

PART 1

You are going to read a magazine article about computerised patients. Choose from the list (A-H) the sentence which best summarises each part (1-6) of the article. There is one extra sentence which you do not need to use. There is an example at the beginning (0).

- A It is now possible to show patients what will happen to them during surgery.
- B The amount of information meant that it was impossible to send quickly.
- C Very realistic images will help prevent errors during surgery.
- D A donated body made it all possible.
- E Doctors are now looking for more bodies to put on computer.
- F The ease with which the disk can be used means it is very popular.
- G The tiniest details were put on camera for the computer image.
- H Movement of the body image will aid surgery.

It's Almost Human

Detailed computer images are improving our approach to surgery.

- 0

Doctors in Europe will soon be able to train and practise their skills on a computerised patient that can move and be very flexible on screen. The body which was used to create these images was that of a man who died recently in America and donated his body to medical science.

A doctor in France, who specialises in face and neck operations at the Medical Surgical Centre says that he has been using these computerised images to demonstrate to patients what has to be done during their operations. He also uses the computer images to teach other doctors. He thinks that the pictures are very useful because they give a full picture of the body, but believes that captions describing parts of the body would be helpful.

1

As soon as he died, his body was frozen. By a special process, his body was photographed, layer by layer, in colour. As each layer is only one millimetre thick, the body is shown in great detail. Altogether, 2,100 photographs were taken, and the addition of scanned images finally produced a total of 10,000 colour pictures.

5

The real step forward however, would be if they could move the body around on a computer screen. The experts are working on this though. They believe that being able to see such things as a heartbeat and the movement of other body organs will enable doctors to practise new methods of operating, before working on real-life patients. Once such changes have been made, the system could become the most popular way of planning an operation and also of teaching future surgeons.

2

American scientists first produced the photographic images of the body and then made them available over the International Computer Network in July. But there was so much information, 32 billion bits of it in fact, that it would have taken more than a week to send all of it through the standard network.

6

3

Now the information, which was originally on 22 CD's, has been compressed onto a single CD-Rom disk that can be used on standard desktop or portable computers. Because it is so widely available and so easy to operate many doctors in Europe are now making use of it.

Now that a man's image has been created for the computer, a woman is the next step. The body of a 59-year-old woman who died of a heart attack is being used to achieve this. She will be ready for the computer screen in December. The final goal however, is to create such a life-like model on computer that doctors will be able to perform operations on it. This will greatly reduce the risk of making a mistake on a real patient.

PART 2

You are going to read an article about hot air ballooning. For questions 7-13, choose the answer (A, B, C or D) which you think fits best according to the text.

Hot air ballooning is an unusual but increasingly popular sport. There are about 2500 registered balloonists in Britain alone, and world-wide competitions attract thousands of enthusiasts. It has become easier to enjoy this addictive sport too, as changes in the law regarding passenger flights have allowed commercial ballooning companies to offer pleasure trips for parties and festivals. Most balloons carry 4 to 8 people, but some have been designed to carry more. One of these is the balloon which set the world record with a flight carrying 61 passengers at 12 metres above the ground.

The surprising thing about ballooning is that it is a hobby people follow for relaxation rather than for excitement. This fact is amazing considering that you are travelling in a large laundry basket 3,000 feet above the ground and that you never know where you will end up landing.

One thing that is so attractive is the simplicity of ballooning. The simple mechanism of a hot air balloon has not changed since the French Montgolfier brothers designed the original one in 1783. Balloons, since they go with the wind rather than against it, don't have to be aerodynamic - that is, able to move through the air easily and efficiently. This fact makes ballooning less expensive than you might think.

A basic balloon, like the ones 99% of balloonists have, cost around £7,000, plus £20 per flying hour running costs. However, if you prefer a more exotic design such as a fairy-tale castle in the sky, it will set you back at least £75,000. These specially-shaped balloons are almost always used for advertising. Most people interested in ballooning reduce the cost by joining together with like-minded people or by approaching businesses for sponsorship.

It is a surprisingly safe sport with the only problems occurring during *low flying* - crashing into trees, having to avoid power lines, and *landing* which is more like a controlled crash - after all, having no wheels you cannot technically land. The site has to be perfect - a downwind field with no crops or power lines. Normally the worst thing that could happen to you is a few bumps and bruises or a sprained ankle.

Ballooning is not only about flying. It takes two ground crew and one pilot to prepare for take off and to deflate the balloon once landed. One of the most important jobs is that of the *retriever* who has to follow the balloon in a *retrieve vehicle* wherever it goes. The traditional habit is for the retriever to give a bottle of wine as a token of appreciation to the landowner for use of a field for landing.

To become a private balloon pilot, you need to have a licence from the Civil Aviation Authority, to have had sixteen flying hours with an instructor, one solo flight, and to pass a written exam. All this can take between three and twelve months. If you pilot's licence is part of a business venture you will need another 100 hours of flight experience to gain a commercial licence. A little more practice and you never know, you might be breaking Per Lindstrand's altitude record. He flew 19,811 metres over Texas on the 6th of June 1988.

7 Why is it easier to enjoy ballooning nowadays?

- A It is easier to gain a pilot's licence.
- B It is safer nowadays.
- C Passenger flight regulations have been relaxed.
- D It is cheaper than it used to be.

8 Balloons can be designed to carry as many as

- A four people.
- B sixty-one people.
- C twelve people.
- D eight people.

9 What is surprising about ballooning?

- A It is a relaxing sport.
- B People do it for excitement.
- C It isn't safe.
- D It is very expensive.

10 Why is hot air ballooning cheaper to take up than you might think?

- A The mechanism of the balloon isn't complex.
- B The running costs aren't as low as you might think.
- C The gas isn't expensive to buy.
- D They don't need expensive aerodynamic structures.

11 How do people interested in buying a basic balloon make it cheaper?

- A by choosing a less exotic design
- B by sharing the cost with some other enthusiasts
- C by getting businesses to buy the balloon for them
- D by applying to sponsor a business

12 What does a "retriever" (line 27) have to do?

- A Follow the balloon everywhere it goes.
- B Prepare the balloon for take off.
- C Help the balloon to land on the ground.
- D Write in advance to the landowner to ask for permission to land.

13 To become a private balloon pilot you need to pass a written exam and do one solo flight.

- What else do you need?
- A sixteen flying hours with an instructor
 - B 3 months' practice
 - C 12 months' practice
 - D 100 hours of flight experience

