1. **FAQs**

1. Define Landscape architecture.

Landscape architecture is the art and science of planning and designing the landscape for purposeful human use and the conservation of landscape resources. American Society of

Landscape Architects defines it as below: "Landscape architecture is the analysis, planning, design, and management of the natural and built environment".

2. What are the elements of Landscape Design?

Generally Landscape elements are divided into Hard and Soft landscape elements. **Hard Landscape**: Consists of all the built elements in the Landscape.

Example: Paving, Retaining Walls, Street Furniture, Pergolas and Gazebos.

Soft Landscape: Consists of all the natural elements i.e., earth, water and plants.

3. Discuss the use of landform as a landscape design element.

Landform refers to the three dimensional relief of the surface of the earth. Landform is an important and ever present design element used by the landscape architects to meet their objectives in creating and managing outdoor spaces for human use and enjoyment. It is both an artistic and utilitarian element in its design applications. Landform affects the definition and perception of space, views, drainage, micro-climate, the organization of functions on a particular site and aesthetic character of an area.

Use of Landforms:

Spatial Definition: landform may be used to define exterior space. When defining exterior spaces with landform, three variables are critical: i) The floor area of the space,

a. the steepness of the enclosing slopes, and iii) the line of visible horizon. These three variables interact simultaneously with one another to enclose space. For example, landforms not approaching eye level imply or articulate space, but they do not physically enclose it.

Control Views: Landforms can be manipulated to control views. For example, landforms can be used to conceal unpleasant views

Influence Movement: Mounds and slopes can be used to create barriers that force movement in certain directions.

Affect Microclimate: Landform affect sun exposure, wind exposure, and precipitation accumulation. Landforms can be used to deflect Wind.

Aesthetic uses: Landform can be used as a compositional and visual element.

Landforms serve as the base for all the activities. Every land use or site function has an optimum slope condition which it operates best. Thus, the location of the different land uses is based on their compatibility with the steepness of the topography. Landforms

determine surface drainage.

4. Explain briefly the characteristics of still water.

Water may be classified into two general categories according to its motion- static (i.e., quiet, nonmoving) or dynamic (moving and changing).

Water by itself doesn't have any d de sign properties other than that it is a liquid. All the visible characteristics of water are directly dependent on exterior factors. Its form is determined by the characteristics of its container. Thus the same volume of water can have infinite number of different qualities – all depending on the size, color, texture, of the container.

Pools and ponds are bodies of still water. It can be used as a reflective or transparent base material. The finish of the underwater surface and the condition of water at the surface influence the ultimate effect.

A dark pool finish with an undisturbed surface will function as a reflector. In a quiet, static state, water can function as a mirror, repeating an image of its surroundings on the base plane.

A light-colored and/or patterned pool finish with an undisturbed surface will function as a window.

Static, quiet water is, found in lakes, ponds, or pools. A pond may be used to create a feeling of repose and tranquility in an outdoor space. It is peaceful, relaxing and mellow in character with a soothing effect on human emotions.

5. Explain the qualities of water and highlight its use in landscape design through examples.

Water by itself doesn't have any design properties other than that it is a liquid. All the visible characteristics of water, such as plasticity, motion, sound and reflectivity, are directly dependent on exterior factors (Size, Shape, and surface characteristics of the Container, Slope – Gravity, Temperature , Wind and Light).

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Edge of the Container: One of the critical aspects of designing with water is the edge of the container as it connects the water to land. The edge of the water is visually dominating. Form and material of the edge determines the nature of our participation with water at the edge.

Static water elements can be used to demarcate different areas of activity. They can be effectively used to divide spaces, control circulation or as a setting for other landscape enriching elements such as statues.

Dynamic water: According to its motion, dynamic water is divided into flowing, falling water or jets of water.

Flowing Water: Flowing water is any moving water confined to a well-defined channel. Flowing water results when the channel and its bottoms are sloped, allowing the water to move in response to gravity. The behaviour and characteristics of flowing water depend on the volume of water, steepness of slope, channel size, and properties of the channel bottom and sides

A smooth flow is achieved by a channel lined with slick/ smooth material that is constant width and depth – such flowing water is suitable for a peaceful and casual environment – where water needs to be neutral element.

A more turbulent effect of flowing water can be created by - altering the channel width , lining the channel with rough materials.

Flowing water is best used in outdoor spaces as s kinetic element to express movement, direction and energy. Similar to still water bodies, flowing water can be effectively used to divide spaces and control circulation.

Falling Water: The third form of water in the landscape is falling water, which occurs when water moves over and down a sudden drop in the elevation of the channel. Three types of fall are Free- fall, Obstructed fall and Sloped fall.

Falling water expresses the forces of gravity even more dramatically than flowing water and therefore is often a noticeable focal point in the outdoor environment. The character of free-falling water depends on volume, velocity, height of fall and edge condition over which water falls. Edge over which water falls determines the character of the falling water.

A perfectly smooth edge causes water to fall in an unwrinkled sheet.

A rough edge concentrates the water at certain points and produces a ripples effect.

When the edge becomes very rough and erratic in combination with large volume of water, a white water effect is created

They can be used to provide visual amenity, screening and evaporative cooling.

Jets of Water: Relatively large volumes of water forced through small apertures result in water jets. Vertical water jets draw attention. Non vertical jets can connect points and lead the eye. They can be used to add energy, movement and direction to a space. Sounds they produce can effectively mask noise

All the types and characteristics of water described may be used alone in a design or combined with each other. Thus, water elements can be used to demarcate different areas of activity, divide spaces, control circulation or as a setting for other landscape enriching elements such as statues. Water is also useful as a cooling agent in hot climates. Comfort is enhanced through evaporative cooling, when the air is dry. (Refer to the ppt slides for Examples)