

Chapter 11 – Care & Maintenance of Fabrics

Page No. 218

Question 1:

What are the different aspects of care and maintenance of fabrics?

Answer 1:

Clothes need care and maintenance when they become dirty due to various reasons like dust, stains, perspiration etc.

Different aspects of care and maintenance of fabrics is as follows:

- We have to maintain our fabrics in clean and good condition. They have to be washed properly, dried and the ironed regularly for a good appearance.
- Delicate detergents and low spin speed should be used for **linen clothes**.
- **Cotton clothes** should be washed with care and attention.
- **Woolen clothes** should be dried clean, while other clothes can go for into gentle, quick wash.
- **Silk fabrics** should be washed separately because they are quite delicate and dry at low temperatures

Question 2:

Define the term 'stain'. What are the different types of stains and what techniques can be used for removing them?

Answer 2:

- A stain is a discoloration that can be clearly distinguished from the surface, material, or medium it is found upon.
- They are caused by the chemical or physical interaction of two dissimilar materials.
- Many stubborn stains requires both chemical and physical treatment.
- Mainly stains are of six types. They are :

1. **Protein stain:** Protein stain are based on the example of egg, blood, vomit etc are the coloured mark. **Removal of protein stain:** For the first time use hot water to remove the stain and if it is not done then do soak the fabric into the cold water and rub it against itself to dislodge stain. Lift off as much as possible brush off the clothes and then soak them in the cold-water using detergent and then wash it properly.
2. **Tannin stain:** Example of tannin stain are coffee, tea, wine, etc. **Removal of Tannin stain:** It can be removed when you clean with the hot water and the detergent without any treatment. Natural soap cannot be used in the tannin stain. Because if we use it will stay permanently.
3. **Oil-based stain:** Oil based stain are comes only when we may woodworkers mind when they think of wood stain. **Removal of oil-based stain:** Prepare a soaking solution added with the washing powder and then soak the clothes properly into that soaking solution for an hour and then gently wring out the excess of water before washing. Add detergent and wash the clothes properly by washing with the hands or in the washing machine.
4. **Dye stain:** Examples of dye stains are crystal violet, malachite green, methylene blue, and safranin. **Removal of Dye stain:** Firstly you have to mix one tablespoon of dishwashing liquid like dawn, and add one table spoon of white vinegar with two cups of hot water. Using a clean, white cloth, sponge the stain with the detergent-vinegar solution, blotting frequently. Flush the clothes with the clear water and the liquid that you have added and then wash it with the soap properly.
5. **Combinations stain:** Example are gravy, ice cream, grease, candle wax etc. **Removal of combination stain:** As the name suggest it is a mixture of oil, wet, dry, stains. They must be treated as an oil base stain first and then the water base treatment is done use the bleaching liquid if possible to remove the stain. Permit the fabric in to the air dry between the treatments. Stains require special treatment methods: **For example stains of chewing gum, nail polish, rust, smoke, etc.** **Removal of stain:** Wash the stain for to minutes. After that use oxygen bleach. Nail polish mark is removed with the acetone and spot treatment methods. And other marks have been removed when run in the duty liquid detergent, rinse in warm water and then wash. Rust can be removed by applying the hydrofluoric acid, oxalic acid. Smoke is removed by heavy duty phosphate base detergent or liquid.

Question 3:

Write the steps in removing unknown stains from fabrics.

Answer 3:

- Cover the stain with a **rubbing alcohol** compress.
- Let it remain on the stain for a few minutes, then wipe with a cloth moistened with ammonia.
- If the stain persists, sponge the area with a dry – **cleaning solvent**, Spot lifter or after cleaning fluid.
- Apply a dry spotter. Tamp or scrape to help loosen the stain.
- Flush with one of the **liquid dry-cleaning** solvent.
- If stain remains, apply **amyl acetate** and tamp again.
- Again flush with a dry solvent.
- If sometimes the stain is remain then apply a **wet spotter vinegar** of few drops.
- And apply a wet spotter and a few drops of **ammonia**.
- Then at last flush with the dry-cleaning solvent and allow to dry.
- This process is also preferable for **Acrylic fabric, cotton, linen, modacrylic, Nylon, olefin, polyester, spandex** and many more types of clothes having staining is removed by this type of process.

Question 4:

What is dirt? How do water, soaps and detergents combine to remove dirt from fabrics?

Answer 4:

- **Dirt** is a structured collection of **smashed rocks and plants** that is quite different once you get a few feet deep.
- Dirt is the unclean matter, especially when in contact with a person's clothes, skin or possessions.
- Dust is a general powder of organic or mineral matter.
- Filth foul matter such as excrement ingrained dust such as soot.
- The process by which triglycerides are reacted with sodium or potassium hydroxide to produce **glycerol, fatty acid salts called soap**.
- They are the most often animal fats or vegetable oils.
- When the **sodium hydroxide** is used a **hard soap** is produced.
- **Soap are fatty acids, fatty acids are monocarboxylic acids that have long carbons chain.**

- When the soap is combined with water the one end of the chains connect with water and the other end of the chain is connected with the dirt; hence the dirt is removed from fabrics.
- There are two parts of soaps. **Hydrophilic and hydrophobic**
- **Materials with a special affinity for water those it spreads across, maximizing contact are known as hydrophilic.**
- **Those parts of soap that naturally repel water, causing droplets to form, are known as hydrophobic.**
- Here, hydrophobic sticks with the oil and hydrophilic end stick out of the water.
- Thus, oil drops gets removed with water.

Question 5:

How does finishing after washing improve the brightness and textural characteristics of fabrics?

Answer 5:

- **Finishing** is a process of rinsing the article with clean water till is absolutely free of soap or detergent. Some reagents provide brightness to the fabrics:
- **Blues:** Repeated washing of white cotton articles tend to lose their whiteness and become yellow. For ultramarine blue is available in the market.
- **Optical brighteners or Fluorescent brightening agents:** They are compounds with low grade or weak dyes that possess the property of fluorescence. These compounds can absorb light at a shorter wavelength and re-emit them at a longer wavelength. With the use of such compounds, fabrics become intense white and bright.

Question 6:

What is dry-cleaning? What are the types of fabrics where dry-cleaning is recommended?

Answer 6:

Dry cleaning is cleaning of fabrics is **non-aqueous liquid medium**. For dry cleaning, the most common solvents used are **perchloroethylene, a petroleum solvent or a fluorocarbon solvent**. The types of fabrics where dry cleaning is recommended are:

1. **Wool:** Dry cleaning solvents and stain removing agents have no deleterious effect. Bleaches have to be used with care.
2. **Silk:** Dry cleaning solvents and spot removing agents don't damage silk.
3. **Nylon:** Dry cleaning solvents, stain removing agents, detergents and bleaches can be used safely.