UNIT II - CONSTRUCTION PRACTICE - SUPER STRUCTURE

1. Plastering

- **Definition**: Plastering is the process of applying a coat of plaster to walls and ceilings to provide a smooth surface, enhance durability, and protect against environmental elements.
- **Materials Used**:
    - Cement plaster
    - Lime plaster
    - Gypsum plaster
    - Mud plaster (in rural or traditional construction)
- **Purpose of Plastering**:
    1. **Smooth Surface**: To provide a smooth and even surface for walls and ceilings, making them suitable for painting or decoration.
    2. **Protective Layer**: Acts as a protective layer for walls, safeguarding against weather effects like rain, dust, and erosion.
    3. **Aesthetic Enhancement**: Plastered surfaces offer a visually appealing finish and help conceal irregularities in the wall.
    4. **Improves Durability**: Increases the durability of the building by protecting walls from wear and tear.
    5. **Moisture Resistance**: Plaster can be made waterproof (cement-based plaster) to prevent moisture penetration in walls.
    6. **Thermal Insulation**: Plastering contributes to better thermal insulation, reducing heat transfer through walls.

- **Types of Plaster Finishes**:
    1. **Smooth Cast Finish**: A smooth and level surface achieved by troweling.
    2. **Sand Face Finish**: Achieved by adding sand to the plaster to create a textured surface.
    3. **Rough Cast Finish**: A coarse surface achieved by throwing plaster onto the wall to create a textured effect.
    4. **Pebble Dash Finish**: Small pebbles are pressed onto the final coat of plaster to create a decorative surface.
- **Process of Plastering**:
    1. **Surface Preparation**: Clean the wall and remove loose particles.
    2. **Applying the First Coat (Scratch Coat)**: A rough layer is applied to create a key for the final layer.
    3. **Applying the Second Coat (Finishing Coat)**: A smooth layer is applied, and troweling is done to finish the surface.
    4. **Curing**: The plaster is cured by keeping it wet for a few days to ensure proper setting.

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2. Pointing

- **Definition**: Pointing is the process of finishing the joints of masonry work with mortar to improve the appearance and protect the structure.
- **Materials Used**:
    - Cement mortar
    - Lime mortar
- **Purpose of Pointing**:
    1. **Weatherproofing**: Pointing protects the joints of masonry from rainwater infiltration, which can lead to dampness and structural damage.
    2. **Aesthetic Appeal**: Proper pointing improves the appearance of exposed brick or stone masonry, making the structure look neat and well-maintained.

3. **Repair of Joints**: Pointing fills any gaps or cracks in the mortar joints, preventing further deterioration of the masonry.
4. **Preventing Growth of Vegetation**: It inhibits the growth of plants, moss, or weeds within the masonry joints.
5. **Increasing Structural Strength**: Properly done pointing contributes to the overall stability and strength of the masonry by reinforcing the mortar joints.

- **Types of Pointing**:
    1. **Flush Pointing: Mortar is pressed into the joint and leveled with the wall surface.**
    2. **Recessed Pointing: Mortar is pressed into the joint, but the finish is set back slightly from the wall surface.**
    3. **Beaded Pointing: A rounded bead is formed by pressing the mortar into the joint to create a decorative finish.**
    4. **Struck Pointing: The mortar is pressed in and shaped with a slope that sheds water away from the joint.**
    5. **Tuck Pointing: A narrow groove is created in the joint, and a contrasting mortar color is used to create a neat, decorative line.**

Comparison of Plastering and Pointing:

- **Plastering** covers entire surfaces for protection and aesthetics, whereas **Pointing** focuses on protecting and finishing the joints of masonry.
- Both techniques serve the dual purpose of **protection and appearance enhancement** but are applied to different parts of a structure (plaster for walls, pointing for joints).

These notes outline the purposes and processes of plastering and pointing in construction.