4 VOCABULARY (5 marks)

Write the correct word in each blank. A dash (—) is shown for each missing letter and every other letter is given in each word.

Many people think inventors suddenly have an idea which results in a [1]r e v o l u t i o n a r y invention. This is not usually the case. Inventors certainly need to have [2]o — i — i — a — ideas but most inventions are the result of hard work in the [3]l — b — r — t — r — and careful [4]e — p — r — m — n — s by experts. Each invention is then put through all kinds of [5]t — s — s before eventually a [6]p — t — n — and licence to manufacture are granted.

5 READING (10 marks)

Read the following passage about the invention of a device for getting rid of cockroaches. Every seventh word is missing. Write the correct word in each blank.

Singapore housewife invents useful device

A useful device for getting rid of cockroaches has just been invented by a housewife. The device is called 'Stop-Roach' and [1] will soon be on sale in department [2]_____ and large shops.

'Stop-Roach' consists of [3]_____ hollow cylinder and movable valve. It [4]_____ placed in any drain or opening [5]_____ there are cockroaches. Cockroaches trying to [6]_____ the house through the drain will [7]_____ it impossible to get through the [8]_____.

'Stop-Roach' has been subjected to thorough [9]_____ by the Environment Ministry and the [10]_____ has now been patented. It has [11]_____ found completely foolproof against invasions of cockroaches from drains and sewers.

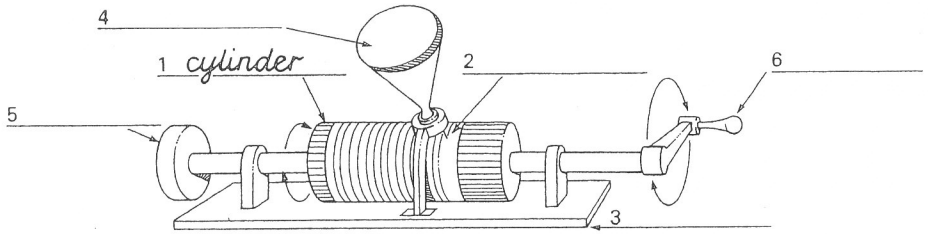
It is expected that 'Stop-Roach' will be on sale very soon for under ten dollars.

6 READING (5 marks)

Read the paragraph about the invention of the phonograph, the first recording machine.

The phonograph was invented in 1877 by Thomas Edison. It consisted of a brass cylinder which was mounted on a heavy wooden base. A sheet of tinfoil was wrapped over grooves cut on the brass cylinder. A funnel which was shaped like a cone was used to focus sound on to a metal diaphragm. This diaphragm touched a steel stylus containing a sharp tip which pressed on the sheet of tinfoil. When the brass cylinder was turned by means of the handle at one end, the stylus pressed into the foil over one of the grooves and thus recorded the sound. A large flywheel on one end of the cylinder helped to keep the speed steady. The cylinder was then wound back to its original position. When the handle at the other end was turned again, the cylinder revolved and the original sound was reproduced.

Now label the diagram below.



7 READING (5 marks)

Read the following passage about the invention of a new kind of armchair. Write true (T) or false (F) for each of the sentences below, according to the information given. If the information is not given, put a question mark (?).

A lot of people like to play their records as loudly as possible. The result is that the rest of the family and the neighbours often complain if they don't like the music. One answer to this problem is to wear headphones, but headphones are usually uncomfortable.

An armchair which has a record-player system built into it has just been designed by a British engineer, Stephen Court.

The armchair looks like an ordinary armchair with a high back. However, each of the two sides of the chair has three loudspeakers inside to reproduce middle and high sounds. Low sounds are reproduced by a pair of loudspeakers in a hollow space under the seat. Anyone who sits in the chair hears sounds coming from all round his/her head.

Because we cannot tell the exact source from which low sounds come, it doesn't matter that they come from underneath or behind. It is the higher sounds coming from the sides of the chair that create a stereo effect.

These sounds travel only a few inches to reach the listener's ears. Consequently, it takes only a little power to make the music sound very loud. Only a small amount of sound leaks out from behind the chair into the room to disturb others. Most of the sound is absorbed by the listener.

1 [T] Stephen Court has just invented an armchair which can play music.

2 [ ] The armchair has very comfortable headphones attached to it.

3 [ ] The armchair is like an ordinary armchair but it contains speakers in both its sides and underneath the part where someone sits.

4 [ ] Most people can tell exactly the direction from where low sounds are coming.

5 [ ] Most people nowadays prefer listening to sound which comes from more than one speaker even if the quality is not too good.

6 [ ] People sitting in chairs near the armchair will not be able to hear most of the sound.