# Step by step guide

to address each question of final exam (IELTS reading section 1)

Note: you should spend 20 minutes on this passage, for a better test result it is believe to only spend 15 minutes on this for a wider time window in order to answer the other sections as they are much harder. Also, you are going to be given 1 hour for 3 reading passages under real IELTS exam conditions. Yet, you had 40 minutes to tackle this passage's questions. In following, we will cover each question one by one and answer them step by step.

Here we have two types of questions: complete the note (1-8) and True/False/Not Given (9-13). In complete the notes we have to find a word from the passage and place it in the blank space so the overall meaning of the given statement is right and according to the text. True/False/Not Given question requires you to check the given statement with the right part of the passage to see if it is right, wrong or not given.

It is advised to look at the questions at first, underline the keywords and look them up in the text. And, without hesitation, start reading the passage.

Also, questions come in order. For example, if you find the answer of question number 10, rest assured the relevant part of passage to question number 11 comes after.

Feel free to search words you don't know, as it is a virtual necessity to know IELTS words to be able to take the test.

Questions and passage are attached and you can check them on the next pages.

*Complete the notes below.*

*Choose **ONE WORD ONLY** from the passage for each answer.*

*Write your answers in boxes 1–8 on your answer sheet.*

# The History of Glass

- Early humans used a material called **1** ..... to make the sharp points of their **2** ..... .
- 4000 BC: **3** ..... made of stone were covered in a coating of man-made glass.
- First century BC: glass was coloured because of the **4** ..... in the material.
- Until 476 AD: Only the **5** ..... knew how to make glass.
- From 10th century: Venetians became famous for making bottles out of glass.
- 17th century: George Ravenscroft developed a process using **6** ..... to avoid the occurrence of **7** ..... in blown glass.
- Mid-19th century: British glass production developed after changes to laws concerning **8** ..... .

*Questions 9–13*

*In boxes 9–13 on your answer sheet, write*

| | |
|---|---|
| ***TRUE*** | *if the statement agrees with the information* |
| ***FALSE*** | *if the statement contradicts the information* |
| ***NOT GIVEN*** | *if there is no information on this* |

**9** In 1887, HM Ashley had the fastest bottle-producing machine that existed at the time.

**10** Michael Owens was hired by a large US company to design a fully-automated bottle manufacturing machine for them.

**11** Nowadays, most glass is produced by large international manufacturers.

**12** Concern for the environment is leading to an increased demand for glass containers.

**13** It is more expensive to produce recycled glass than to manufacture new glass.

# The History of Glass

From our earliest origins, man has been making use of glass. Historians have discovered that a type of natural glass – obsidian – formed in places such as the mouth of a volcano as a result of the intense heat of an eruption melting sand – was first used as tips for spears. Archaeologists have even found evidence of man-made glass which dates back to 4000 BC; this took the form of glazes used for coating stone beads. It was not until 1500 BC, however, that the first hollow glass container was made by covering a sand core with a layer of molten glass.

Glass blowing became the most common way to make glass containers from the first century BC. The glass made during this time was highly coloured due to the impurities of the raw material. In the first century AD, methods of creating colourless glass were developed, which was then tinted by the addition of colouring materials. The secret of glass making was taken across Europe by the Romans during this century. However, they guarded the skills and technology required to make glass very closely, and it was not until their empire collapsed in 476 AD that glass-making knowledge became widespread throughout Europe and the Middle East. From the 10th century onwards, the Venetians gained a reputation for technical skill and artistic ability in the making of glass bottles, and many of the city's craftsmen left Italy to set up glassworks throughout Europe.

A major milestone in the history of glass occurred with the invention of lead crystal glass by the English glass manufacturer George Ravenscroft (1632–1683). He attempted to counter the effect of clouding that sometimes occurred in blown glass by introducing lead to the raw materials used in the process. The new glass he created was softer and easier to decorate, and had a higher refractive index, adding to its brilliance and beauty, and it proved invaluable to the optical industry. It is thanks to Ravenscroft's invention that optical lenses, astronomical telescopes, microscopes and the like became possible.

In Britain, the modern glass industry only really started to develop after the repeal of the Excise Act in 1845. Before that time, heavy taxes had been placed on the amount of glass melted in a glasshouse, and were levied continuously from 1745 to 1845. Joseph Paxton's Crystal Palace at London's Great Exhibition of 1851 marked the beginning of glass as a material used in the building industry. This revolutionary new building encouraged the use of glass in public, domestic and horticultural architecture. Glass

manufacturing techniques also improved with the advancement of science and the development of better technology.

From 1887 onwards, glass making developed from traditional mouth-blowing to a semi-automatic process, after factory-owner HM Ashley introduced a machine capable of producing 200 bottles per hour in Castleford, Yorkshire, England – more than three times quicker than any previous production method. Then in 1907, the first fully automated machine was developed in the USA by Michael Owens – founder of the Owens Bottle Machine Company (later the major manufacturers Owens-Illinois) – and installed in its factory. Owens' invention could produce an impressive 2,500 bottles per hour. Other developments followed rapidly, but it was not until the First World War, when Britain became cut off from essential glass suppliers, that glass became part of the scientific sector. Previous to this, glass had been seen as a craft rather than a precise science.

Today, glass making is big business. It has become a modern, hi-tech industry operating in a fiercely competitive global market where quality, design and service levels are critical to maintaining market share. Modern glass plants are capable of making millions of glass containers a day in many different colours, with green, brown and clear remaining the most popular. Few of us can imagine modern life without glass. It features in almost every aspect of our lives – in our homes, our cars and whenever we sit down to eat or drink. Glass packaging is used for many products, many beverages are sold in glass, as are numerous foodstuffs, as well as medicines and cosmetics.

Glass is an ideal material for recycling, and with growing consumer concern for green issues, glass bottles and jars are becoming ever more popular. Glass recycling is good news for the environment. It saves used glass containers being sent to landfill. As less energy is needed to melt recycled glass than to melt down raw materials, this also saves fuel and production costs. Recycling also reduces the need for raw materials to be quarried, thus saving precious resources.

**Question number 1&2:**

- Early humans used a material called 1 ..... to make the sharp points of their 2 ..... .

After highlighting the keywords, we start reading the reading: (first paragraph)

From our earliest origins, man has been making use of glass. Historians have discovered that a type of natural glass – obsidian – formed in places such as the mouth of a volcano as a result of the intense heat of an eruption melting sand – was first used as tips for spears.

So, the answers are obviously available in the text:

- Early humans used a material called 1 ..***obsidian***.. to make the sharp points of their 2 ..***spears***.. .

Word power is needed in each reading test to complete. So, enhance your vocabulary knowledge.

Spear = 

**Question number 3:**

- 4000 BC: 3 ..... made of stone were covered in a coating of man-made glass.

After highlighting the keywords and good level of understanding the question, we will go on to continue to read where we left off. (second part of paragraph 1)

Archaeologists have even found evidence of man-made glass which dates back to 4000 BC; this took the form of glazes used for coating stone beads.

As you can see some of the keywords are repeated in the text. It makes it easier for us to navigate through the text and find what we are looking for.

So, the answer is as follows:

- 4000 BC: 3 ***beads*** made of stone were covered in a coating of man-made glass.

Aside from vocabulary, we need a bit of word order meaning and understanding. For example, a plastic bag means a bag made of plastic or a leather jacket means a jacket made of leather. So, “coating stone beads” (the last line) also has the similar meaning. “Stone beads” means several beads made of stone which has a form of glass (glaze) coating them.

Bead = 

**Question number 4:**

- First century BC: glass was coloured because of the **4** ..... in the material.

After highlighting the keywords and good level of understanding the question, we will go on to continue to read where we left off. (third part of paragraph 1)

It was not until 1500 BC, however, that the first hollow glass container was made by covering a sand core with a layer of molten glass.

There is nothing useful or related to the question here so we move on and continue reading till we reach were we see some useful information to answer the question. (paragraph 2)

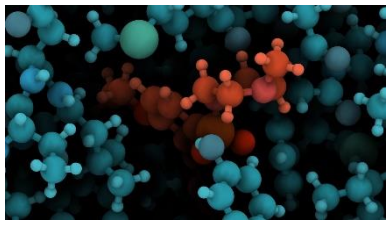
Glass blowing became the most common way to make glass containers from the first century BC. The glass made during this time was highly coloured due to the impurities of the raw material.

Here we go! The answer is in the text exactly as we want it. It is just the matter of finding it. So, the answer is obvious:

- First century BC: glass was coloured because of the **4** ..... ***Impurities*** ..... in the material.

You should know:

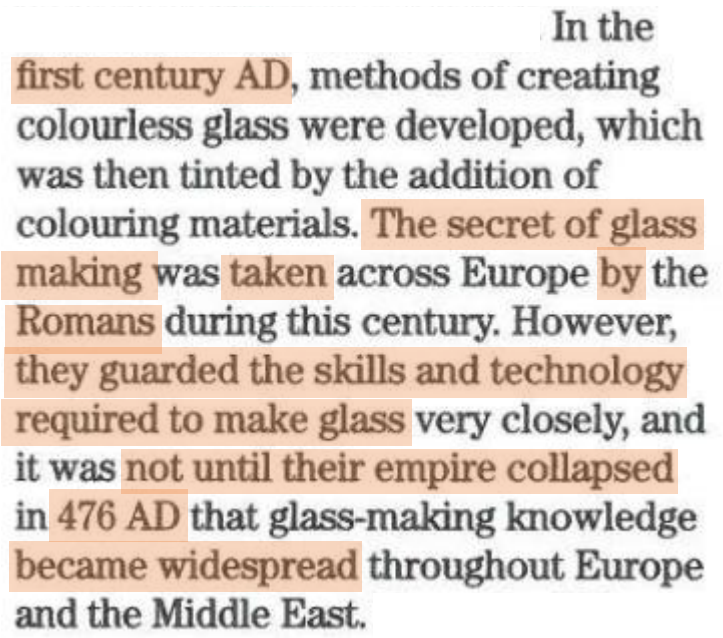
Due to … = because of …
pure > impure > impurity > impurities



**Question number 5:**

- Until 476 AD: Only the **5** ..... knew how to make glass.

After highlighting the keywords and good level of understanding the question, we will go on to continue to read where we left off. (second part of paragraph 2)



In the first century AD, methods of creating colourless glass were developed, which was then tinted by the addition of colouring materials. The secret of glass making was taken across Europe by the Romans during this century. However, they guarded the skills and technology required to make glass very closely, and it was not until their empire collapsed in 476 AD that glass-making knowledge became widespread throughout Europe and the Middle East.

This question is a little tricky as it complicates the text by referencing to already mentioned data by “during this century” referring to first century or “the skill and technology” referring to glass making. Anyways, we find the answer easily.

- Until 476 AD: Only the **5** ..... ***Romans*** ..... knew how to make glass.

Pay attentions you have to use capital R for Romans as it would be a mistake writing like this: romans

**Question number 6&7:**

- 17th century: George Ravenscroft developed a process using **6** ..... to avoid the occurrence of **7** ..... in blown glass.

After highlighting the keywords and good level of understanding the question, we will go on to continue to read where we left off. (third part of paragraph 2)

From the 10th century onwards, the Venetians gained a reputation for technical skill and artistic ability in the making of glass bottles, and many of the city's craftsmen left Italy to set up glassworks throughout Europe.

We find nothing to these questions requirements and therefore we keep on reading. (paragraph 3)

A major milestone in the history of glass occurred with the invention of lead crystal glass by the English glass manufacturer George Ravenscroft (1632–1683). He attempted to counter the effect of clouding that sometimes occurred in blown glass by introducing lead to the raw materials used in the process.

Bear in mind, the names or the numbers show up at the question are highly likely to appear in the text exactly as it is. So, right now "George Ravenscroft" is a good sign to get the answer out of the passage.

- 17th century: George Ravenscroft developed a process using **6** ..*lead*.. to avoid the occurrence of **7** ..*clouding*.. in blown glass.

Clouding is technical term that causes the glass to be no longer clear and transparent and lead is an element used for different purposes.

**Question number 8:**

- Mid-19th century: British glass production developed after changes to laws concerning **8** ..... .

After highlighting the keywords and good level of understanding the question, we will go on to continue to read where we left off. (second part of paragraph 3)

The new glass he created was softer and easier to decorate, and had a higher refractive index, adding to its brilliance and beauty, and it proved invaluable to the optical industry. It is thanks to Ravenscroft's invention that optical lenses, astronomical telescopes, microscopes and the like became possible.

Nothing useful so we persist reading with no regard for this paragraph. We move on. (paragraph 4)

In Britain, the modern glass industry only really started to develop after the repeal of the Excise Act in 1845. Before that time, heavy taxes had been placed on the amount of glass melted in a glasshouse, and were levied continuously from 1745 to 1845.

This question requires a little bit of logical thiking as it does not provide the information as the same format as of the question. However, the answer is still crystal clear.

- Mid-19th century: British glass production developed after changes to laws concerning **8** ..... ***taxes*** ..... .

Tax is an amount of money which is taken by government from normal citizens to provide facilities.

**Question number 9:**

9 In 1887, HM Ashley had the fastest bottle-producing machine that existed at the time.

After highlighting the keywords and good level of understanding the question, we will go on to continue to read where we left off. (second part of paragraph 4)

Joseph Paxton's Crystal Palace at London's Great Exhibition of 1851 marked the beginning of glass as a material used in the building industry. This revolutionary new building encouraged the use of glass in public, domestic and horticultural architecture. Glass manufacturing techniques also improved with the advancement of science and the development of better technology.

The rest of the fourth paragraph provides us with no useful information. So, we keep reading till we find perhaps the name Ashley or anything else related to it. (Paragraph 5)

From 1887 onwards, glass making developed from traditional mouth-blowing to a semi-automatic process, after factory-owner HM Ashley introduced a machine capable of producing 200 bottles per hour in Castleford, Yorkshire, England – more than three times quicker than any previous production method.

More than three time (3x) quicker is far quicker that any at-the-time machine. So, the answer is definitely **TRUE**.

**Question number 10:**

10 Michael Owens was hired by a large US company to design a fully-automated bottle manufacturing machine for them.

After highlighting the keywords and good level of understanding the question, we will go on to continue to read where we left off. (second part of paragraph 5)

Then in 1907, the first fully automated machine was developed in the USA by Michael Owens – founder of the Owens Bottle Machine Company (later the major manufacturers Owens-Illinois) – and installed in its factory. Owens' invention could produce an impressive 2,500 bottles per hour.

There we go! Obviously, he is a company owner who designed a bottle manufacturer machine for his use in his company not any other way as the text implies firmly. So, this statement is most certainly **FALSE**.

**Question number 11:**

11 Nowadays, most glass is produced by large international manufacturers.

After highlighting the keywords and good level of understanding the question, we will go on to continue to read where we left off. (third part of paragraph 5)

Other developments followed rapidly, but it was not until the First World War, when Britain became cut off from essential glass suppliers, that glass became part of the scientific sector. Previous to this, glass had been seen as a craft rather than a precise science.

There is nothing related to the question so we move on till we find some. (paragraph 6)

Today, glass making is big business. It has become a modern, hi-tech industry operating in a fiercely competitive global market where quality, design and service levels are critical to maintaining market share. Modern glass plants are capable of making millions of glass containers a day in many different colours, with green, brown and clear remaining the most popular.

This part is related to the topic partly but there is no information clearly agreeing or disagreeing with the statement. So, the answer is **NOT GIVEN** as there is no given information.

**Question number 12:**

12 Concern for the environment is leading to an increased demand for glass containers.

After highlighting the keywords and good level of understanding the question, we will go on to continue to read where we left off. (second part of paragraph 6)

Few of us can imagine modern life without glass. It features in almost every aspect of our lives – in our homes, our cars and whenever we sit down to eat or drink. Glass packaging is used for many products, many beverages are sold in glass, as are numerous foodstuffs, as well as medicines and cosmetics.

Nope, nothing useful. We move on. (paragraph 7)

Glass is an ideal material for recycling, and with growing consumer concern for green issues, glass bottles and jars are becoming ever more popular.

The answer is right in front of us, it is according to the text so the answer is **TRUE**.

**Question number 13:**

13 It is more expensive to produce recycled glass than to manufacture new glass.

After highlighting the keywords and good level of understanding the question, we will go on to continue to read where we left off. (second part of paragraph 7)

Glass recycling is good news for the environment. It saves used glass containers being sent to landfill. As less energy is needed to melt recycled glass than to melt down raw materials, this also saves fuel and production costs. Recycling also reduces the need for raw materials to be quarried, thus saving precious resources.

That is **FALSE** as the statement contradicts with the text and the idea presented in it.