TO SOLVE TABLE COMPLETION QUESTIONS

These questions are like flow-chart Questions but tend to cover a larger part of the reading passage. Sometimes it may cover the entire passage. Here the headings given to the paragraphs in your notes will help you locate your answers. Such questions demand for specific answers so; the passage needs to be thoroughly read. These questions are commonly encountered for categorisation-based passages like theories proposed by different scientists, different types of processes. Also, the information may not be given in the same order as in the passage. With our tips & practise papers we are sure you're going to enjoy solving such question and get correct answers

GUIDELINES TO SOLVE:

1. Skim read the entire passage to get the overall idea of the passage. (5 min)
2. Understand what kind of information is given in each paragraph. You can give headings to each paragraph for your self-understanding. This way it's easy for you to locate the paragraph which contains the information asked.
3. Study the table completion task. Pay attention to what kind of details are required.
4. Look for the paragraphs which have this text and also for keywords and paraphrases from the question.
5. Usually the words required to fill in the blanks are specific details like numbers, dates, definitions, objects.
6. Fill in the gaps with suitable words considering the word limit mentioned in the question. Carefully examine the Table, before and after the words you have found.
7. Spend less than 5 min to solve table completion questions.

Let's look at the application of the above-mentioned guidelines for the following passage below.

Practice reading 1.1

Sheet glass manufacture: the float process

Glass, which has been made since the time of the Mesopotamians and Egyptians, is little more than a mixture of sand, soda ash and lime. When heated to about 1500 degrees Celsius (°C) this becomes a molten mass that hardens when slowly cooled. The first successful method for making clear, flat glass involved spinning. This method was very effective as the glass had not touched any surfaces between being soft and becoming hard, so it stayed perfectly unblemished, with a 'fire finish'. However, the process took a long time and was labour intensive.

Nevertheless, demand for flat glass was very high and glassmakers across the world were looking for a method of making it continuously. The first continuous ribbon process involved squeezing molten glass through two hot rollers, similar to an old mangle. This allowed glass of virtually any thickness to be made non-stop, but the rollers would leave both sides of the glass marked, and these would then need to be ground and polished. This part of the process rubbed away around 20 per cent of the glass, and the machines were very expensive.

The float process for making flat glass was invented by Alistair Pilkington. This process allows the manufacture of clear, tinted and coated glass for buildings, and clear and tinted glass for vehicles. Pilkington had been experimenting with improving the melting process, and in 1952 he had the idea of using a bed of molten metal to form the flat glass, eliminating altogether the need for rollers within the float bath. The metal had to melt at a temperature less than the hardening point of glass (about 600°C), but could not boil at a temperature below the temperature of the molten glass (about 1500°C). The best metal for the job was tin.

The rest of the concept relied on gravity, which guaranteed that the surface of the molten metal was perfectly flat and horizontal. Consequently, when pouring molten glass onto the molten tin, the underside of the glass would also be perfectly flat. If the glass were kept hot enough, it would flow over the molten tin until the top surface was also flat, horizontal and perfectly parallel to the bottom surface. Once the glass cooled to 604°C or less it was too hard to mark and could be transported out of the cooling zone by rollers. The glass settled to a thickness of six millimetres because of surface tension interactions between the glass and the tin. By fortunate coincidence, 60 per cent of the flat glass market at that time was for six-millimetre glass.

Pilkington built a pilot plant in 1953 and by 1955 he had convinced his company to build a full-scale plant. However, it took 14 months of non-stop production, costing the company £100,000 a month, before the plant produced any usable glass. Furthermore, once they succeeded in making marketable flat glass, the machine was turned off for a service to prepare it for years of continuous production. When it started up again it took another four months to get the process right again. They finally succeeded in 1959 and there are now float plants all over the world, with each able to produce around 1000 tons of glass every day, non-stop for around 15 years.

Float plants today make glass of near optical quality. Several processes – melting, refining, homogenising – take place simultaneously in the 2000 tonnes of molten glass in the furnace. They occur in separate zones in a complex glass flow driven by high temperatures. It adds up to a continuous melting process, lasting as long as 50 hours, that delivers glass smoothly and continuously to the float bath, and from there to a coating zone and finally a heat treatment zone, where stresses formed during cooling are relieved.

The principle of float glass is unchanged since the 1950s. However, the product has changed dramatically, from a single thickness of 6.8 mm to a range from sub-millimetre to 25 mm, from a ribbon frequently marred by inclusions and bubbles to almost optical perfection. To ensure the highest quality, inspection takes place at every stage. Occasionally, a bubble is not removed during refining, a sand grain refuses to melt, a tremor in the tin puts ripples into the glass ribbon. Automated on-line inspection does two things. Firstly, it reveals process faults upstream that can be corrected. Inspection technology allows more than 100 million measurements a second to be made across the ribbon, locating flaws the unaided eye would be unable to see. Secondly, it enables computers downstream to steer cutters around flaws.

Float glass is sold by the square metre, and at the final stage computers translate customer requirements into patterns of cuts designed to minimise waste.

Complete the table below.

Choose NO MORE THAN TWO WORDS from the passage for each answer. **The TWO questions below are solved for you.**

Early methods of producing flat glass

Method	Advantages	Disadvantages
1. ____(1)____	• Glass remained _____(2)_____	• Slow • ____(3)_____
2. Ribbon	• Could produce glass sheets of varying ____(4)_____ • Non-stop process	• Glass was ____(5)____ • 20% of glass rubbed away • Machines were expensive

Solved Examples:

1. The above table specifically focuses on the early methods of producing flat glass. These methods are mentioned in the first 2 paragraphs of the passage. The first blank falls under methods category. There were only 2 such methods, spinning and ribbon. The second option says ribbon method so the first one should be **spinning process**. This indicates that the word for the fill in the gap is **spinning**.
2. The second blank falls under Advantages of the spinning process category. The answer can be traced from the following text belonging to the first paragraph which says, 'This method was very effective as the glass had not touched any surfaces between being soft and becoming hard, so it **stayed perfectly unblemished**, with a 'fire finish'. In the table the synonym used for stayed is the word remained. This indicates that the word for the fill in the gap is **unblemished**.

Practice Exercise 1.1

Complete the table below.

Choose NO MORE THAN TWO WORDS from the passage for each answer.

Early methods of producing flat glass

Method	Advantages	Disadvantages
3. ____(1)____	• Glass remained _____(2)_____	• Slow • ____(3)_____
4. Ribbon	• Could produce glass sheets of varying ____(4)_____ • Non-stop process	• Glass was ____(5)____ • 20% of glass rubbed away • Machines were expensive

The Birth of Scientific English

World science is dominated today by a small number of languages, including Japanese, German and French, but it is English which is probably the most popular global language of science. This is not just because of the importance of English-speaking countries such as the USA in scientific research; the scientists of many non-English-speaking countries find that they need to write their research papers in English to reach a wide international audience. Given the prominence of scientific English today, it may seem surprising that no one really knew *how* to write science in English before the 17th century. Before that, Latin was regarded as the *lingua franca*[1] for European intellectuals.

The European Renaissance (c. 14th–16th century) is sometimes called the 'revival of learning', a time of renewed interest in the 'lost knowledge' of classical times. At the same time, however, scholars also began to test and extend this knowledge. The emergent nation states of Europe developed competitive interests in world exploration and the development of trade. Such expansion, which was to take the English language west to America and east to India, was supported by scientific developments such as the discovery of magnetism (and hence the invention of the compass), improvements in cartography and – perhaps the most important scientific revolution of them all – the new theories of astronomy and the movement of the Earth in relation to the planets and stars, developed by Copernicus (1473–1543).

England was one of the first countries where scientists adopted and publicised Copernican ideas with enthusiasm. Some of these scholars, including two with interests in language – John Wallis and John Wilkins – helped found the Royal Society in 1660 in order to promote empirical scientific research.

Across Europe similar academies and societies arose, creating new national traditions of science. In the initial stages of the scientific revolution, most publications in the national languages were popular works, encyclopaedias, educational textbooks and translations. Original science was not done in English until the second half of the 17th century. For example, Newton published his mathematical treatise, known as the *Principia*, in Latin, but published his later work on the properties of light – *Opticks* – in English.

There were several reasons why original science continued to be written in Latin. The first was simply a matter of audience. Latin was suitable for an international audience of scholars, whereas English reached a socially wider, but more local, audience. Hence, popular science was written in English.

[1] *lingua franca*: a language which is used for communication between groups of people who speak different languages

A second reason for writing in Latin may, perversely, have been a concern for secrecy. Open publication had dangers in putting into the public domain preliminary ideas which had not yet been fully exploited by their 'author'. This growing concern about intellectual property rights was a feature of the period – it reflected both the humanist notion of the individual, rational scientist who invents and discovers through private intellectual labour, and the growing connection between original science and commercial exploitation. There was something of a social distinction between 'scholars and gentlemen' who understood Latin, and men of trade who lacked a classical education. And in the mid-17th century it was common practice for mathematicians to keep their discoveries and proofs secret, by writing them in cipher, in obscure languages, or in private messages deposited in a sealed box with the Royal Society. Some scientists might have felt more comfortable with Latin precisely because its audience, though international, was socially restricted. Doctors clung the most keenly to Latin as an 'insider language'.

A third reason why the writing of original science in English was delayed may have been to do with the linguistic inadequacy of English in the early modern period. English was not well equipped to deal with scientific argument. First, it lacked the necessary technical vocabulary. Second, it lacked the grammatical resources required to represent the world in an objective and impersonal way, and to discuss the relations, such as cause and effect, that might hold between complex and hypothetical entities.

Fortunately, several members of the Royal Society possessed an interest in language and became engaged in various linguistic projects. Although a proposal in 1664 to establish a committee for improving the English language came to little, the society's members did a great deal to foster the publication of science in English and to encourage the development of a suitable writing style. Many members of the Royal Society also published monographs in English. One of the first was by Robert Hooke, the society's first curator of experiments, who described his experiments with microscopes in *Micrographia* (1665). This work is largely narrative in style, based on a transcript of oral demonstrations and lectures.

In 1665 a new scientific journal, *Philosophical Transactions*, was inaugurated. Perhaps the first international English-language scientific journal, it encouraged a new genre of scientific writing, that of short, focused accounts of particular experiments.

The 17th century was thus a formative period in the establishment of scientific English. In the following century much of this momentum was lost as German established itself as the leading European language of science. It is estimated that by the end of the 18th century 401 German scientific journals had been established as opposed to 96 in France and 50 in England. However, in the 19th century scientific English again enjoyed substantial lexical growth as the industrial revolution created the need for new technical vocabulary, and new, specialised, professional societies were instituted to promote and publish in the new disciplines.

Practice Exercises 1.2

Complete the table below.

Choose NO MORE THAN TWO WORDS from the passage for each answer.

Science written in the first half of the 17th century		
Language used	Latin	English
Type of science	Original	____(1)_____
Examples	_____(2)_____	Encyclopaedias
Target audience	International Scholars	____(3)_____ , but socially wider

IELTS Reading Strategies

ANSWER KEY

EXERCISE 1.1

1. Spinning
2. Unblemished
3. Labour-intensive
4. Thickness
5. marked

EXERCISE 1.2

1. Popular
2. Principia/ the Principia/ Newton's Principia/ mathematical treatise
3. Local/ more local/ local audience

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