

## TYPES OF WINDOWS USED IN BUILDING

### 7.1. Vocabulary

*Ex. 1. Match the words to their Russian equivalents.*

1. swivel shutter	a. поворотно-откидной затвор
2. gable end	b. оконные ставни из стекла
3. hinged shutter	c. роликовый подшипник
4. sash bars or glazing bars 	d. фронтон
5. roller bearing	e. петлевой затвор
6. glazed shutter window	f. створчатые решетки
7. stainless steel	g. нержавеющая сталь

*Ex. 2. Match the words to their definitions.*

1. utilize	a. to use something effectively for a particular purpose
2. weatherproof	b. designed to protect from damage caused by rain, wind, or other weather conditions
3. mild steel	c. to move back and forth repeatedly between two points or positions
4. welded	d. angled slats in a frame that can be adjusted to control the amount of light or air that enters a room or building
5. sill	e. the flat horizontal piece at the bottom of a window frame
6. louvers	f. a reddish-brown metal that is used especially for making wire and coins
7. oscillate	g. joined together by heating the

	edges and pressing them together
8. copper	h. a type of steel that contains a low percentage of carbon and is easy to shape and weld
9. utilities	i. public services such as gas, water, and electricity that are used by everyone in a particular area

*Ex. 3. Complete the sentences with the following words:*

**weatherproof, utilities, sill, welded, louvers, utilize, oscillating**

I pay for my \_\_\_\_\_(1) every month, like electricity and water bills.

The swing set was \_\_\_\_\_(2) back and forth in the wind.

I always try to \_\_\_\_\_(3) my time wisely by studying or exercising.

My cat likes to sit on the \_\_\_\_\_(4) of the window and watch the birds outside.

The \_\_\_\_\_(5) on the window let some light in but keep most of the sun out.

The metal pieces were \_\_\_\_\_(6) together to create a sturdy frame.

The outdoor furniture is \_\_\_\_\_(7) so it doesn't get damaged by rain or sun.

## **7.2. Reading**

*Ex. 1. Read the text.*

### **Different Types of Windows Used in Building**

A window is an opening place in a building that is usually built over the wall to enable sunshine, free air circulation, and an outside view as well as the passage of sound. Windows are crucial for the ventilation of a room. Timber, steel, and aluminium are the most frequent materials used to make windows.

A number of critical aspects must be considered and followed when choosing a window for a building, including the temperature of that place, the location of the room, the size of the room, the wind direction to

the room, the utility of the room where the window must be fixed, and the architectural point of view.

### **Classification of Windows:**

The position, materials, and configuration of windows can all be used to classify them. The following is a list of the different types of windows:

#### **1) Fixed Windows**

These windows are anchored to the wall and cannot be opened or closed, but the light can be easily transferred into the room through completely glazed shutters attached to the window frame. The shutters that come with the house are usually waterproof. These windows are sometimes known as pictured windows because they are sometimes solely used to observe natural views outdoors.

The fixed window's main disadvantage is that it prevents airflow. Where ventilation is not required, fixed windows are employed.

#### **2) Sliding Windows**

The window shutters of this type are moveable within the frame. Depending on our needs, the movement could be horizontal or vertical. The addition of roller bearings allows the shutters to move. This style of window is commonly found in buses, bank counters, and shops, among other places.

The main problem with this sort of window is that it cannot be fully opened, leaving one side of the window closed at all times. There are two types of sliding windows: double track and triple track. This form of window has the advantage of being able to move within its own internal space, requiring no additional space to work properly.

#### **3) Ordinary Windows**

It is also called casement windows. These days, casement windows are very popular. This window type has a larger ventilation space than other types. Generally, this style of window is not permitted near sidewalks or traffic areas. The casement windows' shutters are open and close like doors. The frame has been given enough room to accommodate the

shutters. The construction of this sort of window is very similar to that of a door. The window shutter panels might be single or many.

#### **4) Glazed/ Sash Windows**

The casement window and the glazed/ sash window are comparable. The window shutters' panels, however, are completely glazed, as the name implies. Top, bottom, and intermediate rails make up this structure. Small panels known as sash bars or glazing bars are used to separate the area between the rails.

#### **5) Pivoted windows**

Pivoted windows are similar to casement windows, with the exception that the frame does not require rebates and the shutter action differs slightly. The pivots that allow the shutter to oscillate can be made horizontally or vertically, and they are easy to clean. In addition, it lets in more light than side-hung windows do.

#### **6) Metal Windows**

Metal windows, in general, are made of mild steel. These are less expensive and more durable. As a result, these are increasingly widely used, particularly in public and private structures.

Aluminium, copper, stainless steel, and other metals are also utilized to construct windows. However, they are more expensive than mild steel windows. Metal shutters are also available for standard casement windows to offer substantial support for the panels.

#### **7) Corner Windows**

A room's corner windows comprise of two perpendicular faces at the room's corners. This style of window can let light and air in from two sides. When this sort of window is built, a unique lintel is installed in the wall to support the masonry work above the window's opening. The room is enhanced by the presence of corner windows.

#### **8) Bay Windows**

Bay windows are typically projected against an exterior wall and begin at the floor or sill level. These sorts of windows allow for better air and light ventilation. Bay windows come in a variety of shapes, including triangular, rectangular, and polygonal. If you simply have a few bay windows, you might be able to improve the view of your home.

### **9) Louvered Windows**

These windows enable ventilation without allowing outside visibility, ensuring appropriate privacy even when the window is open. The top and bottom rails of the window shutters are made of louvers and are fixed with louvers. Louvers have a 45-degree slant (recommended). By tilting and lifting the string, the louver's slope can be maintained. Louvers are often formed of wood, glass, or metal and are used in restrooms, toilets, and other private areas.

### **10) Double Hung Window**

A pair of shutters is linked to a single frame in a double-hung window. Each shutter is stacked on top of the other. Within the frame, these two shutters can be moved vertically. As a result, we can adjust the top or bottom windows to meet our needs.

A chain or string made up of metal weights that are strung over pulleys is used to operate the double-hung windows. The shutters can now be moved vertically simply by drawing the cord weights. The windows can then be adjusted to provide the ventilation or light that we require.

### **11) Dormer Windows:**

Dormer windows are built into the roof's sloping surface. The primary characteristics of these windows are that they allow for appropriate light and air circulation in the room. Dormer windows are built into roof slopes. It also adds to the room's beauty.

### **12) Clerestory Windows**

These windows are typically used in rooms with varying ceiling heights, meaning that one room has a higher ceiling height than the others and the window is located at the top of the main roof. When the front side of the

room is obstructed from light and air circulation, this style of window is usually installed.

### **13) Gable Windows:**

Gable windows are windows that are typically installed at the gable end of a building's sloping roof. This sort of window improves the building's outlook and has been used since ancient times.

### **14) Lantern Windows:**

If the room is blocked from all sides and there are no windows in the room's wall to offer appropriate light and air circulation, lantern windows are installed on the flat top of the structure. However, if the window is to be fixed for air ventilation, hinged shutters must be installed with a string or pulley system to open and close the window. Glass panels should be used to cover the window shutters.

### **15) Skylight Windows:**

Skylight windows are usually waterproof and are installed in a parallel manner on the sloping surface of a pitched roof with glass panels. The primary function of skylight windows in a structure is to allow more light into the space. It can be opened whenever necessary.

### **16) Ventilators:**

Ventilators are typically installed near the room's ceiling and are quite modest in comparison to the window size. It is set in place and opens upwards and outwards for room ventilation. In the case of ventilators, swivel shutters are provided horizontally. Wire mesh is often used instead of shutters with a parasol to keep rainwater out.

**Ex. 2.** Say if the following statements are *TRUE (T)* or *FALSE (F)*.

1. Windows are not important for the ventilation of a room.
2. Timber, steel, and aluminium are the most frequent materials used to make doors.
3. The temperature of a place is not a critical aspect to consider when choosing a window for a building.

4. Fixed windows are sometimes used to observe natural views outdoors.
5. Sliding windows cannot be fully opened.
6. Casement windows are not popular these days.
7. Glazed/sash windows have panels that are not completely glazed.
8. Pivoted windows let in less light than side-hung windows do.
9. Metal windows are more expensive than mild steel windows.
10. Corner windows do not require a unique lintel to be installed in the wall.

**Ex. 3.** *Answer the questions.*

1. What are louvered windows and how do they provide privacy?
2. What materials are louvers made of, and where are louvered windows commonly used?
3. How do double-hung windows work, and what is used to operate them?
4. What advantage do dormer windows offer in terms of light and air circulation?
5. Where are clerestory windows typically installed, and why?
6. What are gable windows, and where are they usually located on a building?
7. When are lantern windows installed, and what type of shutters must be used for ventilation?
8. What is the primary function of skylight windows, and how are they installed?
9. What are ventilators, and how do they differ from other types of windows?
10. Why might wire mesh be used instead of shutters with a parasol in ventilator windows?