TABLE/ FLOW CHART COMPLETION

Example 1.

SHEET GLASS MANUFACTURE: THE FLOAT PROCESS

A. 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 .

B. 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.

Questions 1-8

Complete the table and diagram below.

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

Write your answers in boxes 1-8 on your answer sheet.

Early methods of producing flat glass

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

Example 2.

SECRETS OF THE SWARM

Miller explains that he first really understood the impact that swarm behaviour could have on humans when he read a study of honeybees by Tom Seeley, a biologist at Cornell University. The honeybees choose a group which new nest to move to. First, scouts fly off to investigate multiple sites. When they return they do a 'waggle dance' for their spot, and other scouts will then fly off and investigate it. Many bees go out, but none tries to compare all sites. Each reports back on just one. The more they liked their nest, the more vigorous and lengthy their waggle dance and the more bees will choose to visit it. Gradually the volume of bees builds up towards one site; it's a system that ensures that support for the best site snowballs and the decision is made in the most democratic way.

Complete the flow-chart below.

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

How honeybees choose a new nest

Honeybee 10.....explore possible nest sites

↓

they perform what is known as a 11.....on their return

↓

other bees go out and report back

↓

enthusiasm and 12.....increase for one particular site

↓

a final choice is reached using a 13..... process.

Example 3.

THE DOVER BRONZE-AGE BOAT

A. It was 1992. In England, workmen were building a new road through the heart of Dover, to connect the ancient port and the Channel Tunnel, which, when it opened just two years later, was to be the first land link between Britain and Europe for over 10,000 years. A small team from the Canterbury Archaeological Trust (CAT) worked alongside the workmen, recording new discoveries brought to light by the machines.

B. At the base of a deep shaft six metres below the modern streets a wooden structure was revealed. Cleaning away the waterlogged site overlying the timbers, archeologists realized its true nature. They had found a prehistoric boat, preserved by the type of sediment in which it was buried. It was then named the Dover Bronze-Age Boat.

C. With hindsight, it was significant that the boat was found and studied by mainstream archaeologists who naturally focused on its cultural context. At the time, ancient boats were often considered only from a narrower technological perspective, but news about the Dover boat reached a broad audience. In 2002, on the tenth anniversary of the discovery, the Dover Bronze-Age Boat Trust hosted a conference, where this meeting of different traditions became apparent. Alongside technical papers about the boat, other speakers explored its social and economic contexts, and the religious perceptions of boats in Bronze-Age societies. Many speakers came from overseas, and debate about cultural connections was renewed.

D. Detailed proposals to reconstruct the boat were drawn up in 2004. Archaeological evidence was beginning to suggest a Bronze-Age community straddling the Channel, brought together by the sea, rather than separated by it. In a region today divided by language and borders, archaeologists had a duty to inform the general public about their common cultural heritage.

E. The boat project began in England but it was conceived from the start as a European collaboration. Reconstruction was only part of a scheme that would include a major exhibition and an extensive educational and outreach programme. Discussions began early in 2005 with

archaeological bodies, universities and heritage organizations either side of the Channel. There was much enthusiasm and support, and an official launch of the project was held at an international seminar in France in 2007. Financial support was confirmed in 2008 and the project then named BOAT 1550BC got under way in June 2011.

F. A small team began to make the boat at the start of 2012 on the Roman Lawn outside Dover museum. A full-scale reconstruction of a mid-section had been made in 1996, primarily to see how Bronze-Age replica tools performed. In 2012, however, the hull shape was at the centre of the work; so modern power tools were used to carve the oak planks, before turning to prehistoric tools for finishing. It was decided to make the replica half-scale for reasons of cost and time, and synthetic materials were used for the stitching, owing to doubts about the scaling and tight timetable.

G. Meanwhile, the exhibition was being prepared ready for opening in July 2012 at the Castle Museum in Boulogne-sur-Mer. Entitled 'Beyond the Horizon: Societies of the Channel & North Sea 3,500 years ago', it brought together for the first time a remarkable collection of Bronze-Age objects, including many new discoveries for commercial archaeology and some of the great treasure of the past. The reconstructed boat, as a symbol of the maritime connections that bound together the communities either side of the Channel, was the centerpiece.

Questions 1 – 5
Complete the flow chart below.
Choose **ONE WORD ONLY** from the text for each answer.

Key events

1992 – the boat was discovered during the construction of a **1**……..

↓

2002 – an international **2**…….was held to gather information

↓

2004 – **3** …….. for the construction were produced

↓

2007 – the **4**……..of BOAT 1550BC took place

↓

2012 – the Bronze Age **5**…….. featured the boat and other objects.