

**SOLUTIONS PRE-INTERMEDIATE 5**  
**UNIT 9: SCIENCE**  
**9F**

**PEGAH BAHOJB GHASEMI**

**9E****Word Skills**

## Verb + preposition

*I can understand and use verb + preposition collocations.*

- 1 Complete the text with these prepositions: *about, at, for, in, of, to, with*. You will have to use some prepositions more than once.



If somebody told you they were building a lift to take people into space, you would probably laugh <sup>1</sup> \_\_\_\_\_ the idea. But in fact, if you listen <sup>2</sup> \_\_\_\_\_ scientists and engineers talking about the plan, you soon realise they are being completely serious.

The elevator would consist <sup>3</sup> \_\_\_\_\_ a carbon fibre ribbon 100,000 km long. One end would be in the ocean at the equator, and the other end would be in space.

At the moment, it takes months or years to prepare <sup>4</sup> \_\_\_\_\_ a trip into space by rocket. Space agencies have begun searching <sup>5</sup> \_\_\_\_\_ a better option – partly because they worry <sup>6</sup> \_\_\_\_\_ the cost of space missions. The idea of a space elevator appeals <sup>7</sup> \_\_\_\_\_ governments because it would be far cheaper than sending rockets into space. It would be slower, but that would give passengers more time to adjust <sup>8</sup> \_\_\_\_\_ the different conditions as they left the earth.

It may not be easy though: countries might argue <sup>9</sup> \_\_\_\_\_ the exact location of the elevator. But if the political leaders can cope <sup>10</sup> \_\_\_\_\_ these problems and manage to take part <sup>11</sup> \_\_\_\_\_ the project together, it is certainly possible.

Science fiction writer Arthur C. Clarke wrote a novel <sup>12</sup> \_\_\_\_\_ the idea in 1979. He said in a speech that humans would build a space elevator ten years after they stopped laughing at the idea. Well, they've stopped laughing now.

## 2 Circle the correct prepositions to complete the sentences.

- 1 You should apologise **for** / **to** that comment!
- 2 Cats get frightened if you shout **at** / **to** them.
- 3 I asked **about** / **for** the manager so I could talk to him in person.
- 4 We complained **for** / **about** our hotel room.
- 5 I've never heard **from** / **of** this video game.
- 6 I dreamed **about** / **of** flying again last night.
- 7 After a long discussion, they agreed **to** / **with** our request and gave us our money back.
- 8 If you're unhappy with the service, why don't you write **for** / **to** the manager?

**3 Study the dictionary entries and answer the questions.**

- 1 Which verb is used with two prepositions with no change of meaning? \_\_\_\_\_
- 2 Which verb is used with two prepositions, but the meaning changes? \_\_\_\_\_
- 3 Which entry uses ***bold and italic*** type for two words that often go together? \_\_\_\_\_



**charge** / tʃɑːdʒ / *verb* **1** [T, I] **charge (sb/sth) for sth** to ask sb to pay a particular amount of money: *We charge £75 a night for a single room* ♦ *They forgot to charge us for the drinks* **2** [T, I] **charge sb (with sth)** to accuse sb officially of doing sth which is against the law: *Three men have been charged with robbery*

**inform** / in'fɔ:m / *verb* [T] **inform sb (of/about sth)** to give sb information (about sth), especially in an official way: *You should inform the police of the accident* ♦ *Do keep me informed of any changes*

### VOCAB BOOST!



Dictionaries often use *something* or *somebody* (*sth* or *sb*) in their definitions, but when you record verbs it is a good idea to include words which often go with those verbs.

to complain about sth / sb → to complain about the weather / the noise / your hotel / your neighbours / your doctor

**4** Read the *Vocab boost!* box. Write some words that often go with these verbs.

1 to care for sth / sb → to care for \_\_\_\_\_

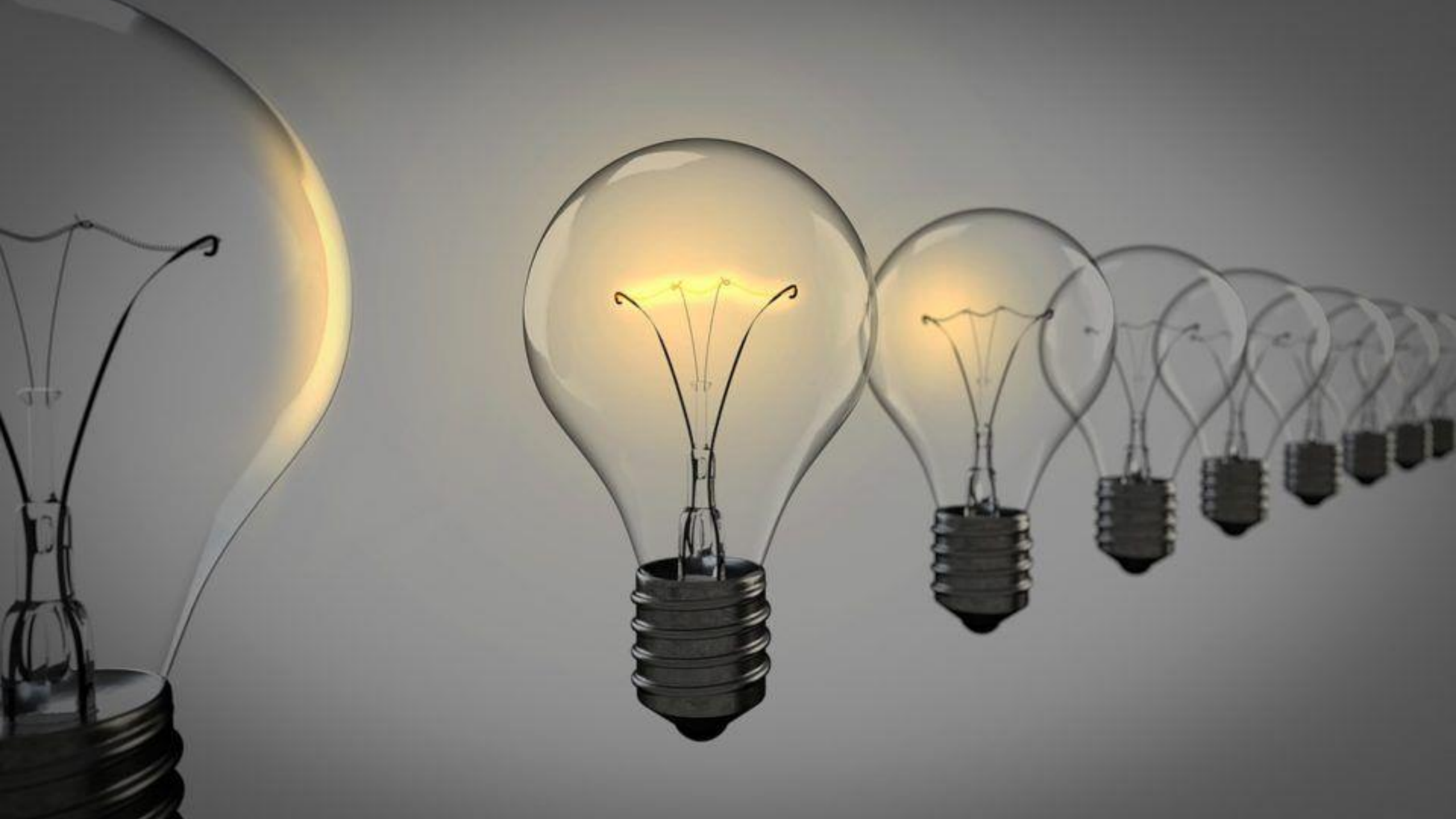
\_\_\_\_\_

2 to learn about sth → to learn about \_\_\_\_\_

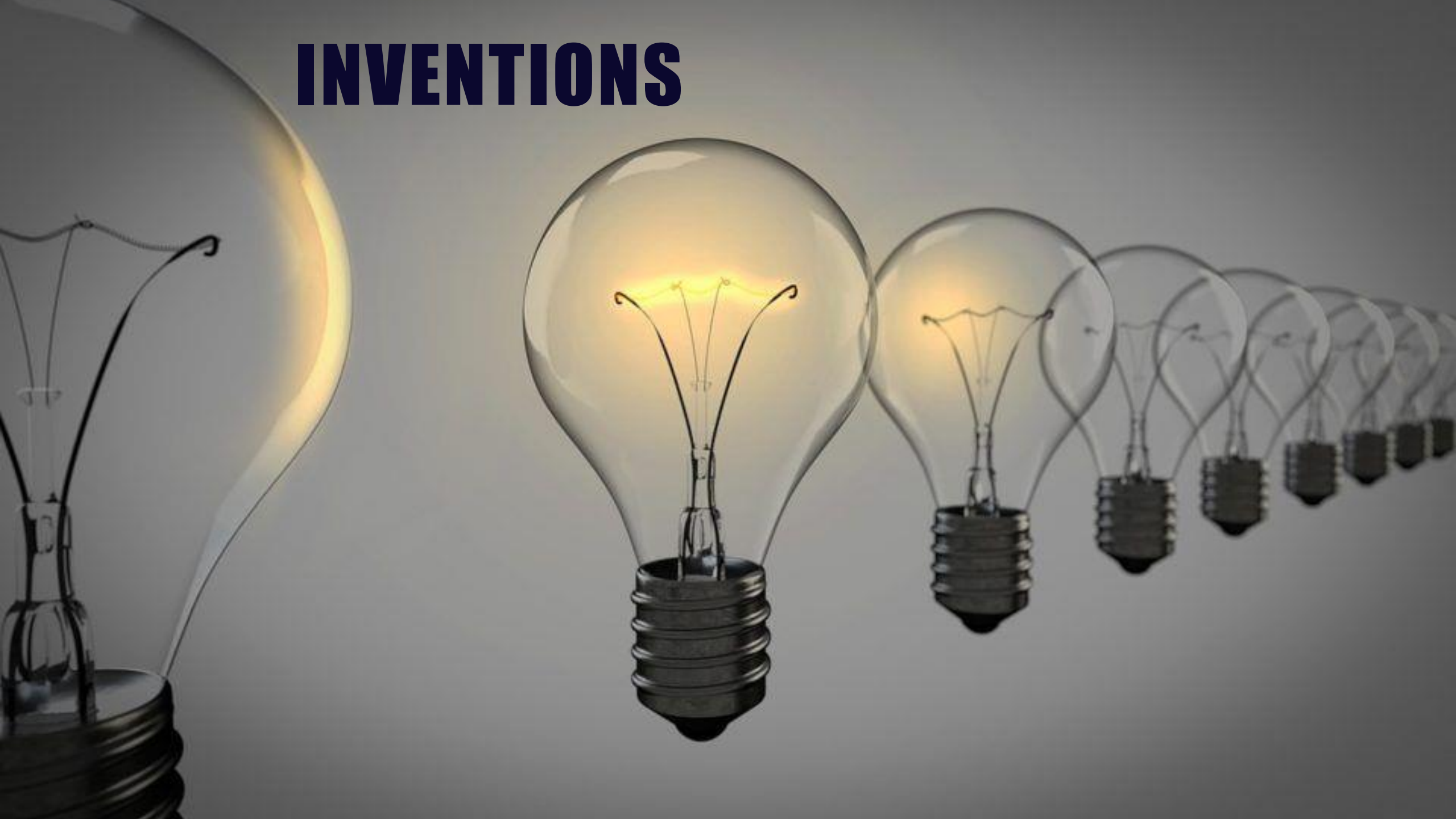
\_\_\_\_\_

3 to write to sb → to write to \_\_\_\_\_

\_\_\_\_\_



# INVENTIONS





*COPY &*

**PASTE**



ECO



SPEED



HUMANITY

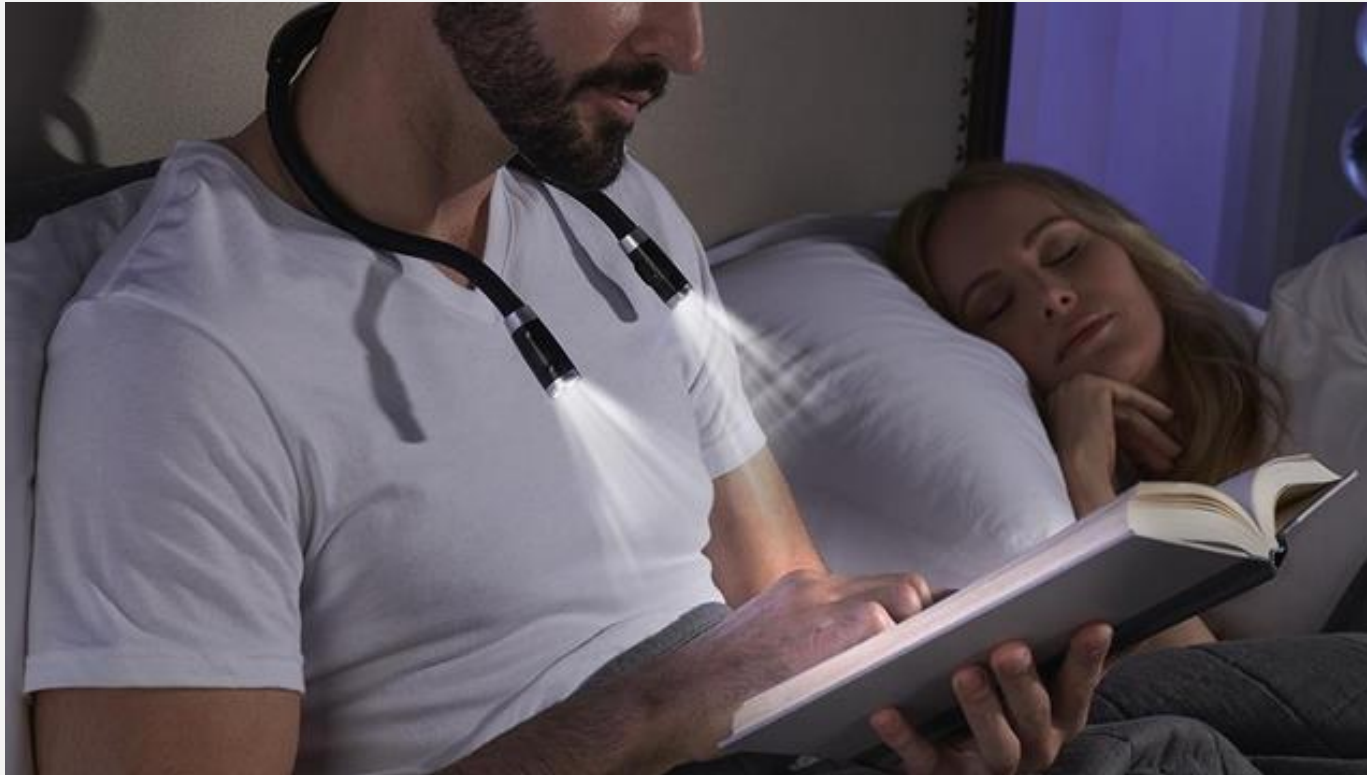
# COPY & PASTE



- Ever wished to have a smart scanning and printing tool to help you go about your business with the desired convenience? If yes, “Copy & Paste” can be the right answer to your needs. What I like the most in this scanning and printing tool is the ability to transfer the images and text from one source to the other pretty fast. Not to mention, you can also use it to print directly into your notebook, thereby eliminating the requirement for an additional paper. So, no more expensive printer or heavy photocopier machines!



# THE WEARABLE READING LIGHT



- There might be times when you want to read a book before hitting the bed without disturbing anyone. While a lot of people use a night lamp for this purpose, there's a dedicated reading light which might just be what you're looking for. Worn around the neck, the gadget offers 2,700 Kelvin of warm white light and 7,000 Kelvin of cold white light. You get up to 16 hours of usage from a single charge and it takes around 2.5 hours for a complete charge with the bundled USB cable.





# SPIN ON



- Spin On is a lamp for your inner child. You can use a spinning top to switch on and off the lamp. Interestingly, the top will keep spinning as long as the base is powered, thanks to the electromagnet present inside. This way, you don't have to manually spin the top after a while. You can also use the touch sensor to tap to turn on the lamp.



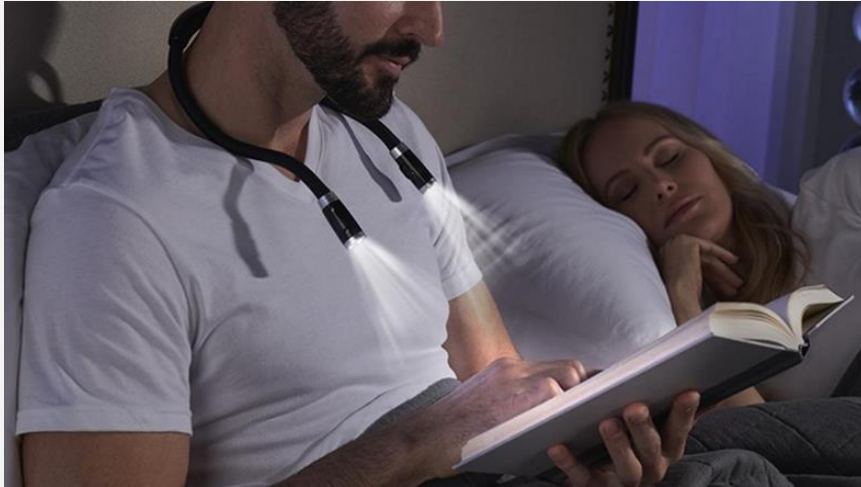
# XIAOMI HANDWARMER POWERBANK



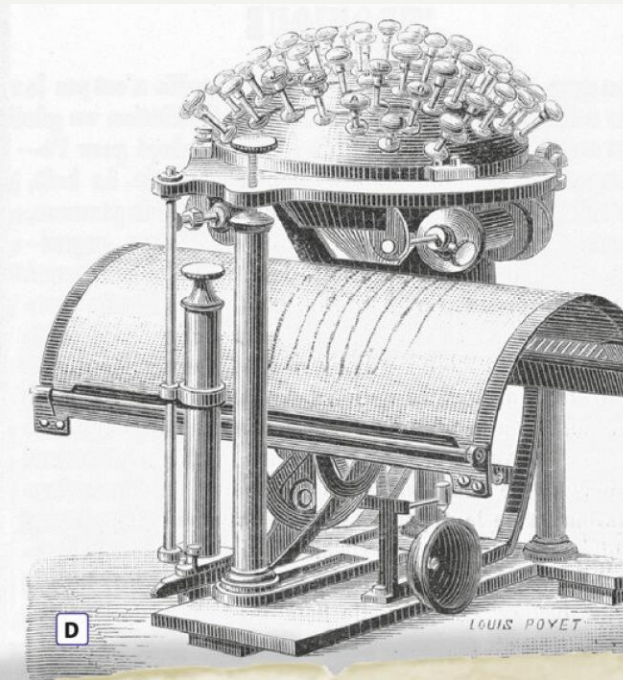
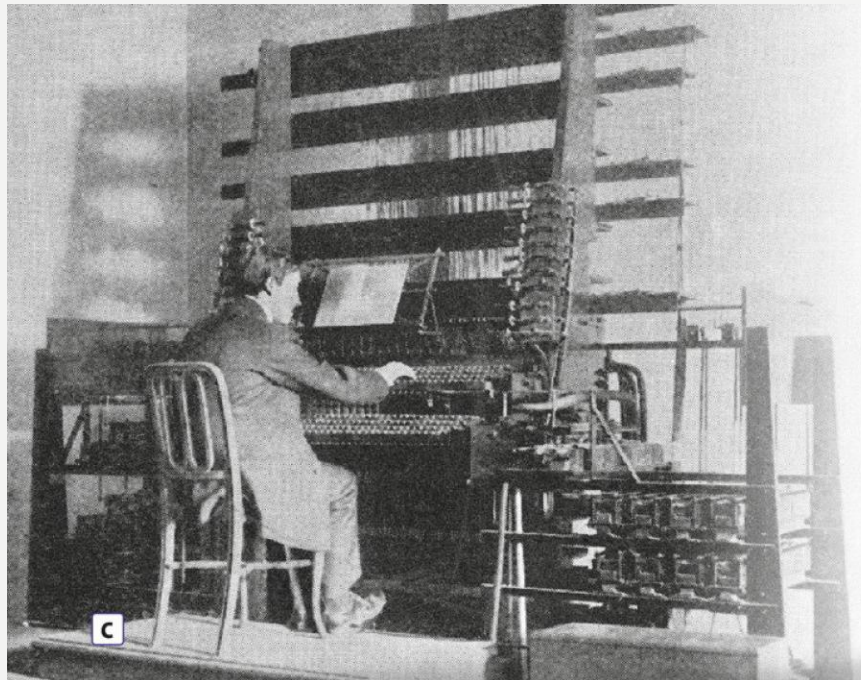
- Ever wanted a convenient handwarmer to keep your hands warm during the winter season? Well, Xiaomi's offering does just that while being a fully functional power bank. With its PTC self-limiting temperature heating technology, it is proven not to harm your hands. You can get up to 2 hours of usage in high temperature and up to 4 hours at low temperature. This quirky gadget adds extra convenience and manages to be compact to stay in your carry bag.



# WHICH ONE IS THE MOST USEFUL INVENTION OF 2021?



1 **SPEAKING** Look at the pictures.  
What do you think these  
inventions were for?











## DEMONSTRATION

A practical exhibition and explanation of how something works or is performed.



**BC.**

**BEFORE CHRIST**

**BC.**

# Inventions the world forgot

3.13

2 Read the texts. Check your answers in exercise 1. Were any of your guesses correct?

## 1 *The Telharmonium*

The Telharmonium was the world's first electronic musical instrument. It was designed by an American, Thaddeus Cahill, in 1897. Three models of the instrument were built; the first weighed about 7,000 kg, and the other two weighed nearly 200,000 kg! Music from the instrument was broadcast to people's homes using another new invention: the telephone. For the first time, people could stay at home and listen on their telephones to live music from another part of the country. (The radio had not been invented.) People loved these concerts, but there were problems. Some telephone users who were not listening to the concert were interrupted by loud music half way through their conversation! By 1914, the world was no longer interested in the Telharmonium. After Cahill's death in 1934, his brother kept one of the three models, but in 1962 it was destroyed. No recordings of the music were kept, so the Telharmonium and its unique sound have disappeared forever.

## 2 *The Rejuvenator*

In the early part of the 20th century, there was a lot of interest in the power of electricity to cure medical conditions. A device called the Rejuvenator was invented by British scientist Otto Overbeck in 1925. It was used in the home to treat all kinds of medical problems, including deafness and baldness, and became very popular. It was advertised in newspapers and members of the public were invited to watch live demonstrations in theatres. The users placed electrodes on any part of their body and a small electric current was passed through it. It was unclear exactly how the machine worked, but hundreds were sold all around the world and Overbeck became rich. In the 1950s, it was still possible to buy new parts for these machines, but today they are only seen in museums.

## 3 *The Writing Ball*

The Writing Ball was invented in 1865 by Rasmus Malling-Hansen from Denmark. It was a machine for typing onto paper. Malling-Hansen spent a long time working on the design. For example, he made sure all the keys were placed in the best positions for typing quickly. The machine even used electricity to make the movement faster. There was one problem, however: you could not see the paper as you were typing. Nevertheless, the Writing Ball was sold all over Europe and was very successful. However, each model was made by hand. Soon, other machines became more popular because they were made in factories and were cheaper. A new keyboard was developed with the keys arranged differently. This arrangement is now used on phones and computer keyboards all over the world, even though it was quicker to type using the Writing Ball. The once-popular Writing Ball was forgotten.

## 4 *The Antikythera Mechanism*

In 1901, a ship was discovered at the bottom of the sea near the Greek island of Antikythera. On the ship was an ancient machine. It had been made about 1,900 years earlier, in 2 BC. For many years after its discovery, nobody understood exactly what the machine was for. But in the 1970s, scientists used X-rays to find out its secrets. Amazingly, they found that the machine was an ancient computer. It had been designed to predict the movements of the sun, the moon and the planets. It did this using more than thirty hand-made metal wheels of different sizes. A study of the mechanism in 2006 was led by Professor Michael Edmunds from Cardiff University. He described the device as 'just extraordinary, the only thing of its kind' and 'more valuable than the *Mona Lisa*'. Reconstructions have been made and the device works perfectly.

**3** In pairs, decide which of the inventions is the most impressive and / or interesting, in your opinion. Give reasons.

4 Number the pictures (A–D) in the order in which they were invented.

A \_\_\_      B \_\_\_      C \_\_\_      D 1



**5 Match the texts (1–4) with questions A–F below. Some questions match with more than one text.**

Which invention(s) ...

**A** was / were lost and then found again? \_\_\_\_\_

**B** was / were popular for a time but then disappeared? \_\_\_\_\_

**C** used electricity? \_\_\_\_\_

**D** was / were designed by an unknown inventor? \_\_\_\_\_

**E** was / were designed to improve your health? \_\_\_\_\_

**F** was/were first designed in the 19th century? \_\_\_\_\_



**RASMUS MALLING-  
HANSEN'S PARENTS  
WERE PROUD OF  
HIM.**

**TRUE**

**FALSE**



**RASMUS MALLING-  
HANSEN'S PARENTS  
WERE PROUD OF  
HIM.**

**TRUE**

**FALSE**

**DOESN'T SAY**



## **Reading Strategy**

Sometimes, true / false tasks include a third option: the text does not say. Choose the third option if the text does not contain enough information to clearly say if the sentence is true or false. Do not use your own knowledge (or guesswork) to fill any information gaps!

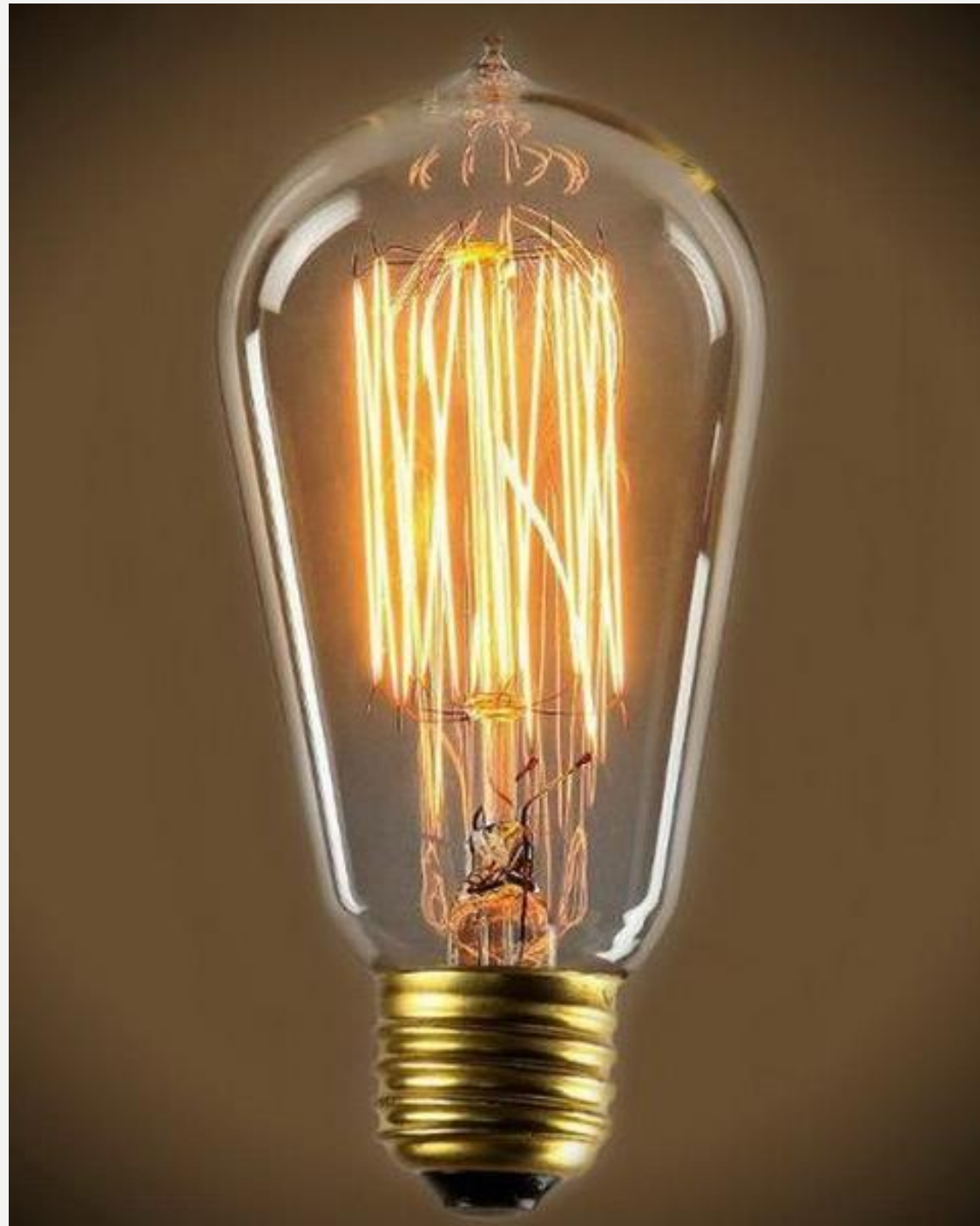
**6** Read the **Reading Strategy**. Explain why 'does not say' is the correct answer to this sentence.

The third of the three Telharmonium models was the heaviest. **DNS**

**7** Decide if the sentences below are true (*T*), false (*F*) or 'does not say' (*DNS*).

- 1 The Telharmonium was invented before the radio. \_\_\_\_\_
- 2 Thaddeus Cahill destroyed the final model of his invention before he died. \_\_\_\_\_
- 3 The Rejuvenator successfully cured deafness and baldness in hundreds of people. \_\_\_\_\_
- 4 The Rejuvenator was a commercial success even though it was not clear how it worked. \_\_\_\_\_
- 5 The Writing Ball was the first machine that used electricity for typing. \_\_\_\_\_
- 6 Other typing machines were cheaper to make because they were not made by hand. \_\_\_\_\_
- 7 The Antikythera Mechanism was at the bottom of the sea for nearly 2,000 years. \_\_\_\_\_
- 8 For about 70 years after it was found, the purpose of the mechanism was not known. \_\_\_\_\_







**EDISON INVENTED  
THE LIGHT BULB.**



**EDISON **INVENTED**  
THE LIGHT BULB.**




**EDISON **INVENTED**  
THE LIGHT BULB.**

**VERB**





**LIGHT BULB IS  
EDISON'S  
INVENTION.**



**LIGHT BULB IS  
EDISON'S  
INVENTION.**



**LIGHT BULB IS  
EDISON'S  
INVENTION.**

**NOUN**

**8 VOCABULARY** Find nouns in the text related to these verbs and adjectives.

### Noun endings

#### Text 1

a invent \_\_\_\_\_

b record \_\_\_\_\_

#### Text 2

c deaf \_\_\_\_\_

d bald \_\_\_\_\_

#### Text 3

e move \_\_\_\_\_

f arrange \_\_\_\_\_

#### Text 4

g discover \_\_\_\_\_

h reconstruct \_\_\_\_\_



**9 VOCABULARY** Look at your answers in exercise 8.  
How many different noun endings do they include?  
Can you think of other nouns with these endings?

**10 SPEAKING** In pairs, decide which three inventions and discoveries from history are the most important. Use the ideas below or think of your own. Give reasons.

aeroplanes antibiotics books cars computers  
electricity fire printing television wheels

If the wheel didn't exist, we couldn't travel by car or bus.

If we didn't have aeroplanes, journeys would take much longer.

**ASSIGNMENT:  
WORKBOOK 9F  
SUMMARY**