and sustainable coir fibers. The manufacturing process is optimized for efficiency and scalability, ensuring a sustainable, cost-effective, and eco-friendly solution that encapsulates the synergies of coir and cotton in crafting versatile and resilient bags for a conscientious consumer market.

---

### **Features/Functions for ECO FRIENDLY - COIR - COTTON BAGS :**

Embark on our sustainable journey, blending coir's durability and recycled cotton's softness. Our cost-effective methodology, featuring a plain weave pattern, ensures a uniform, tightly woven structure. We get our recycled cotton from the plentiful cotton fields in India, supporting environmental responsibility. In Tamil Nadu, we utilize the availability of coir from coconut groves, helping local economies thrive.

Our Step by step process:

Raw Material Selection - Blending and Carding - Spinning - Weaving - Finishing Processes - Cutting and Stitching - Quality Control.

1. Recycled cotton and coir fibers are procured directly from the producers and farmers as Tamil Nadu is one of the leading producers of coir in India .

2. Determining the optimal ratio of 62% coir to 38% recycled cotton for the desired fabric

properties. Utilizing the efficient blending machinery to achieve a homogeneous fiber mix.

Employing cost-effective carding processes to align and prepare the fibers for spinning.

3. Optimizing the spinning parameters to balance yarn quality and production costs.

4. Implement the plain weave pattern to create a uniform and tightly woven fabric structure. Explore automated weaving technologies to enhance efficiency and reduce production time.

5. Implement precision cutting techniques to minimize material waste. Utilize efficient stitching processes, considering both cost and structural reinforcement.

6. Integrate quality checks at key stages of production to identify and rectify defects promptly. Conduct thorough testing to ensure the durability and functional attributes of the final bags.

## **Required Technologies for Survival Prediction Based on Deep Learning:**

### **Textile Engineering:**

Understanding the intricacies of textile engineering, including knowledge of spinning, weaving, and other manufacturing processes, is essential.

### **Material Science:**

Expertise in material science is crucial for optimizing the blend ratio of cotton and coir, ensuring the desired properties such as strength, durability, and comfort.

### **Supply Chain Management:**

Proficiency in supply chain management is necessary to oversee the sourcing of raw materials, manage inventory, and optimize logistics for a streamlined production process.

### **Quality Control:**

Implementing effective quality control measures to ensure that the produced yarn meets industry standards and customer expectations is a critical aspect of the solution.

---

**Signature of Faculty In Charge**