Quiz (Uses of Metals)

1. The table below shows some information of gold, copper, silver, zinc and titanium.

Metal	**Relative price of metal**	**Melting point (°C)**	**Relative strength of metal (1 = lowest; 4 = highest)**	**Relative heat conductivity of metal (1 = lowest; 5 = highest)**	**Relative electrical conductivity of metal (1 = lowest; 5 = highest)**	**Other characteristics of metal**
Gold	Most expensive	1063	1	4	4	attractive golden yellow colour, extremely corrosion resistant
Copper	cheapest	1084	3	2	2	corrosion resistant
Silver	Very expensive	961	2	5	5	attractive silvery colour, corrosion resistant
Zinc	medium	420	1	3	3	poisonous, quite corrosion resistant
Titanium	Very expensive	1668	4	1	1	low density, strong, very corrosion resistant

Answer the following questions using the information given in the table.

(a) Which two metals are widely used in making jewellery? Explain your answer.

(b) Which metal is the best conductor of heat? Give a reason why we do not use this metal to make cooking utensils.

(c) Which metal is used to make supersonic aircraft bodies? Explain your choice.

(d) Which metal is the best conductor of electricity? Give a reason why copper is usually used instead of this metal to make electric wires.

(e) Explain why zinc is not used to make food cans.

2. Suggest a metal which is suitable for each of the following purposes. Explain your choice in each case.

(a) Making water pipes

(b) Making window frames

(c) Making thermometers

Suggested Answer

1. (a) Gold and silver. Both of them have an attractive shiny appearance and are expensive. Besides, they are corrosion resistant.

   (b) Silver. It is because silver is very expensive.

   (c) Titanium. It is because titanium has low density, is strong and corrosion resistant. Also, it has a very high melting point. It enables the aircraft to withstand high temperatures caused by the large friction between the body and air.

   (d) Silver. Copper is commonly used to make electric wires because it is much cheaper.

   (e) It is poisonous.

2. (a) Copper. This is because it is nonpoisonous, strong, malleable and ductile and corrosion resistant.

   (b) Aluminium. This is because it is strong and corrosion resistant.

   (c) Mercury. This is because it is a liquid at room conditions. It expands on heating.