

CHAPTER-11

Care and Maintenance of Fabrics

2marks

1Q: Explain the importance of the 4 Cs of credit in evaluating an individual's creditworthiness.

Answer: The 4 Cs of credit—Character, Capacity, Capital, and Collateral—are crucial factors in assessing an individual's creditworthiness. Character evaluates the borrower's willingness to repay, Capacity assesses their ability to repay, Capital looks at their net worth, and Collateral involves assets provided as security.

Q2: Define the term "budget" in the context of personal finance.

Answer: A budget is a financial plan that outlines expected income and expenditures over a specific period. It serves as a tool for individuals to manage their finances, allocate resources, and achieve financial goals.

Q3: What is the significance of record-keeping in the evaluation of family budgets?

Answer: Record-keeping is essential in evaluating family budgets as it provides a tangible account of actual expenditures. It helps compare spending against the budget, identify areas for improvement, and ensures financial goals are aligned with the family's financial situation.

Q4: Briefly explain the concept of inflation and its impact on purchasing power.

Answer: Inflation is the rise in the general price level of goods and services over time. It reduces the purchasing power of currency, meaning that the same amount of money buys fewer goods and services, leading to a decrease in the real value of money.

Q5: Discuss the role of solvents, absorbents, and emulsifiers in stain removal from fabrics.

Answer: Solvents, absorbents, and emulsifiers are stain removal agents. Solvents like acetone dissolve stains, absorbents like talcum powder absorb grease, and emulsifiers like soaps and detergents break down stains into smaller particles, facilitating their removal.

Q6: What is the purpose of blueing in the care of fabrics, and when is it typically applied?

Answer: Blueing is done to make white fabrics appear whiter. It is applied during the finishing process and is not done when fabrics are to be dyed or printed.

Q7: Explain the role of surfactants in soaps and detergents during the laundry process.

Answer: Surfactants, or surface-active agents, in soaps and detergents reduce the surface tension of water. This property allows water to soak more easily into clothes, facilitating the removal of stains and dirt by breaking them into smaller particles.

4MARKS

1Q: Explain the importance of preventing soil redeposition during the washing process.

Answer: Soil redeposition in wash water can lead to graying of fabrics. To prevent this, detergents are used to emulsify the grease holding the dirt, ensuring that soils remain suspended in the water and do not redeposit onto clean fabrics.

2Q: Compare the advantages and disadvantages of using soaps and detergents in the laundering process.

Answer: Soaps, being natural and biodegradable, are less harmful to the skin and environment. However, they are ineffective in hard water and tend to lose cleaning power over time. Detergents, while more powerful and customizable, can be engineered for specific tasks and washing machines. The choice depends on factors like water hardness and cleaning requirements.

3Q: Describe the methods of washing fabrics and explain when each method is most suitable.

Answer: Methods of washing include friction, kneading and squeezing, suction, and machine washing. Friction is common for strong fabrics like cotton, while kneading suits delicate fabrics like wool. Suction is used for larger items like towels, and washing machines are suitable for various fabrics and large-scale cleaning.

4Q. Discuss the role of blues and optical brighteners in maintaining the whiteness of fabrics.

Answer: Blues counteract yellowness in white fabrics, restoring whiteness. They are applied in the last rinse. Optical brighteners, or fluorescent brightening agents, enhance brightness by absorbing and re-emitting light. They are effective for both white and colored fabrics, countering yellowness and grayness.

5Q: Explain the purpose and types of stiffening agents used in fabric care. Provide examples and mention suitable fabrics for each.

Answer: Stiffening agents like starch, gum acacia, borax, and gelatin enhance fabric texture and appearance. Starch, obtained from various sources, is used for cotton and linen. Gum acacia suits silks and fine cottons. Borax, added to starch, provides water repellency. Application depends on fabric and intended use.

6Q: Outline the key requirements for effective ironing and discuss the advantages of using an electric iron.

Answer: Effective ironing requires high temperature, moisture, and pressure. An electric iron, unlike a charcoal iron, allows temperature control. It provides consistent and controlled heat, making it suitable for various fabric types. Moisture is supplied by ironing damp clothes or sprinkling water on dry ones. Pressure is applied manually during ironing.

8MARKS

1. Explain the process of dry-cleaning and why it is considered a safe method for cleaning delicate textiles.

Answer:

Dry-cleaning is a specialized fabric cleaning process that involves the use of non-aqueous liquid solvents, such as perchloroethylene, petroleum solvents, or fluorocarbon solvents. Unlike traditional washing methods that use water, dry-cleaning avoids fiber swelling, making it a safe option for delicate textiles. The process is typically conducted in industrial establishments rather than at the domestic level.

The steps involved in dry-cleaning include:

Identification and Tagging: Items are brought to the dry cleaner's and tagged with special instructions. Customers often identify stains, which aids in effective cleaning.

Inspection and Spot Treatment: Items undergo inspection, and stains that are water-soluble or hard to remove are treated on a spot board. Customer-identified stains make the cleaning process more efficient.

Cleaning and Additional Treatments: The actual dry-cleaning process takes place using solvents like perchloroethylene. Dry cleaners may offer additional services such as replacing buttons, minor repairs, sizing, water repellency, permanent

creases, moth-proofing, fur and leather cleaning, and even cleaning and sanitizing items like pillows, blankets, quilts, carpets, and draperies.

Storage: Once cleaned, items are returned to customers, ready for use. Proper storage considerations, such as maintaining low humidity, are important for preserving the quality of the textiles.

The use of dry-cleaning solvents, combined with specialized treatments, makes this method safe for delicate fabrics. It is particularly suitable for items that may be damaged by traditional laundering methods.

2. Discuss the factors affecting fabric care and maintenance, with a specific focus on the properties of different fibers.

Answer:

Fabric care and maintenance are influenced by various factors, with the properties of different fibers playing a crucial role. Here's an in-depth discussion:

Fiber Content: Different fibers, such as cotton, linen, wool, silk, nylon, polyester, and acrylic, have distinct characteristics influencing care requirements. For instance, cotton and linen are strong fibers resistant to alkalis, making them suitable for washing with strong detergents. Wool, being a weak fiber when wet, requires gentle handling and should avoid alkaline substances. Silk is strong but requires careful washing due to its weakness when wet.

Yarn Structure: Yarn structure, including twist and type, affects maintenance. High-twist yarns may shrink, and novelty yarns may catch or snag. Blended yarns, like polyester-cotton blends, have unique care considerations.

Fabric Construction: The way fabrics are constructed impacts maintenance. Simple closely woven fabrics are easy to maintain, while fancy weaves, knitted fabrics, and sheer fabrics require careful handling. Long floats in fabrics may snag during washing.

Color and Finishes: Color is an essential aspect of care. Dyed and printed fabrics may lose color during cleaning, requiring special attention. Finishing treatments alter fabric behavior; some may improve characteristics, while others may pose challenges.

Understanding these factors is crucial for effective fabric care. It involves considering each fabric's individual properties, such as fiber type, yarn structure, fabric construction, color, and finishes, to determine appropriate care methods.

3. Evaluate the significance of yarn structure and fabric construction in fabric maintenance. Provide examples to support your explanation. (10 marks)

Answer:

Yarn structure and fabric construction play a significant role in fabric maintenance, impacting how textiles respond to various stresses and cleaning methods. Here's a detailed evaluation:

Yarn Structure Significance:

High Twist Yarns: Yarns with high twists are prone to shrinking when subjected to moisture. Fabrics made from high-twist yarns should be handled with care during washing to prevent undesirable changes in dimensions.

Novelty and Complex Yarns: Fabrics made from novelty or complex yarns may catch or snag during washing due to irregularities in the yarn structure. Extra caution is required to prevent damage.

Blended Yarns: Blended yarns, combining different fibers, necessitate considerations for each fiber type within the yarn. For instance, a blend of polyester and cotton may require lower water temperatures to prevent shrinkage.

Fabric Construction Significance:

Simple Closely Woven Fabrics: Fabrics with simple weaves and closely woven structures are generally easier to maintain. They are less prone to snagging and can withstand regular washing.

Fancy Weaves: Fabrics with fancy weaves, such as satin or pile weaves, may snag during washing due to the presence of long floats. Special care is needed to avoid damage.

Knitted Fabrics: Knitted fabrics, including woolens, stretch easily and may require re-blocking after washing. They demand specific care to maintain their original shape.

Sheer Fabrics: Delicate sheer fabrics, laces, and nets require careful handling to prevent tearing or damage during washing.

Understanding the significance of yarn structure and fabric construction helps consumers make informed decisions about appropriate care methods. It guides them in choosing cleaning techniques that preserve the integrity of the fabric.

4. Elaborate on the role of color and finishes in fabric care. How can dyed and printed fabrics be effectively maintained?

Answer:

Color and finishes are critical factors in fabric care, influencing both appearance and durability. Here's an in-depth elaboration:

Role of Color:

Dyed and Printed Fabrics: Dyed and printed fabrics may lose color during cleaning if not properly cared for. It is essential to follow specific care instructions to maintain the vibrancy of colors and prevent bleeding.

Colorfastness Testing: Testing the colorfastness of fabrics before use is crucial. This involves checking if the colors bleed or fade during washing. Manufacturers often provide care labels with instructions for preserving color.

Role of Finishes:

Behavioral Alterations: Finishing treatments can alter fabric behavior. Some finishes enhance qualities such as water repellency, while others may pose

challenges. Understanding the effects of finishes is essential for effective fabric care.

Renewal Requirements: Certain finishes, like water repellency or permanent creases, may require renewal after each wash. Careful consideration of finishing effects ensures that the fabric's intended characteristics are maintained over time.

Effective Maintenance of Dyed and Printed Fabrics:

Separate Washing: Dyed and printed fabrics should be washed separately from other items to prevent color bleeding. This is especially important during the initial washes when excess dye may still be present.

Mild Detergents: The use of mild detergents is recommended for dyed and printed fabrics. Harsh detergents can accelerate color fading, and using appropriate detergents helps preserve color intensity.

Cold Water Washing: Washing dyed and printed fabrics in cold water reduces the risk of color bleeding. Cold water is less likely to cause dyes to leach out of the fabric.

Follow Care Labels: Care labels on garments provide specific instructions for maintaining dyed and printed fabrics. Following these instructions is essential for preventing color-related issues. Understanding the role of color and finishes in fabric care empowers consumers to make informed decisions, ensuring that fabrics maintain their aesthetic appeal and longevity.

5. Explain the concept of a care label in the context of fabric maintenance. Discuss the information typically found on care labels and its importance. (10 marks)

Answer:

A care label is a permanent tag or label attached to a garment, providing essential information about how to care for and maintain the fabric. Care labels play a crucial role in guiding consumers on the appropriate methods for washing, drying, ironing, and storing garments. Here's a comprehensive explanation:

Components of Care Labels:

Fiber Content: Care labels specify the type of fibers used in the garment. This information is crucial as different fibers have unique care requirements. For example, cotton may have different care instructions than wool or synthetic fibers.

Washing Instructions: Care labels provide instructions for washing the garment. This includes recommended water temperature, cycle type (e.g., delicate cycle), and any specific considerations such as washing inside out.

Drying Instructions: Information on how to dry the garment is included, whether it be tumble drying, drip drying, line drying, or flat drying. Specific instructions help prevent damage caused by inappropriate drying methods.

Ironing Instructions: Care labels indicate the recommended ironing temperature and whether steam pressing or dry ironing is appropriate. This helps prevent damage to fabrics during the ironing process.

Bleach and Dry Cleaning Information: Care labels specify whether bleach can be used and the types of bleach suitable for the garment. They also provide guidance on whether the garment can be dry-cleaned and any specific instructions for dry cleaning.

Importance of Care Labels:

Preserving Fabric Integrity: Care labels are crucial for preserving the fabric's integrity over time. Different fibers and fabrics require specific care to prevent damage, shrinkage, or fading.

Consumer Guidance: Care labels provide consumers with clear and concise guidance on how to care for their garments. This empowers individuals to make informed decisions and ensures that garments maintain their quality.

Preventing Mishandling: Clear care instructions help prevent mishandling of garments. Consumers can avoid common mistakes, such as using the wrong water temperature or improper drying methods, by following the guidance on care labels.

Increasing Longevity: Proper care, as guided by care labels, contributes to the longevity of garments. Understanding how to maintain fabrics ensures that they remain in good condition for an extended period.

In conclusion, care labels are essential components of garments, offering valuable information that aids consumers in preserving fabric quality and appearance through proper care practices.

6. Conduct a critical analysis of the practical tasks "Colour fastness of fabrics" and "Study of labels on fabrics and apparel" in the context of fabric care education. (10 marks)

Answer:

The practical tasks "Colour fastness of fabrics" and "Study of labels on fabrics and apparel" serve as valuable tools in fabric care education. Let's conduct a critical analysis of each task:

"Colour Fastness of Fabrics" Practical

Purpose: This practical aims to educate consumers on the colorfastness of fabrics during washing. It is a hands-on approach to understanding how different fabrics react to washing and the potential for color bleeding.

Educational Value: The task provides practical insights into the importance of testing colorfastness before washing colored fabrics. It allows students to observe and analyze changes in color and staining on white cloth attached to colored samples.

Application: Understanding colorfastness is crucial for consumers to prevent color bleeding and fading during routine washing. The practical application bridges theoretical knowledge with real-world scenarios.

Critical Analysis: The practical effectively addresses the significance of color in fabric care. However, it could be enhanced by including a broader range of colored fabrics and variations in washing conditions to simulate real-world scenarios more accurately.

"Study of Labels on Fabrics and Apparel" Practical:

Purpose: This practical focuses on analyzing information provided on fabric and apparel labels. It aims to enhance consumer understanding of fiber content, size, and care instructions.

Educational Value: The task provides a practical approach to interpreting information on labels, fostering skills in identifying fiber content, understanding care instructions, and making informed choices based on label information.

Application: Analyzing labels is a fundamental skill for consumers to choose appropriate care methods. The practical application aligns with real-world scenarios, helping individuals make educated decisions when handling garments.

Critical Analysis: While the practical is beneficial, it could be further enriched by incorporating a broader range of fabric and apparel labels. Including labels with complex information or specific care requirements would better prepare students for diverse real-world scenarios.

In summary, both practical tasks contribute significantly to fabric care education by offering hands-on experiences. Enhancements could be made by diversifying the range of fabrics and labels to better simulate the complexity of real-world situations. Overall, these tasks are valuable tools in fostering practical fabric care knowledge among students.

CHOOSE THE COPRRECT ANSWERS

1: What is the primary solvent used in the dry-cleaning process?

- A) Water
- B) Perchloroethylene
- C) Petroleum jelly
- D) Ethanol

Correct Answer: B) Perchloroethylene

2: Which factor is crucial in determining fabric care requirements?

- A) Fabric color
- B) Fabric smell
- C) Fabric weight
- D) Fabric fiber content

Correct Answer: D) Fabric fiber content

3: Fabrics with high-twist yarns are more susceptible to:

- A) Color bleeding
- B) Shrinking

C) Snagging

D) Stretching

Correct Answer: B) Shrinking

4: What is a crucial consideration for maintaining dyed and printed fabrics?

A) Excessive drying

B) Separating washing

C) Frequent ironing

D) Hot water washing

Correct Answer: B) Separating washing

5Q: Care labels are essential for:

A) Enhancing fabric smell

B) Preserving fabric integrity

C) Changing fabric color

D) Increasing fabric weight

Correct Answer: B) Preserving fabric integrity

6Q: The "Colour Fastness of Fabrics" practical task aims to educate about:

A) Drying techniques

B) Color bleeding during washing

C) Ironing temperatures

D) Fabric smell preservation

Correct Answer: B) Color bleeding during washing

FILL IN THE BLANKS

1. Dry-cleaning is generally done in industrial establishments, and the most common solvents used are **perchloroethylene**, a petroleum solvent, or a fluorocarbon solvent.

2. **Fibers** of which fabrics are made influence their care requirements. For example, Cotton & Linen can withstand high temperatures and are resistant to alkalis, making them easily washable with strong detergents; however, they are susceptible to attack by silverfish.

3. Yarn structure, such as high-twist yarns, may cause fabrics to shrink during washing, while fancy weaves like satin or pile fabrics may be **prone to snagging**.

4. **Dyed and printed fabrics** may lose color during cleaning, emphasizing the importance of separating them during washing to prevent staining onto other materials.

5. Care labels, typically found on garments, provide consumers with essential information about **fabric composition**, size, and care instructions, contributing to the durability of the product.