ACCOMODATION MANAGEMENT

FOR HM&CT DIPLOMA STUDENTS

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UNIT 5: COMPOSITION, CARE & CLEANING OF DIFFERENT SURFACE

IETALS

1. **SILVER:** Soft, malleable and ductile metal with a brilliant sheen. Used as EPNS (Electroplated Nickle Silver) for making cutlery, utensils & decorative artifacts.

ypes of silver

- **Sterling Silver:** Alloy containing 92.5% silver and rest copper. Copper hardens the silver without affecting its properties. More expensive than silver plated alloy, so not used in hotels. Usually used for jewellery.
- **Silver plating:** Table silver or silverware is made of silver plated alloy. A base is made with an alloy of nickel, copper and often brass and no silver. However they are plated with silver by electrolysis. The resultant is EPNS (Electroplated Nickel Silver).

Maintenance challenges:

- ✓ **Silver pits:** Small pits on articles. If left in contact with salt for too long especially cutlery. To prevent pitting, silver cruet sets should be fitted with glass liners and silver spoons should not be kept in salt for long.
- ✓ **Scratching:** Silver being soft metal gets scratched easily if rubbed with hard scrubbers or surfaces.
- ✓ **Tarnishing:** Action of compounds of sulphur / oxide present in atmosphere and certain foods like fish, onion, pickles, juices etc. Tarnish is Silver Sulphide / silver oxide varies from yellow, brown to blue black in color.

Cleaning / Polishing Procedures:

- **Regular cleaning:**
  1. Wash the article with hot detergent solution, scrubbing with cotton cloth.
  2. Rinse in clean boiling water.
  3. Drain water and wipe when still warm with lint free cloth.
  4. Toothpaste (soft abrasive) can be rubbed over the article and left for some time and then washed off.
- **Silver Dip:**
  1. Used for tarnished silver. It is a pink color liquid based on acid solution of THIOUREA compound into which articles are immersed completely, for very short time, friction not required.

2. Then washed with warm water and dried.
3. It should not be used too frequently and do not put in stainless steel containers.

Polivit or Aluminum Soda method:

1. Silver articles immersed in hot soda solution containing a plate of perforated aluminium for 10 mins.
2. A chemical exchange takes place to remove the tarnish transferring Sulphur to Aluminum plate.
3. Then article is rinsed in boiling water & dried with lint free cloth.

- **Proprietary Preparations:**

1 **Jeweler's rouge** – A very fine powder of iron/ferric oxide which is rubbed on the silver surface to polish it. It is available as powder, bars, paste and even laced on a polishing cloth.

2 Polish rubbed on article, allowed to dry and then buffed. Eg. SILVO

- **Plate Powder:**

1. Pink powder mixed with methylated spirit to form smooth paste.
2. Paste rubbed don article and left to dry. Then rubbed off with rags.
3. Rinsed with boiling water and wiped with clean cloth.

Burnishing Machine:

1. Consists of revolving drum. Highly polished steel balls are immersed in detergent solution with silver articles. The steel balls should always be kept under water to prevent rusting.
2. The machine rotates and friction between steel balls polishes the silver.
3. Articles are rinsed in hot water and dried.

2. **STEEL:** An alloy of Iron. Mainly iron and carbon. Used in the form of Chrome steel for manufacture of baths, sinks etc and stainless steel for cutlery, sanitary ware, furniture, utensils etc.

Types of Steel:

- **Chrome steel:** Steel coated with Chromium. Ex. in taps, shower fittings etc. Doesn't get tarnished, only becomes spotted with water.
- **Stainless steel:** Steel + 8-25% Chromium, making it corrosion resistant. Used in cutlery, sinks etc. For spoons & forks: steel + 18% chromium + 8% nickel are used. Harmed by silver dip, bleaches and acidic solutions.
- **Galvanized steel:** Steel coated with zinc to prevent tarnishing. Used for buckets.

anining / Polishing:

- Washed in hot detergent solution with soft nylon scrubber, rinsed in clean water and dried with linen cloth. (No harsh abrasives).
- For greasy stains Sodium Bicarbonate can be used.
- Occasionally polished to remove scratches and stubborn water marks.(proprietary polish)

3. **COPPER:** Metal with orange brown tinge. Used in wall paneling, cutlery, cookware; vases, bowls etc. Copper cookware lined with tin or nickel as it reacts with some foods. May be lacquered to avoid tarnishing.

   Lacquering is a process of coating the metal with shellac (flakes of lac – animal resin) solution giving it a protective coat.

aning / Polishing:

- ✓ Washed in warm water, rubbed with a mixture of salt, fine sand and vinegar.
- ✓ Rinsed in warm water and dried with lint free cloth.

- ✓ Thin coat of vegetable oil applied to avoid tarnish.
- ✓ Heavy tarnish: weak ammonia solution used.
- ✓ May be polished with proprietary polish. Unlacquered copper requires frequent polishing.

4. **BRASS:** Golden- brown alloy of COPPER & ZINC. Used in making window fittings, railings, taps, ashtrays etc. It tarnishes & scratches easily, thus are usually lacquered.

aning / Polishing:

- ◊ Remove dirt from surface with a duster.
- ◊ Rub the article with a paste of tamarind & salt. Or, Paste of white flour, salt and vinegar in equal parts to remove mild tarnish. Rinse, dry and polish.
- ◊ In very bad cases, soak brass article for 12 hrs in washing soda solution and then rinse and polish.
- ◊ Polish with BRASSO or KIWI CLEAN BRASS.

5. **BRONZE:** Brown alloy of COPPER & TIN. Used in making works of art and medals.

Cleaning / Polishing:

- ➳ Dust the article, wash well with water.
- ➳ Apply one part muriatic acid and two parts water.
- ➳ Allow it to dry and then polish with vegetable oil.

6. **ALUMINUM:** Silvery, light weight, malleable & ductile. Used in light fittings, window frames, furniture items, door fittings, utensils etc. Not tarnished by air but harmed by alkalis and stained by acids, so anodized to prevent damage.

:aning / Polishing:

- ❖ Wash in hot detergent solution, scrub with soft steel wool.
- ❖ Use mild abrasive only in case of stubborn stains.
- ❖ Discoloration can be removed with boiling solution of water & lemon, rinsing and drying.
- ❖ Showpieces may be polished to maintain gloss.

7. **IRON:** Silver – white metal of great strength. Used in making furniture, buckets, cookware etc. Iron can be forged or cast. Wrought iron is shaped by heating and hammering when hot, thus FORGED. CAST iron is hard alloy of iron, carbon and silicon cast in mould.

intenance challenges:

- Cast iron utensils need to be seasoned before first use to prevent RUSTING.
- Article is washed in mild soap and dried.
- Inside surface is rubbed with vegetable oil and heating in slow oven for 2 hrs.
- Enamelled cast iron requires no seasoning.

:aning:

- Unprotected iron should be washed only when required and dried thoroughly.
- Galvanized iron requires regular washing and thorough drying.
- Rust can be removed with fine steel wool dampened in oxalic acid.
- Don't store in damp areas.
- Before long term storage, coat with oil or black lead(Graphite).

LASS

Glass is a transparent, lustrous, and brittle material made from silica or sand. A xture of pure, fine sand, soda or potash, and other ingredients.

ass manufacturing: These ingredients are carefully measured out. This is called **tch'.** The batch is fed into a furnace and heated to an extremely high temperature, ove 1300 degree Celsius, where it fuses into molten glass. From the furnace, the molten

ss is led away for shaping with various casts / instruments. After shaping, the glass is
led by a process called **'annealing'.**
ıss is used in making Doors, Windows, Furniture, Vases, Lighting fixtures, Mirrors,
titions, Tableware, Kitchenware and Bottles

ASS CLASSIFICATION

- On the basis of constituents and properties
- On the basis of use and form
- On the basis of safety

assification on the basis of constituents:

- **Soda-lime glass** – it contains sand, soda ash and lime stone. This is an inexpensive ordinary glass.
  This glass is used for inexpensive flat or hollow glassware, windows mirror etc.
- **Lead crystal glass** - it contains sand, pot ash and lead oxide. This is an attractive glass with fine lustre and softer than soda lime glass. This glass can be cut easily. Used for expensive hollow glassware and artifacts.
- **Borosilicate glass** - it contains sand and borax. This is a hard, heat resistant glass. Borax cuts down the rate of expansion when the glass is heated. It is used for ovenware, flameproof glass cookware.

lassification on the basis of use:

- **Flat Glass** - It is usually soda-lime glass, used in making windows, table tops, and shelves.

- **Fibreglass** - Glass can be manufactured as a textile fibre, which may be used for making curtains and fire blankets. Fibreglass may also be manufactured as rigid sheets of plastic or other material with glass filaments embedded for strength. Fibreglass is fire-proof, impermeable, and resistant to damage by pests, sunlight, or air. They are also used to manage acoustics in an area.
- **Obscured Glass** - This is a type actually derived from flat glass. It is textured from one side, so that some light passes through and some is blocked or distorted, so that the material is not entirely transparent. It is used in making bathroom windows and the areas where privacy is desired.
- **Hollow Glassware** - This is produced by blowing, moulding, and pressing molten glass into the desired shapes.
- **Cut Glass** - This glass is expensive and used for chandeliers, vases and quality glassware.

ıssification on the basis of safety:

- **Obscured Glass with wire** - Wire is incorporated in obscured glass during the rolling process.
  If broken, the glass pieces will be held in place by the wire until knocked out of the 'frame' for repair.
- **Laminated Glass** - This consists of two thin sheets of glass with transparent plastic sandwiched between them. If a laminated glass sheet breaks, the glass pieces will adhere to the plastic layer.
- **Toughened Glass** - This is made by heating the glass sheet to a temperature just below softening point and then cooling the surface rapidly. This glass is five times tougher than annealed glasses.
- **Toughened & Laminated Glass** - This safety glass is made by the combination of the above mentioned two methods laminating and toughening.
- **Borosilicate glass** - . This glass is a hard, heat resistant glass. Borax cuts down the rate of expansion when the glass is heated. It is used for ovenware, flameproof glass cookware.

eaning Procedure (Flat Glass)

- Even slight marks and smudges show prominently on glass surfaces. Therefore

glass surfaces, especially flat sheets, require frequent cleaning.

Dusting should be done daily with a lint-free cloth.

Damp dusting needs to be done whenever necessary. Light soiling and greasy fingerprints should be wiped away with a solution of vinegar and water (1:1) or a solution of 9ml liquid ammonia in approximately 1 litre of water.

- Glass cleaners applied with a sponge also clean glass effectively.
- For cleaning larger surfaces, a small window squeegee may be used.
- Stubborn marks on mirrors—such as toothpaste deposits, hair-spray, and make-up—should be removed by wiping with a cloth moistened with methylated spirit.
- Newsprint contains an effective solvent, therefore newspaper can be used to remove marks from windows too.
- Use a lint-free cloth to dry the glass surface afterwards.

aning of Hollow glassware & other articles

- Textured or engraved glass ware should be cleaned whenever necessary, using a soft nylon brush.
- Abrasives should be avoided.
- Discoloured or stained bottles and vases can be cleaned using a mixture synthetic detergents, and warm water.
- For jars and bottles, a mixture of construction sand and water can also be used to remove discolouration.
- Alternatively, clean by filling them one-fourth full with a mixture of vinegar and water (1:1) and add a few potato pieces, gently shaking till the marks disappear.
- To remove lime deposits from hard water in water jugs, vases, and tumblers, soak the items in distilled water for an hour, scrub with a nylon scrubber and synthetic detergent solution, and rinse with water.
- Dry the articles with a lint-free cloth.

They can be cleaned by bringing down and cleaning each piece with spirit.

Cleaning chandeliers is a time-consuming laborious process; but it should be done with utmost care since parts from a chandelier , once broken, may not be easy to replace.

- For cleaning purpose, chandeliers are taken down, dismantled piece by piece, and dipped into a warm solution of synthetic detergent.
- Each piece is then gently cleaned with a nylon scrubber and rinsed in clean warm water.
- A second rinsing is done in a mixture of one teaspoon liquid ammonia in 2 ½ litres of water.
- This results in a brilliant sparkle.
- Another method, which is more efficient, uses an upholstery shampooing machine.
- The machine sprays a detergent solution through a fine nozzle with enough pressure to clean each prism.
- The dripping wash water is collected in a catch basin or cloth installed below the chandelier.

;ATHER

ıther is made from the skins of various animals- including sheep, goat, pig and cattle. It ıne of the durable & versatile of all natural materials. The skins are treated in various ys to get different varieties of leather. Some varieties of leather:

- KID: Light colored leather produced from skin of young goats. Used to make shoes and gloves.
- SUEDE: Soft and flexible leather obtained from sheep skin, specially treated. Used to make shoes, belts, coats & handbags.
- MOROCCO: Leather made from goat skin which is very soft and long wearing. Used in book bindings.
- CHAMOIS: Kind of leather used mainly for cleaning and polishing. Originally, skin of antelope was used, but now simulated sheep skin is used.

ther can be dyed in a variety of colors and is used for belts, gloves, shoes, purses, lets, luggage, upholstery, book bindings etc. It is expensive and should be kept supple)revent cracking. It also picks up oil & grease readily.

:aning of leather

- General cleaning involves daily dusting or suction cleaning.
- In case of soiling, wipe the leather with soft cloth wrung out of warm water and mild detergent.
- Foilow with damp dusting with clean water and then dry thoroughly. Soft brush may be used for stubborn stains.
- Occasionally leather may be polished with a good leather cream polish to keep it supple.
- Solvents should not be used on leather as they stiffen it.

atherite: A brand name for an imitation leather product consisting of chemically :ated and vulcanized paper or other vegetable fiber or bark of tree.

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obsolete name for an IMITATION LEATHER consisting of chemically treated paper mbined with rubber and sandarac (resin obtained from coniferous tree)

exine: It is faux leather is primarily vinyl (poly vinyl chloride, or PVC), but also contains asticizers to make it flexible (as compared to PVC tubing), stabilizers to make it light and one resistant and the fabric backing. The backing is probably cotton, but could also be lon or polyester. The plasticizers, usually a phthalate of some sort, are generally nsidered 'safe,' but will probably break down when burnt. The

abilizers are typically heavy metals (lead, etc), but those won't vaporize, or likely even elt out when the fabric is burnt. Chlorine gas is released the burning of faux leather.

PLASTICS

lastics are resinous synthetic polymers that have the following qualities or advantages:

- They are light in weight.
- They are resistant to most chemicals.
- They are non conductors to electricity.
- They are easy to clean.
- They are resistant to moths and other pests.
- They are available in attractive colors.
- They are on whole reasonably priced.

They have the following disadvantages:

- They can be scratched if harsh abrasive are used on them.
- They have a tendency to discolor and crack.
- They produce toxic fumes on burning.
- Thy attract dust due to static electricity.
- They are non biodegradable.

Types of plastics:

Plastics may be of two types according to their properties:

1. **Thermosetting plastics**: These are **HARD** plastics that are moulded by heat and pressure and do not usually soften when they are reheated

   Some examples are:

   - MELAMINES: This group of plastics is used in making tableware, trays, laminated worktops, wall panels and shelves.

   - PHENOLICS: These are used in making buckets, trays, telephones, door handles and electrical fittings. These are not affected even by boiling in water, so that they are suitable for making kitchenware.

- LAMINATES: These are manufactured by subjecting layers of paper impregnated with plastic resins, such as phenolics or melamine, to high temperature and pressure. A texture may also be introduced in laminates. These may be stuck directly to wall surfaces or to plywood. They may be used for making wall panels, countertops and furniture.

2. **Thermoplastic:** These are **SOFT** plastics that soften when exposed to heat and harden again when cool. Most of the plastic materials used in hotels fall under this group. Some commonly used thermoplastics are:

   - ACRYLICS: These are light weight plastics that scratch easily and are damaged by very hot liquids. These are used in trays, sanitary ware, telephones, furniture and protective panels.

   - POLYESTERS: These are lightweight, water resistant and color change resistant plastics. These are used in trays, lampshades, sinks, furniture etc.

   - POLYSTYRENES: These are used in domestic equipments and utensils, refrigerator linings and fan blades and expanded polystyrene is used in disposable utensils (STYROFOAM).

- **POLY-TETRA-FLOURO-ETHYLENE (PTFE or TEFLON): These are tough plastics used** in kitchen ware. These are sometimes bonded to iron or aluminium to give smooth, non stick surface.

- POLY VINYL CHLORIDE (PVC): These are used in upholstey fabrics, wall coverings and rigid form is used in curtain tracks, plumbing fittings, sheet and tile form and used as used inhibitor on kitchenware articles.

Cleaning procedure:

1) Plastic surfaces are easy to clean and maintain.
2) Daily damp dusting should be done since plastics attract dust due to static electricity.
3) Light soilage can be removed by wiping with warm solution of synthetic detergent, followed by rinsing and drying.
4) Never rub plastics with dry cloth as this increases their static electricity and makes them attract more dust.
5) Textured surfaces need mild scrubbing with a soft brush; Stains should be removed by rubbing with cloth soaked in methylated spirit.
6) Where plastics come in contact with food such as in refrigerators, a solution of 9ml sodium bicarbonate to 300 ml of water should be used for cleaning.

Precautions in maintaining plastics:

- Do not use harsh abrasives.
- Do not buff with a dry cloth.
- Do not drag heavy objects over plastics.
- Do not expose to direct heat, such as from cigarette butts, hot plates and so on.
- Do not apply strong acids or alkalis.

CERAMICS: Ceramics are made from sand and clay in various proportions. It is then baked. Ceramics are glazed i.e coated with a glass like materials. Unglazed ceramics are highly porous and have an absorbent surface. Ceramics are used for making sanitary fittings, drain pipes, vases, tiles and crockery.

Types of ceramics are –

- **Earthenware** is used extensively for pottery tableware and decorative objects. It is one of the oldest materials used in pottery. The clay is fired at relatively low temperatures (1,000–1,150°C), producing a slightly porous, coarse product. To overcome its porosity, the fired object is covered with finely ground glass powder suspended in water (coating of vitreous substances is glaze) and is then fired a second time. Faience, Delft and majolica are examples of earthenware.
- **Stoneware** clay is fired at a high temperature (about 1,200°C) until made glass-like (heating and rapid cooling vitrified). Because stoneware is non-porous, glaze is applied only for decoration. It is a sturdy, chip-resistant and durable material suitable for use in the kitchen for cooking, baking, storing liquids and as serving dishes.
- **Porcelain** is a very hard, translucent white ceramic. The earliest forms of porcelain originated in China around 1600BC, and by 600AD, Chinese porcelain was a prized commodity with Arabian traders. Because porcelain was associated with China and often used to make plates, cups, vases and other works of fine art, it often goes by the name of 'fine china

To make porcelain, small amounts of glass, granite and feldspar minerals are ground up with fine white kaolin clay. Water is then added to the resulting fine white powder so that it can be kneaded and worked into shape. This is fired in a kiln to between 1,200–1,450°C. The high silica content of porcelain causes it to fuse and vitrify at high temperatures. The reaction is similar to what happens while making glass. Thus porcelain is usually shiny and nonporous.