

**17. Answer: (d)**

**Explanation:**

Not all of the solar energy that reaches the Earth actually reaches the surface of the Earth.

Although  $1367 \text{ W/m}^2$  of sunlight strikes the outer atmosphere, about 30% of it is reflected back into space. After this reflection, a certain spot on the Earth might see almost all or almost none of this sunlight. There are many factors that help determine how much sunlight actually reaches a given area, but some of them include sun angle, air mass, day length, cloud coverage, and pollution levels.

The amount of energy that is reflected by a surface is determined by the reflectivity of that surface, called the albedo.

A high albedo means the surface reflects the majority of the radiation that hits it and absorbs the rest.

A low albedo means a surface reflects a small amount of the incoming radiation and absorbs the rest. **For instance, fresh snow reflects up to 95% of the incoming radiation.** Therefore, fresh snow has a high albedo of .95. By contrast, water reflects about 10% of the incoming radiation, resulting in a low albedo of .10.

**18. Answer: (d)**

**Explanation:** The demand for a good moves in the opposite direction of its price. Price-elasticity of demand is a measure of the responsiveness of the demand for a good to changes in its price. Price-elasticity of demand for a good is defined as the percentage change in demand for the good divided by the percentage change in its price.

The more responsive the demand for a good is to its price, the higher is the price- elasticity of demand for the good. If at some price, the percentage change in demand for a good is less than the percentage change in the price, then demand for the good is said to be inelastic at that price.

If at some price, the percentage change in demand for a good is equal to the percentage change in the price, then demand for the good is said to be unitary elastic at that price.

If at some price, the percentage change in demand for a good is greater than the percentage change in the price, then demand for the good is said to be elastic at that price.

**19. Answer: (c)**

**Explanation:**

Dew point is the temperature at which water vapor in any static or moving air column will condense into water. In other words, the air is saturated and can no longer hold the moisture at this temperature.

When the air temperature drops below its dew point, excess moisture will be released in the form of condensation. Condensation problems are most likely to occur in climates where temperatures frequently dip to  $35^\circ\text{F}$  or colder over an extended period of time.

Relative humidity is a percentage measurement of the amount of water vapor present in the air in relation to the amount it is capable of holding at that temperature. For example, 50% relative humidity indicates the air is carrying one-half of the maximum amount of moisture that it is capable of containing at the given temperature. There is a relationship between the dew point and relative humidity. A high relative humidity means that the dew point is near the current air temperature. Therefore, a relative humidity of 100% indicates that the dew point is equal to the current temperature.

**20. Answer: (d)**

**Explanation:**

**Article 1(3):** The territory of India shall comprise –

- (a) the territories of the States;
- (b) the Union Territories specified in the First Schedule; and
- (c) such other territories as may be acquired.